

# Virginia

## Standards of Learning Assessments

### Technical Report: 2003-2004 Administration

January 2005



**Virginia**  
***Standards of Learning***  
**Assessments**

**Technical Report:**  
**2003-2004 Administration**  
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## INTRODUCTION

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In 1995, the Board of Education of the Commonwealth of Virginia took an important step toward raising the learning expectations for all students in their public schools. The Board adopted new *Standards of Learning (SOL)* in English, mathematics, history, social sciences, science, and computer technology. The Virginia *SOL* set reasonable targets for what teachers were expected to teach and what students were expected to learn.

The new academic standards were designed to inform parents and teachers what students were actually learning. They were also intended to make the schools accountable for teaching the content found in the *SOL*. To this end, the Virginia Department of Education (VDOE), in collaboration with hundreds of educators across the Commonwealth and Harcourt Assessment, developed a series of tests to measure the students' achievements against the *SOL* standards.

The purpose of the *Virginia Standards of Learning Assessment Technical Report* is to inform users and other interested parties about the development, content and technical characteristics of the Virginia *SOL* assessments. The *SOL Technical Report* provides information for the 2003 *SOL* cycle that comprises the fall 2003 and spring 2004 administrations.

The *SOL Technical Report* is divided into three parts:

The first part of the report, Sections 1 through 3, presents a historical overview of the Virginia *SOL* assessment program. Section 1 is a synopsis of the *SOL* assessment program. Section 2 has information about the development of the assessment blueprints, its initial development and item and forms review. Section 2 also contains information about how the items for the first *SOL* administration were field tested, as well as a description of the initial standard setting. Section 3 describes the calibration, scaling and equating procedures used in the program.

The second part of the report, Section 4, explains the changes made to the *SOL* assessments during the 2003-2004 administration cycle.

The third part of the report, Sections 5 through 7, is a statistical summary of the 2003 administration cycle. Section 5 outlines the analyses that were performed. The results for the fall 2003 and spring 2004 administrations are included in Sections 6 and 7.

Appendixes providing additional statistical and technical information regarding the fall 2003 and spring 2004 administrations accompany the report.



# 1. DEVELOPMENT OF THE 1998 STANDARDS OF LEARNING ASSESSMENTS

The 1998 *SOL* assessments were composed of multiple-choice items and writing prompts designed to test all of the *SOL* content except where noted on the assessment blueprint (see Section 2.1). Although it was not possible to test student knowledge on every *SOL* on a single assessment, the test items did address every *SOL* for subsequent assessment forms. The test items assessed a *SOL* that can be measured using a multiple-choice or writing format in a targeted content area <sup>1</sup>.

## 1.1 Overview of the Standards of Learning Assessments

Students in grades 3, 5, 8, and high school were tested using multiple-choice *SOL* assessments in the content areas listed in Table 1.1. In addition, students in grades 5, 8, and high school, were also tested using a writing prompt. The *SOL* assessments were cumulative at the elementary and middle-school levels. That is, a content area test at one grade level contained items that addressed *SOL* content from prior grades. For example, fifth grade students taking the science test encountered items covering content taught in both fourth and fifth grade science. Similarly, an eighth grade student taking an *SOL* assessment in mathematics may have been questioned on mathematics content taught at grades 6, 7, and 8. High school tests were designed to address specific course content, regardless of the student’s current grade.

More specific information about the *SOLs* covered by each test can be found in Section 2.1.

**Table 1.1 Virginia Standards of Learning Assessments at Each Grade Level**

Content Area	Standards of Learning Assessment			
	Grade 3	Grade 5	Grade 8	High School
English: Reading and Writing	•			
English: Reading/Lit. & Research.		•	•	•
English: Writing		•	•	•
Mathematics	•	•	•	
History	•	•	•	
Science	•	•	•	
Computer/Technology		•	•	
Algebra I				•
Geometry				•
Algebra II				•
United States History				•
World. History. to 1000 A.D./W. Geog.				•
World. History. From 1000 A.D./W. Geog.				•
Earth Science				•
Biology				•
Chemistry				•

<sup>1</sup> Not all *SOLs* are assessed. See the assessment blueprints in Appendix B of the *1998 Virginia Technical Report* (2000) for those *SOLs* that were excluded.



## 1.2 Responsibility for the Development of the SOL Assessments

Creating the 27 SOL assessments necessary to assess student learning was a complex undertaking. It required involvement from the Virginia Department of Education (VDOE), Harcourt Assessment local school divisions and local education agencies (LEAs). Teachers, administrators, and content specialists from all over Virginia were recruited for the different test development committees (see Section 1.3).

Committee members came to Richmond on several occasions to work on the tests. Harcourt Assessment in San Antonio, Texas and the VDOE in Richmond were responsible for the development process activities. Table 1.2 identifies the groups responsible for developing the SOL assessments.

**Table 1.2 Responsibilities for the Development of the SOL Assessments**

Step in Development	Primary Responsibility
• Development of Preliminary Blueprints and Item Specifications	Harcourt; Content Committees
• Development of Preliminary Writing Rubrics	Harcourt; VDOE
• Item Writing	Harcourt
• Item Review	Content Committees
• Construction of Field Test Forms	Harcourt; VDOE
• Pre-Field Test Training Workshops	Harcourt; VDOE; LEAs
• Field Test Administrations	Harcourt; VDOE; LEAs
• Item Data Review	Content Committees
• Bias Review of High School Tests	Bias Review Committees
• Construction of Operational Test Forms	Harcourt; VDOE
• Review of Operational Test Forms	Content Committees; VDOE
• Modification of Special Forms	Harcourt; VDOE
• Review of Special Forms	Special Forms Focus Group (Region 4); Texas Education Service Center
• Final Construction of Operational Forms	Harcourt; VDOE
• Setting Standards for the 1998 SOL Assessments	Standard Setting Committees for the Virginia <i>Standards of Learning</i>

### 1.3 Involvement by Virginia Educators

Teachers, administrators, content specialists, and private citizens from across Virginia participated in the development of the SOL assessments. These individuals reviewed the test items and forms to ensure that they adequately measured student knowledge fairly and without bias.

#### **Assessment Policy Advisory Committee**

The Assessment Policy Advisory Committee reviewed and advised the VDOE on the development and implementation of major policies concerning the SOL assessment program. They recommended guidelines and accommodations for students with physical disabilities or limited English proficiency. The VDOE adopted their recommendations.

#### **Content Review Committee**

Every summer, the Content Review Committees convene in Richmond to review content materials for the Virginia *SOL* program. The Content Review Committee ensures that the *SOL* assessments are appropriately difficult and fair. Content committees are composed primarily of educators teaching the subject of the test. A smaller number of committee members are school test coordinators and school division employees. Committee members are nominated or apply for committee membership. They represent all levels of education, from elementary to post secondary, and the ethnic and social diversity of Virginia students. Committee members also represent a geographical cross-section of Virginia, and no committee can have more than one member from a given area. To provide a fresh perspective, every committee has new members introduced each year.

Harcourt Assessment organizes and facilitates the Content Review Committee meetings each summer. The committee reviews begin with training sessions conducted by a Harcourt psychometrician and other content development experts. Content Review Committee members receive training in fundamental principles of educational measurement, including best practices in item construction. The emphasis of the training session is on identifying high quality items and tests, and the best measure of this is the content. For this reason, committee members are reminded that their experience as teachers in the content area is what is valued the most. For the purposes of reviewing items with data, committee members are also familiarized with psychometric measures including *p*-value, point-biserial correlation, and *Rasch* difficulty values. They are also trained in how to interpret statistical flags for low point-biserial, item fit, and differential performance on the *Rasch*, and *Mantel-Haenszel* models. The training session concludes with the review of actual items with statistics and a discussion of how content can affect item statistics.

Following the plenary training session, individual Content Review Committees meet separately by grade level and subject. A Harcourt Assessment facilitator conducts the committee review, with representatives present from the Department of Education office of Assessment and Reporting, as well as Curriculum and Instruction. Item review consists of two separate reviews, new item review, and data review.

In new item review, items that have not yet been field tested are presented to the committee. The committee reviews them for their content validity, their adherence to the Standards of Learning, and for the quality of item construction. Committees can vote to accept, edit, or reject items. Committee members are provided feedback forms. While committee decisions are made by consensus, committee members also record their votes, and any comments on the feedback forms, which are compiled and become the official record of the committee review. Only after committee votes are counted and comments recorded is the final decision about an item made.

In data review, items that have been field tested are presented to the committee, along with the data collected in field test. Committee members review them again for content validity, adherence to the Standards of Learning, and the quality of item construction. While the data is presented with the item, items can only be rejected for their content. The statistics serve as a guide to possible problems with an item. In data review, committees can vote to accept, reject, or re-field test an item. Committees operate by consensus, but as with new item development, the feedback form is the official record of committee activity. Committees can only re-field test an item if an error content or item construction has been identified and corrected.

### **Bias Review Committees and Special Forms Review Focus Group**

In addition to the Content Review Committee's bias review, a separate Bias and Sensitivity Review Committee examines each item on the high school tests. Bias Review committees are convened by subject area (i.e. Math, Science, English/Language Arts, and Social Studies). Committee members are selected from the same pool of applicants as the Content Review Committee, and the same criteria for selection apply.

Before Bias and Sensitivity Review Committees begin to consider items, a bias review expert from Harcourt Assessment provides training in identifying bias in assessments. The training provides examples of cultural, economic, racial, religious, regional, and gender bias. Committee members are challenged to identify instances where bias in an item may affect the performance of an identifiable group of students. In addition, the bias expert provides information on how to interpret differential item performance measures to determine if an item is biased against any specific group of students. The committee can also address issues of sensitivity in the test. Any topic or subject that may disturb or upset students, and in the process affect their performance on the test, is a sensitivity issue. The Bias and Sensitivity Review Committee can vote to accept or reject items, and can also recommend to address problems with bias and sensitivity in future development.

The Special Forms Review Focus Group examines the *SOL* assessment test forms for students with visual disabilities. Committee members are teachers and parents of visually impaired students. The committee judges the appropriateness of the test format, and edited or deleted items deemed inappropriate for students with specific visual disabilities. Based on the decisions of the Special Forms Review Focus Group, Braille and large-print test forms are constructed to accommodate students with visual impairments. Audiocassette tapes of the test forms were made for students who needed one in order to participate in the testing program.

### **Report Development Focus Groups**

Eight meetings were held at locations across Virginia in order to collect information from local school personnel on reporting *SOL* assessment results. . Representatives from all levels of the LEAs contributed ideas about the type of information and report format that would maximize the usefulness of test results.

#### **1.4 Security of Test Materials**

Test materials were kept in locked storage locations when they were not under the direct supervision of Harcourt Assessment or VDOE personnel. Committee members signed Non-Disclosure/Conflict of Interest Agreements prior to working with secure test materials. Participants agreed not to reveal any information about test content, items, scoring keys, or other test-related materials. They also agreed not to reproduce any test materials, or use any test-related information for financial gain.<sup>2</sup>

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<sup>2</sup> A copy of the non-disclosure agreement is shown in Appendix A of the *1998 Virginia Technical Report* (2000).



## **2. ASSESSMENT DEVELOPMENT AND FIELD TESTING**

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### **2.1 Designing Assessment Blueprint and Item Specifications**

In order for the new assessments to accurately measure the content of the *SOL*, Harcourt Assessment's staff thoroughly reviewed the Virginia *SOLs* and developed assessment blueprints for each grade and content area.

Assessment blueprints functioned as maps, or plans, for the test developers. They identified content or reporting categories for each *SOL*, and determined which items matching specific test content were to be included on a test. Content Review Committees also determined which *SOLs* could be and which could not be tested using multiple-choice format. *SOLs* that could not be tested by a multiple-choice item format were identified and excluded.

The test blueprints provided the structure for constructing test forms. By calculating the number of test items included in each reporting category, the test blueprints made it possible to determine the relative emphasis given to a content area. Those *SOLs* to be tested were grouped into similar content reporting categories. In many instances, reporting categories were identical to the grouping of the *SOL* standards. Using a content analysis of the standards, Harcourt Assessment staff members identified the reporting categories.

In December 1996, the Content Review Committees reviewed and modified the draft test blueprints. The committees were organized into grade-specific groups and at the high school level, into subject-specific groups. This enabled committee members to efficiently judge the grade and content appropriateness of the blueprints. Committee members revised the number of items in each reporting category in a content area to better reflect the emphasis they believed a reporting category should have on a particular test. Once approved by the committee members, the draft blueprints were used as guides in the development of *SOL* field tests.

Test item specifications were general rules or guidelines for the format and layout of test items. They ensured consistency across tests and content areas in the *SOL* assessments. For example, one specification was. Harcourt Assessment development specialists drafted item specifications, for example, that all multiple-choice items have four possible choices, for each content area and grade level. These specifications provided item writers, item reviewers, and other Harcourt Assessment staff with the guidelines necessary to produce high-quality items for the *SOL* assessments.

Advance copies of the assessment blueprints were published by the Virginia Department of Education. The assessment blueprints for all content areas within grades 3, 5 and 8 were contained in one booklet. There were separate blueprint booklets for the high school assessments.

An individual booklet for high school Secondary English, Algebra I, Geometry, Algebra II, World History to 1000 A.D./World Geography, World History From 1000 A.D. to the Present/World Geography, United States History, Biology, Chemistry and Earth Science was produced. Each booklet introduced the purpose and organization of the *SOL* blueprint. It provided development guidelines for the assessment and referenced the *SOL* content in tabular and blueprint form.<sup>3</sup>

## 2.2 Developing and Reviewing Test Items

### Multiple-Choice Item Development

Upon completion of the item specifications, Harcourt Assessment content specialists and item writers constructed thousands of multiple-choice items. Working with the VDOE, the Harcourt assessment development team facilitated the review of draft multiple-choice items. During the item review process, the Content Review Committees were divided into subgroups enabling members to focus on items written for their areas of content and grade level expertise.

During the pre-review orientation, committee members were taught the item review process. They learned to judge items on the basis of their difficulty, clarity, appropriateness, and relevance to the purpose of the test. Reviewers also critiqued each item for its interaction with other items, the appropriateness of any accompanying artwork, the correctness of keyed responses, and the plausibility of the incorrect answer choices (distracters)<sup>4</sup>.

During the item review process, Content Review Committee members identified and noted their concerns regarding potential item bias in the areas of gender, ethnic, religious, socioeconomic and regional characteristics. As a result of this review process, some items were eliminated from the prospective field test item bank, while others were marked for revision and inclusion at a later date<sup>5</sup>.

### Writing Prompt Development

Harcourt Assessment staff members drafted over 100 potential writing prompts. By December 1996, they produced 36 writing prompts each for grades 5, 8 and 11. Prompts were written in either the form of a question, an issue, or a hypothetical situation. The Content Review Committee determined if the prompts were appropriate for the grade level being tested in terms of difficulty, interest, and reading level.

In January 1997, the Content Review Committees for grades 5, 8 and high school met to review and revise the prompts. Committee members selected 24 prompts at each grade level to be included in the pool of potential prompts for the English Writing test. Along with the development of the writing prompts, rubrics were developed in three domains identified by the English Writing Committees: *Composing*, *Written Expression*, and *Usage and Mechanics*. Appendix A shows an example of the rubric developed for the *Composing* domain of the grade 8 writing test. There were nine separate scoring rubrics (one for each domain at each grade level). Prompts were field tested during the spring 1997 *SOL* writing field test.

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<sup>3</sup> Copies of the assessment blueprints are contained in Appendix B of the *1998 Virginia Technical Report* (2000).

<sup>4</sup> A copy of the guidelines used by the committees appears in Appendix C of the *1998 Virginia Technical Report* (2000).

### 2.3 Item and Writing Prompt Field Tests: Spring 1997

Field tests of the *SOL* assessments were conducted in the spring of 1997. Field testing was involved administering items to a sample of students across the Commonwealth. The purpose of the field tests was not to collect information about the students who took the test, but rather to collect information about the performance of test items. Field tests provided:

- Statistical information, such as the percentage of students answering each item correctly.
- A difficulty rating for each item.
- Information about the ability of each item to discriminate between those students who scored well on the test and those who did not.
- Information regarding the test administration procedures, including those for assessing students with disabilities.

The spring 1997 *SOL* field tests provided information about the newly developed test items for the staff at Harcourt Assessment and members of the Content Review Committees. The information provided by the field tests enabled them to make informed decisions about test items and the construction of test forms. Field test results identified items that were potentially biased by ethnicity or gender. Using this information, committee members marked items for exclusion. In addition, examiners were asked to comment on directions for administering the standard test, as well as tests administered with accommodations, such as Braille, large-print, and audiotape forms of the tests.

#### Field Test Form Construction

To ensure that sufficient high-quality test items were available for the spring 1998 operational assessments, approximately 4,875 items were included in 135 field test forms (approximately five for each content area). In addition, the writing assessments were field tested during the spring of 1997. Twenty-four different writing prompts for the writing component of the *English Writing Test* were field tested at grades 5, 8 and 11. Only items that were acceptable to members of the item review committees were included.

Each field test form was developed to closely reflect the specifications of its test blueprint. Each form consisted of one content area per grade level. Each form within a content area had approximately 30 percent of its items in common with the other forms. Forms consisted of 28 to 45 unique items and 12 to 18 common or “linking” items. The common-item test design provided the link used to place the difficulty estimates for all of the items in each subject area at each grade level on a common scale.

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<sup>5</sup> Review Committee materials are found in Appendix C of the *1998 Virginia Technical Report* (2000).



## **Test Administration Preparation and Materials**

Prior to the field tests, pre-test workshops were held across the state. The workshops provided the representatives of all local school divisions with an overview of the tests' content, security expectations and procedures for completing the answer documents. Workshops also addressed the receipt, distribution, and return of test materials.

Three manuals were developed for use during the administration of the *SOL* tests. The *Division Director of Testing Manual*, *School Coordinator's Manual*, and *Examiner's Manual* provided information about the receipt, distribution, security, and return shipment of test materials. In addition to these manuals, directions for administering each *SOL* test were developed and distributed. Several of the *SOL* tests required the use of ancillary materials such as calculators, protractors, compasses, and rulers. A list of these materials is in Table 2.1.

### **Field Test Administration: Spring 1997**

In the spring of 1997, every student in grades 3, 5, 8 and 11 participated in field testing the *SOL* assessments in specified content areas. A representation of students mirroring the overall composition of Virginia was sampled ensuring that large enough groups of students were tested so that the information collected would allow for analysis of item data. Students did not take the full complement of tests, but just one field test in one content area. For example, students in one third-grade class in a school took a Science field test, while third-grade students in another class took a Mathematics field test. Some end of course field tests were given to high school students who had not taken the course upon which the test was based. The scores of these students were not used in statistical analysis.

Field test administration materials and procedures mirrored those of the operational tests. Separate answer documents incorporating many of the features of the operational answer documents were used to collect the demographic data and other information necessary to analyze the results of the field test. Wherever possible, the field test forms were modeled on the test blueprints to closely resemble the operational test forms. The major exceptions were the Reading and Writing tests using passages. Since it was assumed that many items would be rejected after the field test data were analyzed, more items than actually would be used during operational testing were included with each reading passage.

Twenty-four potential writing prompts were field tested at each of the three grade levels. The number of participants ranged from 266 in grade 11 to 938 in grade 8. Different teams of readers scored the writing samples for each grade level. Prior to scoring the responses, the scoring teams reviewed approximately ten randomly selected writing samples from the field test papers. The scoring process included two blind scorings by team readers. The team leader resolved any score discrepancies.

## Field Test Statistics

The descriptive statistics were derived from the spring 1997 field test for each content area, form and reporting category. They included raw scores, means, and standard deviations by demographic characteristics, form, and reporting categories. The demographic variables were: grade level, gender, ethnicity, limited English proficiency status, disability status, and special test accommodations status.

Results from the field test administration provided a basis for including items in the operational test forms and constructing equivalent forms. Results included item statistics for: multiple-choice items and forms, item statistics for the writing prompt domain scores, Rasch item statistics and differential item functioning (DIF) statistics.

The statistics calculated from the multiple-choice items included:

- Numbers of students tested
- Traditional difficulties ( $p$ -values)
- Item-option response distributions for all respondents, for high-, middle-, and low-ability groups, and by gender and ethnic group
- Biserial and point-biserial correlations

Statistics computed for the results of the writing field test included:

- Numbers of students tested
- Frequency distributions, means, and standard deviations for the writing domain raw and total scores
- Correlations between grades and among the multiple-choice and writing domain raw scores
- Percent agreement tables for the writing domain scores assigned by the readers

The descriptive statistics for the writing domain scores included analyses by gender and ethnicity. Readers were asked to perform a qualitative analysis of the writing responses. To supplement the traditional statistics, item difficulty parameter estimates based on *Item Response Theory* (IRT) were computed. When using this technique, a statistical model was fitted to the data to estimate item difficulty and item fit.

DIF statistical procedures such as the Mantel-Haenszel procedure computed the probability that one demographic group was more likely than another group to answer an item correctly, when the groups were equally able. This information was useful in reviewing items and tests for potential bias. High values of the Mantel-Haenszel Alpha indicated that an item interacted differently among equally able students in the reference and comparison groups. The Mantel-Haenszel procedure compared white and African-American students, white and Hispanic students, and male and female students. The Mantel-Haenszel group differences that exceeded a chi-square significance level of 0.10 were “flagged” for further scrutiny.

A Rasch IRT method of computing DIF statistics provided item difficulty estimates among demographic groups. Under the Rasch model, the only reason for difference in item difficulty statistics was some group characteristic other than achievement. When the Rasch item difficulty estimates between groups were statistically different, further examination was warranted. The Rasch procedure compared white and African-American students, white and Hispanic students, and male and female students. Rasch item difficulty differences exceeding a threshold of one standard error of estimate were “flagged” for further scrutiny.

A detailed description of methods for identifying DIF in test items is in Camilli and Shepard (1994) and Wright and Stone (1979, pp. 192-195). They provide a derivation of the SEM criterion used to flag Rasch item difficulty group differences.

## 2.4 Writing Prompt Selection and Scoring

### Final Selection of Field-Tested Writing Prompts

During the scoring process for field-tested prompts, readers and team leaders recorded their observations about the student responses to each prompt. Subsequently, team leaders were responsible for compiling a qualitative report that addressed the following questions:

- Did the students understand what the prompt asked them to do??
- Did the students seem engaged by the prompt?
- Were the students able to effectively focus on a central idea and provide specific information and details?
- Did the readers, based upon reading hundreds of student responses to the prompt, recommend that this prompt be used for live testing?

The same writing prompt was administered to all three grade levels. Papers resulting from this prompt were used by committees to finalize the rubric before the remainders of the prompts were scored. The results of these analyses, in combination with the field-test statistics generated by Harcourt Assessment, were reviewed by the English Writing Committees as they considered which prompts should be included in a prompt item bank for future operational administrations of the *SOL* writing assessment.

### Scoring Student Writing Samples: Selecting and Training Scorers

Highly qualified, experienced readers outside the state of Virginia scored all writing samples. These readers were drawn from a database of over 1,000 college graduates who completed the selection process for readers. The need for ethnic and racial diversity was emphasized throughout the selection process. Readers for the Virginia *SOL* writing test had a minimum of a bachelor’s degree in an appropriate academic discipline (e.g., English, Education), demonstrated ability in performance assessment scoring, and preferably had teaching experience at the elementary or secondary level. The selection process required that each candidate successfully complete a personal interview, a scoring screening sample, a writing sample exercise, and a grammar test.

Readers were trained by a Performance Assessment Specialist and the team leaders. Separate training sessions were held for each writing prompt. The writing samples used for training scorers were from the samples scored during the *rangefinding* process (see Selecting Anchor Papers). These writing samples, and others identified by Harcourt Assessment staff and VDOE staff, were used as scoring guides during reader training, qualifying, and calibration. The primary goal of the training was to convey the decisions made during rangefinding to the readers, and to help them internalize the scoring protocol to effectively apply those decisions.

Prospective readers were able to qualify as a table leader. Table leaders were responsible for supervising small groups of readers. They possessed the leadership and communication skills necessary for a project of this nature. Candidates for table leader positions qualified by scoring 70 percent or better on each domain on one set of ten qualifying papers. Only in the spring of 1998 did they have to score 60 percent or better on a second set of papers.

During the spring of 1998, reader training and qualifying followed the same process as the table leader training and qualifying. The criteria for readers were the same as for table leaders except that some readers who were close to 60 percent agreement on two sets of papers were permitted to read on probation. Training began with a discussion of the three writing domains used in the scoring model: composing, written expression, and usage/mechanics. The domain-specific training began with a discussion of the features of the writing domain as well as the score scale. The scale consisted of four score points:

- 4 = Consistent control
- 3 = Reasonable control
- 2 = Inconsistent control
- 1 = Little or no control

Following a discussion of each domain and score, prospective table leaders and readers independently scored the set of papers of a given domain. Once all of the domains had been discussed and all of the domain-specific training sets were scored, the table leaders and readers scored three mixed-domain sets of papers.

To ensure accuracy in scoring, trainees practiced scoring regular student test responses as well as a set of calibration prompts. Calibration is a process whereby readers re-score five student papers that had been scored previously by expert scoring team leaders. Calibration prompts were randomly included in the test sets so that the readers did not know when they were scoring calibration papers. Readers whose scoring was not consistent with the scores of the experts on the calibration prompts were retrained. The results of the calibration exercises were reported to the VDOE on a daily basis.

### **Selecting Anchor Papers**

During the rangefinding exercise, team leaders at Harcourt Assessment familiar with the *SOL* assessment writing prompts organized student writing samples into high-, middle-, and low-quality responses. The rangefinding process was conducted for each grade level tested. The sets of responses were used by members of the English Writing Committees to identify model writing samples for each of the three quality levels. These model samples are *anchor papers*, and the identification process is *anchor pulling*.

During the anchor pulling process, English Writing Committee members at each grade level, core members (participants in anchor pulling for all three grade levels) and representatives from Harcourt Assessment and National Computer Systems (the subcontractor scoring the writing) scored the student responses. Readers scored the papers independently then discussed the range papers, and reached a consensus on where the papers fell in the range of scores for a category. Participants checked the range of scores at each quality level to ensure that there was no overlap between levels. The anchor-pulling exercise took place over three days and focused on one writing domain per day.

### **Scoring Student Writing Samples**

A cadre of trained readers, under the supervision of room directors, did the actual scoring of the student writing responses at Harcourt Assessment's Performance Assessment Scoring Center (PASC) in San Antonio. The primary responsibility of the room director was to ensure high-quality scoring and answer questions during the scoring process. The room director reviewed all invalid (unscorable) papers in order to confirm the decision of the reader. Room directors were also responsible for evaluating readers' performance on the calibration sets. The room directors and training supervisor, in conjunction with VDOE staff, monitored reading rates, accuracy rates and the overall reliability and consistency of scoring. When necessary, it was the room director's responsibility to retrain readers.

Prior to the actual scoring, readers were instructed to exclude any papers written on the alternate prompt. Readers marked blank papers, off-topic papers, or papers written to the wrong prompt as either blank or invalid. Readers also flagged papers that contained troubling content, as well as papers where it appeared that students had cheated or where there seemed to be teacher interference.

## 2.5 Item Data and Item Bias Reviews: Summer/Fall 1997

### Item Data Review

Following the field tests, the Content Review Committees met to conduct a final examination of items prior to their inclusion in the *SOL* item bank. The item bank, maintained by Harcourt Assessment, served as the repository from which items for current and future forms of the *SOL* assessments were drawn. The item statistics the committees reviewed included the Mantel-Haenszel procedure and Rasch item difficulty group differences previously described. Committee members interpreted item statistics and judged the quality and appropriateness of each item in the tests. They reviewed items for fairness and possible bias.

This data review process provided Content Review Committee members with an opportunity to discuss their concerns about item content, format, bias, and fit. Participants completed individual rating forms about including an item in the *SOL* item bank. These ratings were tabulated and used to make inclusion decisions about the items on the operational test forms. Items that passed all stages of the development process (e.g., item review, field test, data review, and bias review) were placed in the item bank. They became eligible for use on future *SOL* assessments.<sup>6</sup>

In addition to reviewing items data, the Content Review Committees members also reviewed draft item specifications and draft blueprints. Committee members suggested revisions, such as adjusting the total number of items on the test, adjusting the number and/or type of reporting categories, and adjusting the number of items in each reporting category.

The final blueprints were used to create the first operational test forms administered in the spring of 1998. Published copies of the blueprints were distributed to all public school teachers in Virginia. Table 2.2 shows the number of items for each of the *SOL* assessments reviewed by the Content Review Committees. Where available, it shows the numbers and percentages of items that passed the item data review process.

### High School Bias Review

Because passing certain high school *SOL* assessments would become a high school graduation requirement, it was essential that the assessments be free of factors that could unfairly impact a given group of students. Therefore, a separate Bias Review Committee, representing each content area to be tested, conducted an additional bias review. Bias Review Committee members scrutinized items for potential stereotyping or other forms of bias. The additional bias reviews identified items that might treat any ethnic, gender, or regional group of students differently from any other group or groups. Committee members examined the response distribution for each of the demographic groups to determine if members of a certain group were drawn to one or more of the answer choices for the item. If a large percentage of members of one group selected a particular response, or did not select a particular response, the item was re-examined.

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<sup>6</sup> A sample from the Data and Bias Review Data Books and item data review materials used by the Content Review Committees are included in Appendix C of the *1998 Virginia Technical Report* (2000).

The training and procedures used by Bias Review Committee members were similar to those used during the item review meetings. After the Content Review Committees reviewed the items, the Bias Review Committee focused solely on reviewing items for potential bias. The Bias Review Committee ensured that all test items were fair, and that all students would have an equal opportunity to demonstrate achievement regardless of their gender, ethnic background, religion, socio-economic status, or geographic region.<sup>7</sup>

## 2.6 Review of Operational Forms

In addition to the new item review and data review, Content Review Committees also review operational forms of the *SOL* assessments. Harcourt Assessment constructs test forms that match the content and psychometric specifications of the blueprint. A representative from Harcourt Assessment trains the committee in the basic principles of forms construction. As with item review and data review, the emphasis in Content Review Committee forms review is on the content of the test form. Committee members consider the content of the items that compose the test, test blueprint, the Standards of Learning and the *Curriculum Framework*, and the arrangement of items within the form. The emphasis of this review is the form as a whole, rather than the individual items that compose a form.

## 2.7 Setting Final Standards for the 1998 *SOL* Assessment

Crocker and Algina (1986, p. 410) point out, “(m)any situations require the setting of cutoff scores before test performance is interpreted. ... The practice of setting cutoff scores is commonly called *standard setting*.” In June 1998, the Virginia Board of Education appointed a Standard Setting Advisory Committee (SSAC) to review the procedures and operations of the eight committees involved in the standard setting recommendation process for the 1998 Virginia *Standards of Learning* tests. Committees were created to set standards for the Reading, Writing, Mathematics, History, Science, and Computer/Technology assessments for grades 3 and 5. Table 2.3 shows the eight committees’ *SOL* assessments assignments.

Each of the committees set two cut scores for the *SOL* assessments. These cut scores were used to establish the three performance categories:

- *Advanced Attainment of the Standards (Pass)*
- *Proficient Attainment of the Standards (Pass)*
- *Does Not Meet the Standards (Fail)*

Standard setting is defined as a systematic way of making a professional judgment about how many points a student must earn in order to meet a specified criterion. Two standard-setting methods were used to set the cut scores. The *Modified-Angoff* procedure (Loomis and Cooper, 2001) was used in the multiple-choice *SOL* assessments while the method used for the English Writing assessments for grades 5, 8 and high school end-of-course was the *Bookmark* procedure (Mitzel, Lewis, Patz, and Green, 2001). The Bookmark procedure was used for the English Writing assessments because those assessments incorporate both multiple-choice items and direct-writing prompts.

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<sup>7</sup> Guidelines used by members of the Bias Committee are presented in Appendix D of the *1998 Virginia Technical Report* (2000).

The initial steps of the two standard-setting procedures are similar. Committee members took the test on which the cut scores were to be set in order to simulate a student's experience with the test. Only the multiple-choice components of the assessments were taken. However, committee members were not asked to write a paper for the English Writing assessments. Instead, they were briefed on how the writing papers were scored. This included reviewing the scoring guide or rubric, as well as examining student papers that exemplified each of the score points.

The committee then developed definitions and descriptors for the three performance categories. Members defined the skills and knowledge that separate the students who are barely proficient in a particular content area from those students who do not meet the content standards. The committee members also defined the skills and knowledge that separate the students who are advanced from those who are only proficient in the content standards.

After these initial steps, the modified-Angoff procedure proceeded as follows:

Committee members independently examined each of the test items in the *SOL* assessment. They then estimated the percentage of *barely proficient* students who would answer each question correctly. Committee members considered what those students ought to be able to do, instead of what they could do. This process was repeated for students in the *advanced* category.

Next, each committee member recorded two estimated percentages for each test item on the assessment. Each member's barely proficient ratings were averaged and multiplied by the number of the test items on the assessment. The same procedure was used for each member's advanced ratings. This produced the cut scores for each category. Committee members then discussed the entire range of cut scores. During the discussion, many members refined their original definitions and descriptors. After completing their discussion, they repeated the procedure for producing the cut scores. After three rounds of ratings and discussions, the committee completed its task. The committee's results were presented to the State Board of Education as recommendations of potential cut scores.

The Bookmark method differed from the modified-Angoff method in how ratings were obtained as follows:

Committee members were given booklets that contained the multiple-choice items based on the spring 1998 assessment. The items were ordered by item difficulty, with the easiest items at the front of the booklet and the hardest items in the back. Student writing papers ordered from low score point to high score point were interspersed throughout the booklet. The committee members read the booklets and considered the skills and knowledge exemplified by the multiple-choice questions and the scores assigned to the writing prompts. Each member placed a "bookmark" at the point in the booklet where the items and papers that exemplified the knowledge and skills needed by a student to be considered barely proficient in writing ended. They placed a second bookmark to indicate where the knowledge and skills needed by a student to be considered barely advanced began.

The committee reviewed each member's ratings and discussed the results. During the discussion, many members refined their definitions and descriptors of the performance categories. After completing their discussion, the process was repeated. After three rounds of ratings and discussions, the committee completed its task. These results were presented to the State Board of Education as recommendations of potential cut scores.



One measure of how well the committees did their work is the convergence of their ratings over the three rounds of the standard setting process (cf. Reckase, 2000, p. 39). As committee members proceeded with the standard setting process, one would expect that the members would use the feedback from their discussion to reduce the variation in their ratings. A commonly used index to describe the variation of measurements is the standard deviation. The expectation would be that for a given cut score, the standard deviations of a committee's ratings would decrease from the initial round of ratings to the final round. Table 2.4 shows that the standard deviation of each committee's ratings decreased from the initial round to the final round of ratings for the proficiency cut score.

For the advanced cut score, 23 out of 27 standard settings showed the standard deviations of the committee's ratings decreasing from the initial round to the final round. All of the standard deviations for the ratings at grades 3, 5, and 8 decreased. The standard deviations of the ratings for Algebra I, Earth Science, and Chemistry remained the same. The ratings for World History From 1000 A.D. to the Present/World Geography increased slightly. Overall, these data suggest that while the committees were able to use the ratings feedback in setting their standards, they were not dominated by peer pressure to confirm to a single standard.

The results of the committees' work were presented as recommendations to the Board of Education. Specifically, the recommendations were presented as a range of suggested cut scores that the Board considers in setting the final cut scores for the Virginia *SOL* assessments. A report containing the backgrounds and demographics of the committee members, summaries of the standard setting process, reports from the committee chairs, and the final passing scores established by the Board of Education for the 1998 *SOL* assessments was sent to the Virginia Board of Education Standard Setting Committee.<sup>8</sup> The Board of Education's final cut scores *SOL* assessments are in Table 2.7.

Additional information regarding the standard settings is summarized in Tables 2.5 and 2.6. The committees' initial and final mean ratings are in Table 2.5. The committees' initial and final ratings are shown in Table 2.6.

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<sup>8</sup> Appendix E of the *1998 Virginia Technical Report* (2000) provides additional details of the modified-Angoff and Bookmark standard setting procedures, as well as reports and memoranda from Standard Setting Committees for the *Virginia Standards of Learning*. Included in the appendix is the initial report containing the committee recommendations for each 1998 *SOL* assessment by grade and content area. These recommendations also included the names of the committee members and data from each round of the standard setting.

**Table 2.1 List of Ancillary Materials Used in 1998 Virginia Standards of Learning Assessment**

<b>Standards of Learning Assessment</b>	<b>Ancillary Materials</b>
Grade 3	
Mathematics	Ruler, scratch paper
Science	Ruler, scratch paper
Grade 5	
Writing	Dictionary & scratch paper for direct-writing component only
Mathematics	Ruler, scratch paper, calculator, protractor
Science	Ruler, scratch paper, calculator
Grade 8	
Writing	Dictionary & scratch paper for direct-writing component only
Mathematics	Ruler, scratch paper, calculator, formula sheet
Science	Ruler, scratch paper, calculator
High School End-of-Course	
Writing	Dictionary & scratch paper for direct-writing component only
Algebra I	Ruler, scratch paper, calculator, formula sheet
Geometry	Ruler, scratch paper, calculator, formula sheet, compass
Algebra II	Ruler, scratch paper, calculator, formula sheet
Earth Science	Ruler, scratch paper, calculator
Biology	Ruler, scratch paper, calculator
Chemistry	Ruler, scratch paper, calculator, Periodic Table of the Elements

**Table 2.2 Numbers and Percents of Items Passing Data Review for the Spring 1998 SOL Assessments**

<i>Standards of Learning Assessment</i>	<b>No. of Items Reviewed</b>	<b>No. of Items Passing Data Review</b>	<b>% of Items Passing Data Review</b>
<b>Grade 3</b>			
English: Reading	150	140	93
English: Writing <sup>1</sup>	100	-	-
Mathematics	250	230	92
History	320	302	94
Science	200	175	88
<b>Grade 5</b>			
English: Reading/Lit. & Research.	250	226	90
English: Writing <sup>1</sup>	200	-	-
Mathematics	250	238	95
History <sup>1</sup>	200	-	-
Science	250	220	88
Computer/Technology	150	146	97
<b>Grade 8</b>			
English: Reading/Lit. & Research.	250	241	96
English: Writing <sup>1</sup>	320	-	-
Mathematics	300	275	92
History	250	210	84
Science	200	161	81
Computer/Technology	200	151	76
<b>High School End-of-Course</b>			
English: Reading/Lit. & Research.	270	235	87
English: Writing	270	230	85
Algebra I	450	407	90
Geometry	225	172	76
Algebra II	225	209	93
United States History	300	269	89
World. History to 1000 A.D./W. Geog. <sup>1</sup>	300	-	-
World. History From 1000 A.D./W. Geog.	300	278	93
Earth Science <sup>1</sup>	250	-	-
Biology	250	224	90
Chemistry	250	217	87

<sup>1</sup> Number and percents of items passing Data Review unavailable

**Table 2.3 Assignment of Standards of Learning Assessments to Standard Setting Committees**

<i>Standards of Learning Assessment</i>	<b>Standard Setting Committee</b>							
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Grade 3								
English: Reading/Writing	•							
Mathematics	•							
History	•							
Science	•							
Grade 5								
English: Reading/Lit. & Research.		•						
English: Writing			•					
Mathematics		•						
History		•						
Science		•						
Computer/Technology				•				
Grade 8								
English: Reading/Lit. & Research.					•			
English: Writing			•					
Mathematics						•		
History							•	
Science								•
Computer/Technology				•				
High School End-of-Course								
English: Reading/Lit. & Research.					•			
English: Writing			•					
Algebra I						•		
Geometry						•		
Algebra II						•		
United States History							•	
World. History to 1000 A.D./W. Geog.							•	
World. History From 1000 A.D./W. Geog.							•	
Earth Science								•
Biology								•
Chemistry								•

Note: The marks in the columns indicate the SOL assessments that were assigned to each of the Standard Setting Committees.

**Table 2.4 Initial and Final Standard Deviations of Standard Setting Committee Members' Ratings**

<i>Standards of Learning Assessment</i>	No. of Committee Members	Proficient Cut Score Ratings		Advanced Cut Score Ratings	
		Initial SD	Final SD	Initial SD	Final SD
Grade 3					
English: Reading/Writing	19	6.0	4.6	5.0	2.1
Mathematics	19	5.9	4.9	4.3	3.3
History	19	4.5	3.8	5.0	3.3
Science	19	5.5	4.0	4.0	1.9
Grade 5					
English: Reading/Lit. & Research.	20	5.1	3.6	3.7	1.8
English: Writing	19	4.6	3.2	2.4	1.7
Mathematics	20	5.6	4.6	3.0	2.2
History	20	4.5	3.8	3.1	2.2
Science	20	4.5	3.6	3.6	1.8
Computer/Technology	11	4.7	1.7	2.0	1.8
Grade 8					
English: Reading/Lit. & Research.	17	4.0	3.6	3.0	2.3
English: Writing	19	4.0	2.4	11.1	2.0
Mathematics	19	4.7	3.0	2.5	2.2
History	21	6.3	4.8	4.0	2.8
Science	20	3.3	3.0	3.2	1.8
Computer/Technology	11	6.0	3.2	3.0	2.3
High School End-of-Course					
English: Reading/Lit. & Research.	17	3.6	3.4	4.1	3.4
English: Writing	19	7.7	4.3	3.3	2.1
Algebra I	19	3.8	3.4	1.9	1.9
Geometry	19	6.0	2.8	2.1	1.5
Algebra II	19	4.8	3.5	2.3	1.6
United States History	21	7.4	5.7	5.3	3.8
World. History to 1000 A.D./W. Geog.	19	4.3	3.9	3.0	3.5
World. History From 1000 A.D./W. Geog.	20	5.3	4.9	3.9	2.9
Earth Science	20	2.5	2.4	1.4	1.4
Biology	20	3.3	2.6	2.7	2.1
Chemistry	20	2.9	2.3	1.4	1.4

Note: The modified-Angoff method was used for all standard settings except for English: Writing at grades 5, 8, and high school. These standards were set using the Bookmark procedure.

**Table 2.5 Initial and Final Means of Standard Setting Committee Members' Ratings**

<i>Standards of Learning Assessment</i>	No. of Committee Members	Proficient Cut Score Ratings		Advanced Cut Score Ratings	
		Initial Mean	Final Mean	Initial Mean	Final Mean
Grade 3					
English: Reading/Writing	19	24.0	24.8	37.4	38.4
Mathematics	19	26.2	27.2	41.4	42.5
History	19	19.5	19.4	31.2	31.6
Science	19	23.4	24.0	34.0	34.6
Grade 5					
English: Reading/Lit. & Research.	20	23.2	23.5	36.6	37.0
English: Writing	19	20.3	23.8	37.4	38.9
Mathematics	20	27.2	29.2	43.9	44.4
History	20	21.6	22.2	34.7	34.9
Science	20	22.2	22.6	34.8	35.2
Computer/Technology	11	12.5	13.4	24.5	24.5
Grade 8					
English: Reading/Lit. & Research.	17	19.6	20.0	33.5	34.0
English: Writing	19	17.7	22.4	31.9	39.1
Mathematics	19	30.7	31.4	52.1	52.2
History	21	22.9	23.7	40.2	40.5
Science	20	18.6	21.1	40.8	43.0
Computer/Technology	11	21.0	20.0	33.5	33.5
High School End-of-Course					
English: Reading/Lit. & Research.	17	19.6	19.2	33.5	33.5
English: Writing	19	25.8	29.9	47.2	48.9
Algebra I	19	23.6	23.5	44.7	42.9
Geometry	19	23.3	23.9	39.5	39.8
Algebra II	19	25.3	25.3	44.7	43.8
United States History	21	28.1	27.8	48.6	49.5
World. History to 1000 A.D./W. Geog.	19	25.7	25.9	51.2	52.4
World. History From 1000 A.D./W. Geog.	20	26.4	26.8	53.0	53.7
Earth Science	20	22.2	22.6	45.0	44.0
Biology	20	18.6	21.0	41.0	42.8
Chemistry	20	21.8	22.2	45.0	44.0

Note: The modified-Angoff method was used for all standard settings except for English: Writing at grades 5, 8, and high school. These standards were set using the Bookmark procedure.

**Table 2.6 Initial and Final Ranges of Standard Setting Committee Members' Ratings**

<i>Standards of Learning Assessment</i>	No. of Committee Members	Proficient Cut Score Ratings		Advanced Cut Score Ratings	
		Initial Range	Final Range	Initial Range	Final Range
Grade 3					
English: Reading/Writing	19	9-33	11-32	19-42	34-42
Mathematics	19	13-35	13-36	27-47	33-48
History	19	8-27	9-26	13-37	22-36
Science	19	9-33	12-30	19-38	30-37
Grade 5					
English: Reading/Lit. & Research.	20	15-32	16-28	24-41	33-39
English: Writing	19	12-29	18-30	33-40	34-41
Mathematics	20	18-36	20-36	38-49	40-48
History	20	13-27	14-27	25-39	29-38
Science	20	13-27	15-26	23-39	32-38
Computer/Technology	11	10-19	11-17	21-27	21-27
Grade 8					
English: Reading/Lit. & Research.	17	14-28	14-27	28-38	28-37
English: Writing	19	11-25	17-27	18-40	32-41
Mathematics	19	22-38	23-37	48-58	49-55
History	21	16-37	18-37	33-46	36-46
Science	20	14-28	18-29	31-45	39-45
Computer/Technology	11	15-36	15-27	29-40	30-37
High School End-of-Course					
English: Reading/Lit. & Research.	17	13-25	14-24	20-38	22-37
English: Writing	19	16-42	22-37	41-53	41-51
Algebra I	19	16-33	16-30	41-47	38-45
Geometry	19	15-31	18-29	36-44	37-42
Algebra II	19	17-39	19-34	40-48	42-46
United States History	21	17-43	21-43	38-57	41-56
World. History to 1000 A.D./W. Geog.	19	20-37	21-33	47-57	48-60
World. History From 1000 A.D./W. Geog.	20	20-38	21-36	43-60	49-59
Earth Science	20	18-29	20-30	42-47	40-46
Biology	20	14-25	17-26	36-44	38-46
Chemistry	20	18-29	18-27	42-47	40-46

Note: The modified-Angoff method was used for all standard settings except for English: Writing at grades 5, 8, and high school. These standards were set using the Bookmark procedure.

**Table 2.7 Virginia Standards of Learning Assessments: Passing Scores Established by the Board of Education**

Standards of Learning Assessment	Max. Score	Pass (proficient)		Pass (advanced)	
		Raw Score	Percent of Max. Score	Raw Score	Percent of Max. Score
Grade 3					
English: Reading/Writing	45	32	71%	42	93%
Mathematics	50	36	72	45	90
History	40	24	60	36	90
Science	40	27	68	36	90
Grade 5					
English: Reading/Lit. & Research.	42	28	67%	39	93%
English: Writing	44	32	73	41	93
Mathematics	50	34	68	46	92
History	40	26	65	37	93
Science	40	26	65	37	93
Computer/Technology	30	17	57	27	90
Grade 8					
English: Reading/Lit. & Research.	42	27	64%	37	88%
English: Writing	44	30	68	41	93
Mathematics	60	37	62	55	92
History	50	33	66	45	90
Science	50	29	58	45	90
Computer/Technology	40	26	65	36	90
High School End-of-Course					
English: Reading/Lit. & Research.	42	24	57%	37	88%
English: Writing	54	37	69	49	93
Algebra I	50	27	54	45	90
Geometry	45	27	60	41	91
Algebra II	50	31	62	45	90
United States History	61	40	66	55	90
World. History to 1000 A.D./W. Geog.	61	33	61	55	90
World. History From 1000 A.D./W. Geog.	63	36	57	57	90
Earth Science	50	30	60	45	90
Biology	50	26	52	45	90
Chemistry	50	27	54	45	90





### 3. CALIBRATION, EQUATING, AND SCALING PROCEDURES

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The *Rasch model* (Rasch, 1980) and its polytomous extension, the *Partial Credit model* (PCM) (Masters, 1982) was the Item Response Theory (IRT) model used to develop, calibrate, equate, and scale the Virginia *SOL* assessments. These measurement models are regularly used to construct test forms, for scaling and equating, and to develop and maintain large item banks. The formulation of the Rasch and PCM are outlined in greater detail in Section 3.3.

All test analyses, including item-fit analysis, scaling, equating, diagnosis, and performance prediction were accomplished within this framework. All of the analyses for the grades 5, 8, and end-of-course writing tests were based on the PCM. The multiple-choice items and writing domain scores were combined to form a single scale, and items from different assessment modes and from different test forms were processed simultaneously. The statistical software used to calibrate, scale, and equate the *SOL* assessments was *SAS* (1989), *BIGSTEPS* (Linacre & Wright, 1991), and *TRIAN* (Rentz, 1980).

#### 3.1 Equating and Scale Score Derivation Procedures

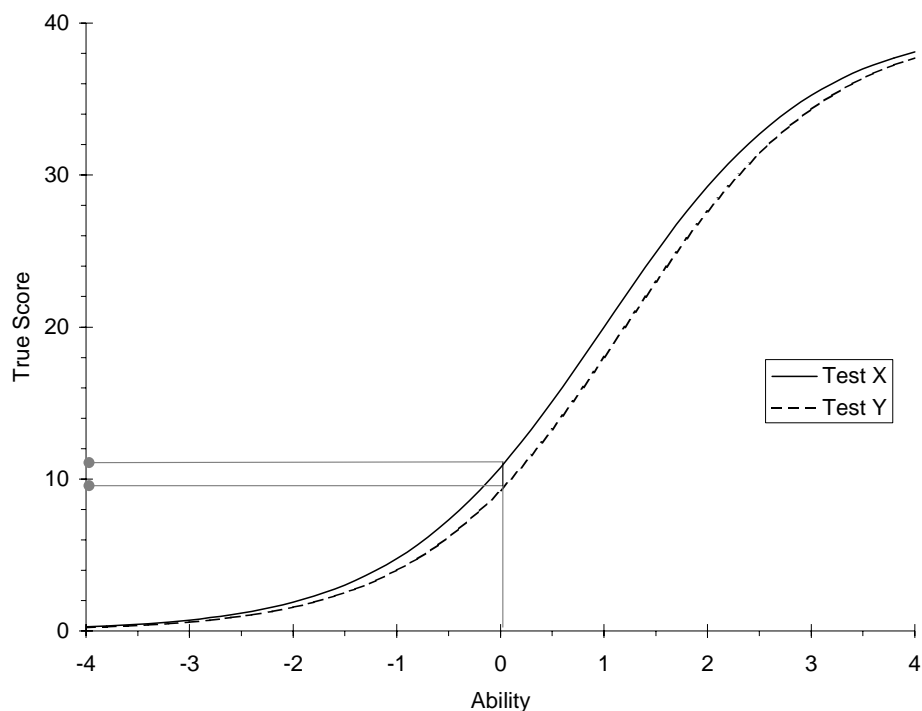
Equating of operational test forms involved ensuring that all forms in a content area and grade level test (e.g., grade 3 Mathematics) are as equally difficult as possible, both within and across assessment administrations. Equating makes certain that students taking one form of a test were neither advantaged nor disadvantaged when compared to students taking a different form of a test.

Common items on each form of the test were used to equate the *SOL* assessments. Each test form contained a subset of items that was reproduced on every other test form for the same subject and grade. These items, called *linking items*, served as anchors for comparison. Each time a new test form is constructed in the future, use of linking items ensures the new form will be equal in difficulty to the previous form. Statistical procedures using data collected on items during field tests were used to perform the equating. The data collection design used was the Design IV procedure for common item, non-equivalent groups (Angoff, 1971).

In order to obtain parameter estimates for both the unique items on each form and the linking items, the Rasch model (or PCM) was applied to each test form at a grade level and content area. The parameter estimates for each form were placed on a common metric by using the equating constant procedure (Wright & Stone, 1979). This resulted in the item parameters for *all* forms being on the same ability scale. A consequence of this was that, given an ability estimate  $\theta$ , it was possible to determine scores on different forms that could be considered equivalent. The final step consisted of obtaining for each raw score point on a form the ability score or theta corresponding to it. This was done by iteratively solving the expression:

$$True\ Score = \sum_{i=1}^I \sum_{j=0}^{m_i} j \cdot P_{ij}(\theta) \quad (\text{Equation 3.1})$$

where  $P_{ij}(\theta)$  is the probability of a correct response for each of the  $i=1, \dots, I$  items given that the item categories are scored  $0, \dots, m_i$ .



**Figure 3.1 True Score Equating**

Figure 3.1 illustrates these concepts for two hypothetical test forms, X and Y. In this figure, the true scores on each of the forms are plotted against ability using Equation 3.1. By drawing a line from the ability (here shown for an ability of 0) to each of the respective curves, and moving across to the true score scale, one can find the pairs of true scores that are equated to one another. According to Lord and Wingersky (1983), the procedure applied to true scores can be transferred to observed scores without any major anomalies in the resulting outcomes.

All post-equating on live test forms was carried out at the total score level, while pre-equating of forms was conducted at the reporting category level. Consequently, as new test forms are developed, they will be of approximate equal difficulty at the reporting category level. Members of the Content Review Committees also used data from these analyses for item review.

### Scale Scores for Content Areas

To accomplish the transformation, two levels,  $d_1$  and  $d_2$ , were selected on the ability scale corresponding to standards-referenced criteria. These values were converted to the new scale at easy-to-remember locations,  $D_1$  and  $D_2$ . Specifically,  $D_1 = 400$  was linked to the cut point between *Below Proficient* and *Proficient*, and  $D_2 = 500$  was linked with the cut scores between *Proficient* and *Advanced*. Since  $d_1$  and  $d_2$  were criterion values on the ability scale, and  $D_1$  and  $D_2$  were the values on the new scale, the linear transformation (see Wright & Stone, 1979) was given by:

$$\text{ScaleScore} = \alpha + \gamma \cdot \text{Theta} \quad (\text{Equation 3.2})$$

where the intercept of the linear transformation is

$$\alpha = (D_1d_2 - D_2d_1)/(d_2 - d_1) \quad (\text{Equation 3.3})$$

and the slope is

$$\gamma = (D_2 - D_1)/(d_2 - d_1). \quad (\text{Equation 3.4})$$

This transformation preserved the standards-referenced interpretation of the scale scores by being explicitly linked to the standards-referenced cut scores obtained from the Virginia SOL assessment standard setting. In other words, regardless of what form or administration year of the SOL assessment a student takes, a student would require the same level of ability to obtain a scale score of 400 for proficiency, and a scale score of 500 for advanced. While the scale scores can be used for comparisons *within* an SOL assessment, they cannot be compared *across* different SOL assessment content areas.

The scale scores represent a non-linear transformation of the raw scores from which they were obtained. That is, the distance between scale scores does not remain the same for each change in the raw scores. Typically, for the middle of the scale (around the 350 to 400 range), the increments are smaller than near the top or bottom of the scale. To complete the scale, a scale score of 0 was set to correspond to a raw score of 0, and a scale score of 600 was set to correspond to a perfect raw score.

### Scale Scores for Reporting Categories

In order to facilitate the use and interpretation of the SOL assessment results, various scale scores were derived for reporting purposes. Since each assessment covers a number of SOLs, the SOLs were grouped into categories that address related content or skills in each test blueprint. These categories are labeled *Reporting Categories*<sup>9</sup>.

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<sup>9</sup> A list of the Reporting Categories for a given SOL assessment can be found in the test blueprints in Appendix B of the 1998 Virginia Technical Report (2000).

For the 1998 *SOL* administration, scale scores for Reporting Categories were calculated to provide a norm-referenced interpretation<sup>10</sup>. First, the mean and standard deviation of the ability distribution of each reporting category<sup>11</sup> was calculated. Next, these values were used to convert each student's ability or theta to an intermediate scale with a mean of 0 and a standard deviation of 1 by:

$$Z_{98} = (\text{Theta} - \text{Mean}_{98}) / \text{SD}_{98} \quad (\text{Equation 3.5})$$

The final scale for the reporting categories was obtained by converting the intermediate scale to a scale with a mean of 35 and a standard deviation of 5 by:

$$\text{ReportingCategoryScaleScore} = 5 \cdot Z_{98} + 35. \quad (\text{Equation 3.6})$$

### 3.2 Item Bank Construction

The number of test forms to be constructed each year, and the need to replace items that would be released to the public, necessitated the availability of a large pool of items. The *SOL* item bank continues to be maintained by Harcourt Assessment in the form of computer files and paper copies. Test items are readily available to both Harcourt and VDOE staff for reference, test construction, test booklet design, and printing.

Harcourt Assessment maintains a computerized statistical item bank to store identification and supporting information on each item. The information stored for each item in this bank includes:

- Code number
- Grade level
- Content area
- *SOL* and reporting category
- Field test date
- Test form
- Item statistics

The statistical item bank also contains information from the data review meetings. The item statistic information was used during test construction to calculate and adjust for test difficulty, content coverage, and pre-equating test forms, and to print individual test statistics as needed.

The item bank Rasch scale statistics were re-calibrated using all of the student test responses after the spring 1998 operational administration of the *SOL* assessments.. The re-calibrated scale will serve as the base scale. Standards were set using the 1998 forms as the base year, and future administrations of the tests will be equated to the scales from the base year administration using a common item non-equivalent groups design.

### 3.3 Technical Note: The Rasch and Partial Credit IRT models

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<sup>10</sup> For *SOL* assessments starting with the fall 1998 administration, scale scores for reporting categories became standards-referenced. The derivation of these scales is described in the *Virginia Standards of Learning Assessments Technical Report: 1998-1999 Administration Cycle* (2001, p. 33).

<sup>11</sup> This is a clarification of the original description of the reporting category scale scores in the *1998 Virginia Technical Report* (2000), which had the mean and standard deviation calculated from the "content area" rather than "reporting category."

The most basic expression of the Rasch model is in the Item Characteristic Curve (ICC). The ICC shows the probability of a correct response to an item as a function of the ability level. The probability of a correct response is bounded by 1 (certainty of a correct response) and 0 (certainty of an incorrect response). The ability scale is, in theory, unbounded. In practice, however, the ability scale ranges from -4 to +4 logits for heterogeneous ability groups. As an example, consider Figure 3.2, which depicts an item that falls at approximately 0.85 on the ability (horizontal) scale. When a person answers an item at the same level as their ability, then that person has a probability of roughly 50% of answering the item correctly. Another way of expressing this is that if we have a group of 100 people, all of whom have an ability of 0.85, we would expect about 50% of them to answer the item correctly. A person whose ability was above 0.85 would have a higher probability of getting the item right, while a person whose ability is below 0.85 would have a lower probability of getting the item right. This makes intuitive sense and is the basic formulation of Rasch measurement for test items having only 2 possible categories (i.e., wrong or right).

Figure 3.3 extends this formulation to show the probabilities of obtaining a wrong answer or a right answer. The curve on the left ( $j=0$ ) shows the probability of getting a score of “0” while the curve on the right ( $j=1$ ) shows the probability of getting a score of “1”. The point at which the two curves cross indicates the transition point on the ability scale where the most likely response changes from a “0” to a “1”. Here, the probability of answering the item correctly is 50%.

The key step in the formulation, and the point at which the Rasch dichotomous model merges with the PCM, requires us to assume an additional response category. Suppose that rather than scoring items as completely wrong or completely right, we add a category representing answers that, though not totally correct, are still clearly not totally incorrect. These relationships are shown in Figure 3.4.

The left-most curve ( $j=0$ ) in Figure 3.4 represents the probability for all examinees getting a score of “0” (completely incorrect) on the item, given their ability. Those of very low ability (e.g., below -2) are very likely to be in this category and, in fact, are more likely to be in this category than the other two. Those receiving a “1” (partial credit) tend to fall in the middle range of abilities (the middle curve,  $j=1$ ). The final, right-most curve ( $j=2$ ) represents the probability for those receiving scores of “2” (completely correct). Very high-ability people are clearly more likely to be in this category than in any other, but there are still some of average and low ability that can get full credit for the item.

Although the actual computations are quite complex, the points at which lines cross each other have a similar interpretation as for the dichotomous case. Consider the point at which the  $j=0$  line crosses the  $j=1$  line, indicated by the left arrow. For abilities to the left of (or less than) this point, the probability is greatest for a “0” response. To the right of (or above) this point, and up to the point at which the  $j=1$  and  $j=2$  lines cross (marked by the right arrow), the most likely response is a “1”. For abilities to the right of this point, the most likely response is a “2”.

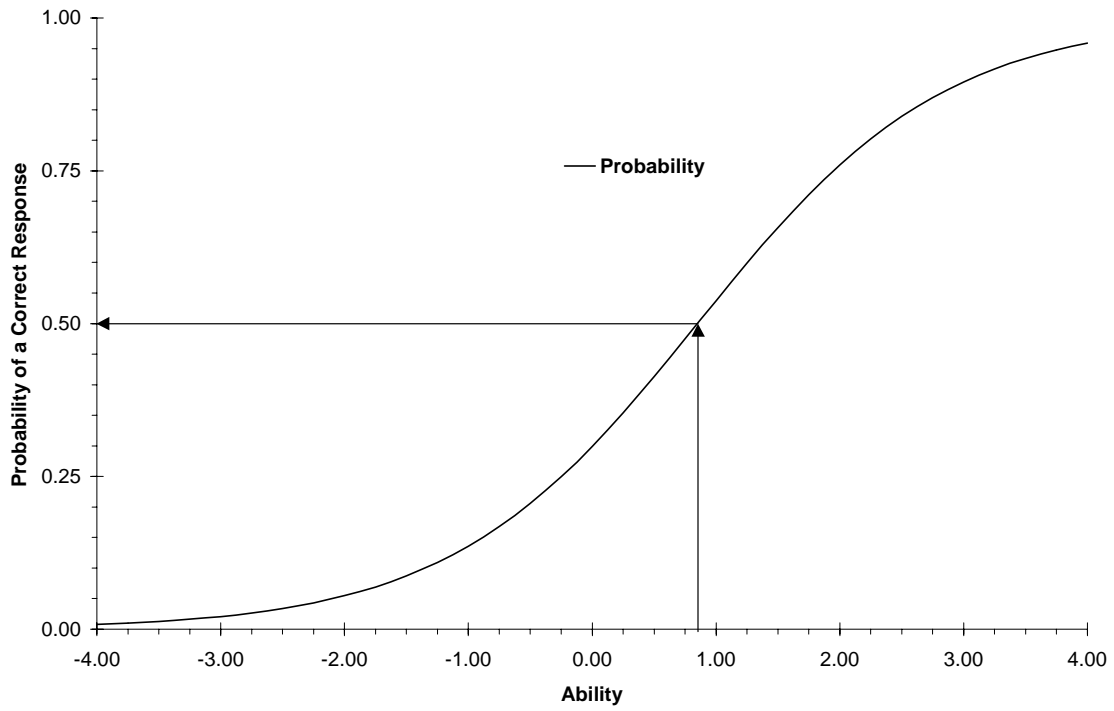


Figure 3.2 Sample item characteristic curve.

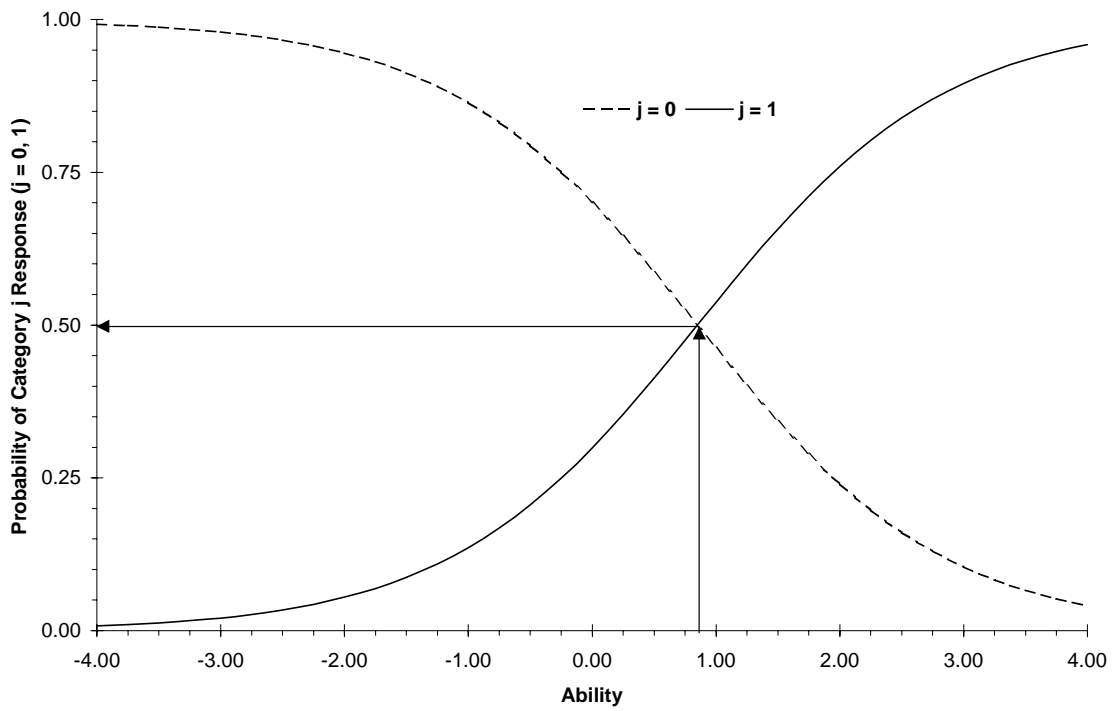
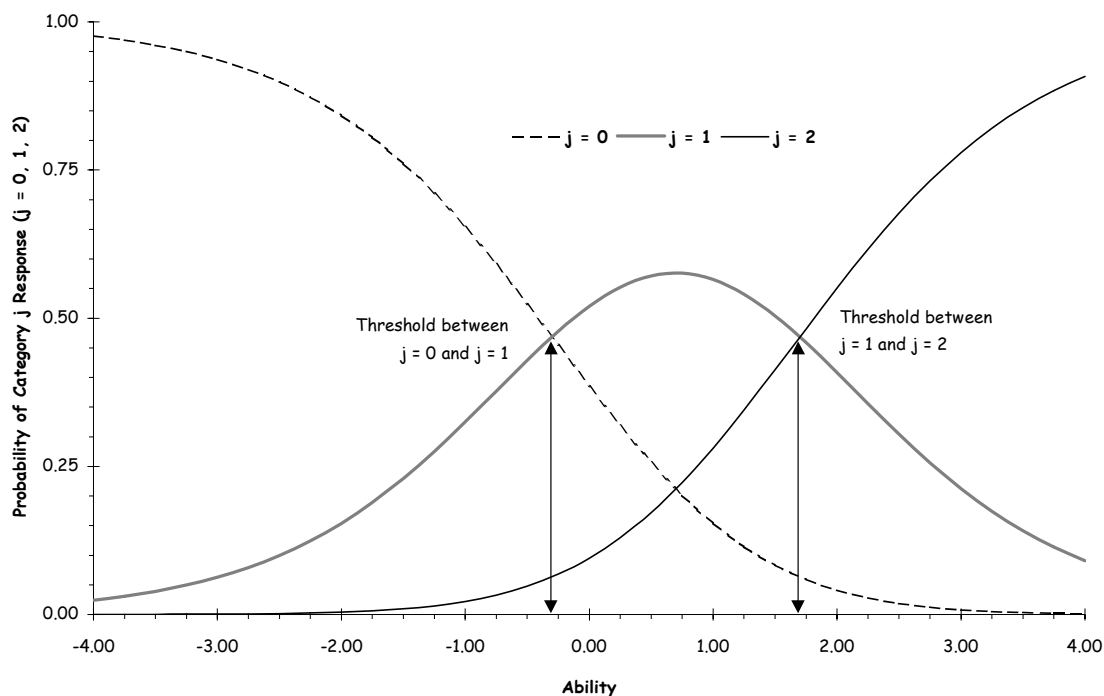


Figure 3.3 Category response curves for a one-step item.



**Figure 3.4** Category response curves for a two-step item.

Note that the probability of scoring a “1” response ( $j=1$ ) declines in both directions as ability decreases to the low extreme or increases to the high extreme. These points then may be thought of as the difficulties of crossing the *thresholds* between categories.

An important implication of the formulation can be summarized as: If the commonly used Rasch model applied to dichotomously (right/wrong) scored items can be thought of as simply a special case of the PCM, then the act of scaling multiple-choice items together with polytomous items, whether they have three or more response categories, is a straightforward process of applying the measurement model. The quality of the scaling then can be assessed in terms of known procedures.

One important property of the PCM is its ability to separate the estimation of item/task parameters from the person parameters. With the PCM, as with the Rasch model, the total score given by the sum of the categories in which a person responds is a sufficient statistic for estimating person ability (i.e., no additional information need be estimated). The total number of responses across examinees in a particular category is a sufficient statistic for estimating the step difficulty for that category. Thus with PCM, the same total score will yield the same ability estimate for different examinees.



The PCM is a direct extension of the dichotomous one-parameter IRT model developed by Rasch in the 1950s (Rasch, 1980). For an item/task involving  $m_i$  score categories, one general expression for the probability of scoring  $x$  on item/task  $i$  is given by

$$P_{xi} = \exp \sum_{j=0}^x (\theta - D_{ij}) / \sum_{k=0}^{m_i} \left[ \exp \sum_{j=0}^k (\theta - D_{ij}) \right] \quad (\text{Equation 3.7})$$

where  $x = 0, 1, \dots, m_i$ , and by definition,  $\sum_{j=0}^0 (\theta - D_{ij}) = 0$ .

The above equation gives the probability of scoring  $x$  on the  $i$ -th test item as a function of ability ( $\theta$ ) and the difficulty of the  $m_i$  steps of the task (Masters, 1982).

According to this model, the probability of an examinee scoring in a particular category (step) is the sum of the logit (log-odds) differences between  $\theta$  and  $D_{ij}$  of all the completed steps, divided by the sum of the differences of all the steps of a task. Thissen and Steinberg (1986) refer to this model as a divide-by-total model. The parameters estimated by this model are (1) an ability estimate for each person (or ability estimate at each raw score level) and (2)  $m_i$  threshold (difficulty) estimates for each task with  $m_i + 1$  score categories.

#### **4. CHANGES AND DEVELOPMENTS IN THE 2003-2004 SOL ADMINISTRATION CYCLE**

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Earlier technical reports have described the changes and developments to the Virginia Standards of Learning Assessments. The technical report for the 1998-1999 administration cycle described changes to the scoring of writing prompts and the development of new reporting category scale scores (Virginia Department of Education, 2001 April). The technical report for the 1999-2000 administration cycle described the standard setting process for the World Geography end-of-course examination and the test security legislation enacted by the Virginia General Assembly (Virginia Department of Education, 2001 December). The technical report for the 2002-2003 administration cycle reflects the deletion of the Computer/Technology test at grades 5 and 8.

The changes to the report for the 2003-2004 administration cycle include the implementation of the 2001 standards in Algebra I, Algebra II, Geometry, Virginia and United States History, World History I, World History II, and World Geography end-of-course, as well as, History and Social Science for Grades 3, 5 and 8. The report also shows the addition of United States History to 1877, United States History from 1877 to Present and Civics and Economics for grades 5, 6 and 7 respectively.



## 5. OVERVIEW OF STATISTICAL SUMMARIES

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This section contains an overview of the statistical summaries for the 2003-2004 Virginia *SOL* assessment cycle. The actual statistics described in this section are in Sections 6 and 7 of this report, and in a separate set of appendixes. Selected results for the fall 2003 *SOL* administration are in Section 6. All of the analytical results for the spring 2004 *SOL* administration are in Section 7. The sections provide the details of the psychometric and statistical analyses performed after the administration of the *SOL* assessments in the 2003-2004 administration cycle.

Analyses are provided for both the writing assessments in grades 5, 8 and high school end-of-course, and the multiple-choice assessments for grades 3, 5, 8 and high school end-of-course. For the writing assessments, analyses are provided for each combination of multiple-choice section and writing prompts. Analyses for the multiple-choice assessments for both the Core 1 (Main) and Core 2 (Alternate) forms of the assessments are included. The tables of the statistical summary are numbered consecutively within their sub-section. Thus, Table 6.1.1 is the first table within Section 6.1. The numbers of the tables in the sub-sections of 6 and 7 also correspond to the sub-section numbers. Additional reliability analyses are listed in Appendix E.

### 5.1 Administration Results

These tables show the percentages of students failing, passing (proficient), and passing (advanced) for each of the *SOL* assessments in the fall 2003 and spring 2004 administrations (see Sections 6.1 and 7.1.)

### 5.2 Reliabilities and Scale Score Descriptive Statistics

The first tables contain the statistics and reliabilities for each grade. They also show the form of the multiple-choice *SOL* assessments, and include:

- Number of items
- Numbers of students<sup>12</sup>
- Means and standard deviations of the students' scale scores
- *Kuder-Richardson Formula 20* (KR20) internal consistency reliability estimate<sup>13</sup>
- Standard error of measurement
- Mean raw score as a proportion of the maximum obtainable score
- Conditional standard errors of measurement for the proficient and advanced cut scores

Results for spring 2004 administration are in Tables 7.2.1 through 7.2.4.

The second tables contain the statistics for the grades 5, 8 and high school end-of-course writing assessments, and include:

- Specific combination of the administered writing prompt and multiple-choice section

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<sup>12</sup> Note the numbers of students reported in these tables may be lower than the totals reported in the statewide summaries. These differences are due to the inclusion of all student results in the state summaries and the exclusion of incomplete student results in the statistical summaries. **In general, students who have scores of zero or with incomplete data responses were deleted from all analysis.**

<sup>13</sup> Crocker & Algina, 1986, p. 139

- Number of items that were on the writing assessment
- Maximum obtainable raw score possible for the writing assessment
- Numbers of students
- Means and standard deviations of the students' scale scores
- *Coefficient alpha* internal consistency reliability<sup>14</sup>
- Standard error of measurement
- Mean raw score as a proportion of the maximum obtainable score
- Conditional standard errors of measurement for the proficient and advanced cut scores

Results for spring 2004 administration are in Tables 7.2.5 through 7.2.7.

The third tables contain the statistics for the grades 5, 6 and 7 history, and include:

- Number of items
- Numbers of students<sup>15</sup>
- Means and standard deviations of the students' scale scores
- *Kuder-Richardson Formula 20* (KR20) internal consistency reliability estimate<sup>16</sup>
- Standard error of measurement
- Mean raw score as a proportion of the maximum obtainable score
- Conditional standard errors of measurement for the proficient and advanced cut scores

Results for spring 2004 administration are in Table 7.2.8.

Additional statistical information regarding the multiple-choice and writing assessments is in Appendixes B and C.

Appendix B provides frequency distributions and histograms of the scale scores of the *SOL* assessments. Grades 3, 5, 8 and high school end-of-course multiple-choice assessments are first, next the grade 5, 8 and high school end-of-course writing assessments, followed by Grades 5, 6 and 7 history assessments.

Appendix C has the item analyses for the multiple-choice and the direct-writing assessments. For each multiple-choice item, the statistics include:

- *p*-value
- Point-biserial correlation
- Rasch difficulty estimate
- Standard error of the Rasch difficulty

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<sup>14</sup> Crocker & Algina, 1986, p. 138

<sup>15</sup> Note the numbers of students reported in these tables may be lower than the totals reported in the statewide summaries. These differences are due to the inclusion of all student results in the state summaries and the exclusion of incomplete student results in the statistical summaries. **In general, students who have scores of zero or with incomplete data responses were deleted from all analysis.**

<sup>16</sup> Crocker & Algina, 1986, p. 139

In order for  $p$ -values for the domain scores of the direct-writing assessments to be comparable to the multiple-choice  $p$ -values they were calculated as modified proportions of the maximum obtainable domain scores. Appendix C also has analyses for all core forms for the spring 2004 administration, but contains only core 1 forms for the fall 2003 administration, with the exceptions of Virginia and United States History, World History I and II, World Geography and Writing which have analysis for both cores 1 and 2. The core 2 forms for the other fall 2003 administration are reprints of previously administered tests.

### 5.3 Correlations

The tables present the correlation matrix of the scale scores for each set of multiple-choice *SOL* assessments in grades 3, 5, and 8. Results for the spring 2004 administration are in Tables 7.3.1 through 7.3.3.

### 5.4 Decision Consistency and Accuracy at the Pass (Proficient) Cut Scores

The tables contain the results of analyses performed to estimate the accuracy and consistency of the decisions for passing (proficient) on the Virginia *SOL* assessments. The analyses make use of the methods outlined and implemented in Livingston and Lewis (1995), Haertel (1996), and Young and Yoon (1998).

The *accuracy* of a decision is the extent to which it would agree with the decisions that would be made if each student were tested with all possible parallel forms of the assessments. The *consistency* of a decision is the extent to which it would agree with the decisions that would be made if the students had taken a different form of the examination, equal in difficulty and covering the same content as the form they actually took.

Students can be misclassified in one of two ways. Students who were below the proficiency cut score, but were classified (on the basis of the assessment) as being above a cut score, are considered to be *false positives*. Students who were above the proficiency cut score, but were classified as being below a cut score, are considered to be *false negatives*.

For each *SOL* multiple-choice and writing assessment, these tables include the proportion of:

- Consistent classifications
- Accurate classifications
- False positives
- False negatives

Results for spring 2004 administration are in Tables 7.4.1 through 7.4.8. The tables illustrate the general rule that decision consistency will be less than decision accuracy.

### 5.5 Inter-Rater Reliability

Results for spring 2004 administration concerning inter-rater reliability are in Tables 7.5.1 through 7.5.3. Each writing prompt was read and scored by two independent readers on a 1 to 4 point scale or rubric. When the two readers assigned the same score to a student's paper, the scores were in *exact agreement*. Scores that differed by exactly one score point were *adjacent*. Scores that differed by two or more score points were *non-adjacent*. The room directors reviewed all of the non-adjacent papers before a final score was assigned.

This table includes:

- Writing prompt and writing domain score
- Numbers of students for which the writing domain inter-rater reliabilities were calculated
- Percentages of papers that were in exact agreement, adjacent, or non-adjacent

### **5.6 Scaling and Equating**

Tables 6.6.1 to 6.6.17 contain the raw score to scale score conversion for the fall 2003 administration. Tables 7.6.1 to 7.6.34 are for the spring 2004 administration. Tables for the direct-writing assessments within each grade follow the tables for the multiple-choice assessments, while History for grades 5, 6 and 7 comes at the end. Conditional standard errors for the scale scores are also included with the tables.

## **6. FALL 2003 STATISTICAL SUMMARY**

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**Table 6.1.1 Fall 2003 Virginia SOL Assessments: Assessment Pass Rates (2001 Standards)**

Standards of Learning Assessment	N	% Fail	% Pass		
			Proficient	Advanced	Overall
Grade 8					
English: Reading/Lit. & Research	7,809	76	22	2	24
English: Writing	820	34	60	5	65
Mathematics	8,242	84	14	1	15
History & Social Science	1,178	28	62	10	72
Science	2,012	19	65	16	81
High School End-of-Course					
English: Reading/Lit. & Research	12,700	26	60	14	74
English: Writing	17,186	29	58	13	71
Algebra I	14,250	42	52	6	58
Geometry	9,032	31	53	16	69
Algebra II	5,668	20	57	23	80
Virginia & United States History	7,589	20	57	23	80
World History I	8,219	25	60	15	75
World History II	5,871	22	58	20	78
Earth Science	21,906	53	40	7	47
Biology	18,385	42	51	6	57
Chemistry	6,606	31	59	9	68
World Geography	4,812	40	47	13	60

**Note: Percentages may not add to 100% due to rounding**

**Table 6.1.2 Fall 2003 Virginia SOL Assessments: Assessment Pass Rates (1995 Standards)**

Standards of Learning Assessment	N	% Fail	% Pass		
			Proficient	Advanced	Overall
Grade 8					
English: Reading/Lit. & Research	7,809	76	22	2	24
English: Writing	820	34	60	5	65
Mathematics	8,242	84	14	1	15
History & Social Science	1,178	28	62	10	72
Science	2,012	19	65	16	81
High School End-of-Course					
English: Reading/Lit. & Research	12,700	26	60	14	74
English: Writing	17,186	29	58	13	71
Algebra I	5,890	63	34	3	37
Geometry	1,571	68	30	1	31
Algebra II	1,139	47	40	13	53
Virginia & United States History	4,837	83	16	1	17
World History I	5,371	61	38	2	40
World History II	5,523	68	31	1	32
Earth Science	21,906	53	40	7	47
Biology	18,385	42	51	6	57
Chemistry	6,606	31	59	9	68
World Geography	4,812	40	47	13	60

Note: Percentages may not add to 100% due to rounding

**Table 6.6.1 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course English: Reading**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	155	55	100	210
2	194	40	154	234
3	218	33	185	251
4	236	29	207	265
5	251	27	224	278
6	264	25	239	289
7	275	24	251	299
8	284	22	262	306
9	294	22	272	316
10	302	21	281	323
11	310	20	290	330
12	318	20	298	338
13	325	20	305	345
14	332	19	313	351
15	339	19	320	358
16	345	19	326	364
17	352	19	333	371
18	358	18	340	376
19	364	18	346	382
20	371	18	353	389
21	377	18	359	395
22	383	18	365	401
23	389	18	371	407
24	395	18	377	413
25	402	18	384	420
26	408	19	389	427
27	414	19	395	433
28	421	19	402	440
29	428	19	409	447
30	435	20	415	455
31	442	20	422	462
32	450	21	429	471
33	458	21	437	479
34	467	22	445	489
35	477	23	454	500
36	487	25	462	512
37	499	26	473	525
38	514	29	485	543
39	532	33	499	565
40	555	40	515	595
41	595	55	540	600
42	600	0	600	600

**Table 6.6.2 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Algebra I (1995 Standards)**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	202	45	157	247
2	234	33	201	267
3	254	27	227	281
4	269	24	245	293
5	281	22	259	303
6	291	20	271	311
7	299	19	280	318
8	307	18	289	325
9	314	17	297	331
10	321	17	304	338
11	326	16	310	342
12	332	16	316	348
13	337	15	322	352
14	343	15	328	358
15	348	15	333	363
16	352	14	338	366
17	357	14	343	371
18	361	14	347	375
19	366	14	352	380
20	370	14	356	384
21	374	14	360	388
22	378	14	364	392
23	382	13	369	395
24	387	13	374	400
25	391	13	378	404
26	395	13	382	408
27	399	13	386	412
28	403	13	390	416
29	407	14	393	421
30	411	14	397	425
31	415	14	401	429
32	420	14	406	434
33	424	14	410	438
34	429	14	415	443
35	433	15	418	448
36	438	15	423	453
37	443	15	428	458
38	448	16	432	464
39	453	16	437	469
40	459	16	443	475
41	465	17	448	482
42	472	18	454	490
43	480	19	461	499
44	488	20	468	508
45	497	21	476	518
46	509	24	485	533
47	523	27	496	550
48	542	32	510	574
49	575	45	530	600
50	600	0	600	600

**Table 6.6.3 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Geometry (1995 Standards)**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	184	49	135	233
2	220	36	184	256
3	242	30	212	272
4	258	26	232	284
5	271	24	247	295
6	281	22	259	303
7	291	21	270	312
8	300	20	280	320
9	308	19	289	327
10	315	18	297	333
11	322	18	304	340
12	328	17	311	345
13	335	17	318	352
14	340	17	323	357
15	346	16	330	362
16	351	16	335	367
17	357	16	341	373
18	362	16	346	378
19	367	16	351	383
20	372	15	357	387
21	378	15	363	393
22	382	15	367	397
23	388	15	373	403
24	393	15	378	408
25	397	15	382	412
26	403	15	388	418
27	408	16	392	424
28	413	16	397	429
29	418	16	402	434
30	423	16	407	439
31	429	16	413	445
32	435	17	418	452
33	441	17	424	458
34	447	18	429	465
35	454	18	436	472
36	461	19	442	480
37	469	20	449	489
38	477	21	456	498
39	486	22	464	508
40	497	24	473	521
41	509	26	483	535
42	525	29	496	554
43	547	35	512	582
44	582	49	533	600
45	600	0	600	600

**Table 6.6.4 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Algebra II (1995 Standards)**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	139	56	83	195
2	180	40	140	220
3	204	34	170	238
4	223	30	193	253
5	237	27	210	264
6	249	25	224	274
7	260	24	236	284
8	270	23	247	293
9	278	22	256	300
10	286	20	266	306
11	293	20	273	313
12	301	19	282	320
13	307	19	288	326
14	314	19	295	333
15	320	18	302	338
16	325	18	307	343
17	332	18	314	350
18	337	18	319	355
19	343	17	326	360
20	348	17	331	365
21	353	17	336	370
22	358	17	341	375
23	364	17	347	381
24	369	17	352	386
25	374	17	357	391
26	379	17	362	396
27	384	17	367	401
28	389	17	372	406
29	394	17	377	411
30	400	17	383	417
31	404	17	387	421
32	410	17	393	427
33	416	18	398	434
34	421	18	403	439
35	427	18	409	445
36	433	18	415	451
37	439	19	420	458
38	445	19	426	464
39	453	20	433	473
40	460	20	440	480
41	467	21	446	488
42	476	22	454	498
43	485	23	462	508
44	496	25	471	521
45	508	27	481	535
46	522	29	493	551
47	540	34	506	574
48	564	40	524	600
49	600	56	544	600
50	600	0	600	600

**Table 6.6.5 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Virginia and U.S. History (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	168	52	116	220	181	23	158	204
2	206	38	168	244	217	23	194	240
3	229	31	198	260	239	31	208	270
4	246	28	218	274	255	20	235	275
5	259	25	234	284	269	23	246	292
6	270	23	247	293	279	20	259	299
7	280	22	258	302	289	22	267	311
8	289	21	268	310	297	21	276	318
9	297	20	277	317	305	16	289	321
10	304	19	285	323	311	18	293	329
11	311	18	293	329	318	13	305	331
12	317	18	299	335	324	18	306	342
13	323	17	306	340	330	13	317	343
14	329	17	312	346	335	14	321	349
15	334	16	318	350	340	16	324	356
16	339	16	323	355	345	16	329	361
17	345	16	329	361	350	13	337	363
18	349	15	334	364	354	15	339	369
19	354	15	339	369	359	14	345	373
20	358	15	343	373	363	15	348	378
21	363	15	348	378	368	13	355	381
22	367	15	352	382	372	14	358	386
23	372	15	357	387	376	13	363	389
24	376	15	361	391	380	13	367	393
25	380	14	366	394	384	14	370	398
26	384	14	370	398	388	14	374	402
27	388	14	374	402	392	14	378	406
28	392	14	378	406	395	14	381	409
29	396	14	382	410	399	14	385	413
30	400	14	386	414	403	13	390	416
31	404	14	390	418	407	15	392	422
32	408	14	394	422	411	16	395	427
33	412	14	398	426	415	17	398	432
34	416	14	402	430	419	14	405	433
35	420	14	406	434	423	14	409	437
36	424	14	410	438	427	13	414	440
37	428	14	414	442	431	13	418	444
38	432	15	417	447	435	18	417	453
39	436	15	421	451	439	15	424	454
40	441	15	426	456	443	15	428	458
41	446	15	431	461	448	15	433	463
42	450	15	435	465	452	14	438	466
43	454	15	439	469	457	17	440	474
44	459	16	443	475	462	18	444	480
45	465	16	449	481	466	16	450	482
46	470	16	454	486	472	17	455	489
47	475	17	458	492	477	17	460	494
48	481	17	464	498	483	31	452	514
49	487	18	469	505	489	52	437	541
50	493	18	475	511	495	20	475	515
51	500	19	481	519	502	18	484	520
52	508	20	488	528	509	20	489	529
53	516	22	494	538	518	15	503	533
54	526	23	503	549	527	21	506	548
55	536	25	511	561	538	17	521	555
56	549	27	522	576	551	27	524	578
57	566	31	535	597	567	31	536	598

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	588	37	551	600	590	37	553	600
59	600	52	548	600	600	20	580	600
60	600	0	600	600	600	0	600	600



**Table 6.6.6 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World History I (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	142	58	84	200	161	57	104	218
2	184	41	143	225	201	41	160	242
3	210	35	175	245	226	25	201	251
4	229	31	198	260	244	31	213	275
5	244	28	216	272	258	16	242	274
6	257	26	231	283	270	16	254	286
7	268	24	244	292	280	24	256	304
8	278	23	255	301	290	15	275	305
9	287	22	265	309	298	22	276	320
10	295	21	274	316	306	16	290	322
11	302	20	282	322	313	16	297	329
12	309	20	289	329	320	16	304	336
13	316	19	297	335	326	19	307	345
14	322	18	304	340	332	15	317	347
15	328	18	310	346	339	15	324	354
16	334	18	316	352	344	18	326	362
17	339	17	322	356	349	16	333	365
18	345	17	328	362	354	17	337	371
19	350	17	333	367	360	18	342	378
20	355	17	338	372	364	17	347	381
21	360	16	344	376	369	16	353	385
22	364	16	348	380	374	16	358	390
23	369	16	353	385	379	15	364	394
24	373	16	357	389	383	14	369	397
25	378	16	362	394	388	16	372	404
26	382	16	366	398	392	16	376	408
27	387	16	371	403	397	16	381	413
28	391	16	375	407	401	15	386	416
29	396	16	380	412	406	16	390	422
30	400	16	384	416	410	16	394	426
31	404	16	388	420	414	15	399	429
32	408	16	392	424	418	17	401	435
33	413	16	397	429	423	17	406	440
34	417	16	401	433	427	16	411	443
35	421	16	405	437	432	16	416	448
36	426	16	410	442	436	17	419	453
37	430	16	414	446	441	16	425	457
38	435	16	419	451	445	16	429	461
39	439	16	423	455	450	15	435	465
40	444	16	428	460	455	18	437	473
41	449	16	433	465	460	15	445	475
42	454	17	437	471	465	15	450	480
43	459	17	442	476	470	17	453	487
44	464	17	447	481	475	17	458	492
45	469	17	452	486	481	17	464	498
46	475	18	457	493	487	16	471	503
47	480	18	462	498	493	30	463	523
48	487	19	468	506	499	15	484	514
49	493	20	473	513	506	16	490	522
50	500	20	480	520	513	57	456	570
51	508	21	487	529	520	21	499	541
52	516	22	494	538	528	22	506	550
53	525	23	502	548	538	15	523	553
54	535	25	510	560	548	25	523	573
55	547	27	520	574	560	15	545	575
56	561	30	531	591	574	15	559	589
57	578	34	544	600	592	18	574	600

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	41	559	600	600	41	559	600
59	600	56	544	600	600	15	585	600
60	600	0	600	600	600	15	585	600

**Table 6.6.7 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World History II (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	15	0	15
1	151	57	94	208	154	15	139	169
2	193	41	152	234	195	15	180	210
3	218	34	184	252	220	34	186	254
4	236	30	206	266	239	20	219	259
5	251	27	224	278	254	18	236	272
6	264	25	239	289	266	20	246	286
7	274	23	251	297	277	22	255	299
8	283	22	261	305	286	22	264	308
9	292	21	271	313	295	21	274	316
10	299	20	279	319	303	20	283	323
11	307	19	288	326	310	19	291	329
12	313	19	294	332	317	14	303	331
13	319	18	301	337	323	14	309	337
14	325	18	307	343	329	17	312	346
15	331	18	313	349	335	14	321	349
16	336	17	319	353	340	14	326	354
17	341	17	324	358	346	14	332	360
18	346	17	329	363	351	14	337	365
19	351	17	334	368	356	17	339	373
20	356	16	340	372	361	15	346	376
21	361	16	345	377	365	14	351	379
22	366	16	350	382	370	14	356	384
23	370	15	355	385	375	15	360	390
24	375	15	360	390	379	15	364	394
25	378	15	363	393	383	15	368	398
26	383	15	368	398	388	15	373	403
27	387	15	372	402	392	17	375	409
28	392	15	377	407	397	15	382	412
29	396	15	381	411	401	14	387	415
30	400	15	385	415	405	15	390	420
31	404	15	389	419	409	16	393	425
32	408	15	393	423	414	15	399	429
33	413	15	398	428	418	15	403	433
34	417	15	402	432	422	15	407	437
35	421	15	406	436	427	14	413	441
36	425	15	410	440	431	15	416	446
37	430	15	415	445	435	15	420	450
38	434	16	418	450	440	16	424	456
39	439	16	423	455	445	16	429	461
40	444	16	428	460	449	15	434	464
41	448	17	431	465	454	15	439	469
42	453	17	436	470	459	23	436	482
43	458	17	441	475	464	17	447	481
44	464	17	447	481	469	14	455	483
45	469	18	451	487	475	15	460	490
46	475	18	457	493	480	23	457	503
47	480	18	462	498	486	14	472	500
48	486	19	467	505	492	19	473	511
49	493	19	474	512	499	19	480	518
50	500	20	480	520	506	20	486	526
51	508	21	487	529	513	15	498	528
52	515	22	493	537	522	22	500	544
53	525	23	502	548	531	14	517	545
54	535	24	511	559	541	17	524	558
55	546	27	519	573	552	15	537	567
56	561	29	532	590	567	29	538	596
57	578	33	545	600	584	15	569	599

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	40	560	600	600	14	586	600
59	600	56	544	600	600	15	585	600
60	600	0	600	600	600	0	600	600

**Table 6.6.8 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Earth Science**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	161	52	109	213
2	198	37	161	235
3	221	31	190	252
4	237	27	210	264
5	250	25	225	275
6	261	23	238	284
7	270	22	248	292
8	279	21	258	300
9	287	19	268	306
10	294	19	275	313
11	301	18	283	319
12	307	18	289	325
13	313	17	296	330
14	319	17	302	336
15	324	16	308	340
16	329	16	313	345
17	335	16	319	351
18	340	16	324	356
19	344	16	328	360
20	349	15	334	364
21	354	15	339	369
22	359	15	344	374
23	363	15	348	378
24	368	15	353	383
25	373	15	358	388
26	377	15	362	392
27	382	15	367	397
28	386	15	371	401
29	391	15	376	406
30	396	16	380	412
31	401	16	385	417
32	405	16	389	421
33	410	16	394	426
34	416	16	400	432
35	421	17	404	438
36	427	17	410	444
37	433	17	416	450
38	439	18	421	457
39	446	19	427	465
40	453	19	434	472
41	461	21	440	482
42	469	22	447	491
43	479	23	456	502
44	489	25	464	514
45	503	27	476	530
46	519	31	488	550
47	541	37	504	578
48	579	52	527	600
49	590	52	538	600
50	600	0	600	600

**Table 6.6.9 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Biology**

Raw Score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	210	44	166	254
2	242	32	210	274
3	261	26	235	287
4	275	23	252	298
5	286	21	265	307
6	296	19	277	315
7	304	19	285	323
8	312	18	294	330
9	318	17	301	335
10	325	16	309	341
11	330	16	314	346
12	336	15	321	351
13	341	15	326	356
14	346	15	331	361
15	351	14	337	365
16	355	14	341	369
17	360	14	346	374
18	364	13	351	377
19	368	13	355	381
20	373	13	360	386
21	377	13	364	390
22	381	13	368	394
23	385	13	372	398
24	389	13	376	402
25	393	13	380	406
26	397	13	384	410
27	400	13	387	413
28	404	13	391	417
29	409	13	396	422
30	413	13	400	426
31	416	13	403	429
32	421	13	408	434
33	425	14	411	439
34	429	14	415	443
35	434	14	420	448
36	439	14	425	453
37	444	15	429	459
38	449	15	434	464
39	454	16	438	470
40	460	16	444	476
41	466	16	450	482
42	473	17	456	490
43	480	18	462	498
44	488	19	469	507
45	497	21	476	518
46	509	23	486	532
47	523	26	497	549
48	542	32	510	574
49	573	44	529	600
50	600	0	600	600

**Table 6.6.10 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Chemistry**

Raw score	Core 1			
	Scale Score (SS)	Standard Error (SEM)	SS - 1SEM	SS + 1SEM
0	0	0	0	0
1	202	46	156	248
2	237	34	203	271
3	258	28	230	286
4	273	24	249	297
5	285	22	263	307
6	295	20	275	315
7	304	19	285	323
8	312	18	294	330
9	319	17	302	336
10	325	17	308	342
11	331	16	315	347
12	337	15	322	352
13	342	15	327	357
14	347	15	332	362
15	352	15	337	367
16	357	14	343	371
17	361	14	347	375
18	366	14	352	380
19	370	14	356	384
20	375	14	361	389
21	379	14	365	393
22	383	14	369	397
23	387	13	374	400
24	391	13	378	404
25	395	13	382	408
26	399	13	386	412
27	403	13	390	416
28	407	14	393	421
29	411	14	397	425
30	416	14	402	430
31	420	14	406	434
32	424	14	410	438
33	429	14	415	443
34	433	14	419	447
35	438	15	423	453
36	443	15	428	458
37	448	15	433	463
38	453	15	438	468
39	459	16	443	475
40	464	16	448	480
41	471	17	454	488
42	478	18	460	496
43	485	19	466	504
44	494	20	474	514
45	503	22	481	525
46	515	24	491	539
47	529	27	502	556
48	549	32	517	581
49	581	45	536	600
50	600	0	600	600

**Table 6.6.11 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World Geography (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	97	67	30	164	109	16	93	125
2	145	48	97	193	156	20	136	176
3	174	40	134	214	184	18	166	202
4	195	35	160	230	205	35	170	240
5	212	32	180	244	220	17	203	237
6	226	30	196	256	234	23	211	257
7	238	28	210	266	246	28	218	274
8	249	26	223	275	257	18	239	275
9	259	25	234	284	266	20	246	286
10	268	24	244	292	274	20	254	294
11	276	23	253	299	282	23	259	305
12	284	22	262	306	289	19	270	308
13	291	22	269	313	297	35	262	332
14	298	21	277	319	303	21	282	324
15	305	21	284	326	310	20	290	330
16	311	20	291	331	316	16	300	332
17	317	20	297	337	322	20	302	342
18	323	20	303	343	328	18	310	346
19	329	19	310	348	333	21	312	354
20	334	19	315	353	338	16	322	354
21	339	19	320	358	343	19	324	362
22	345	18	327	363	349	18	331	367
23	351	18	333	369	354	18	336	372
24	355	18	337	373	359	20	339	379
25	361	18	343	379	364	17	347	381
26	366	18	348	384	368	18	350	386
27	370	18	352	388	373	18	355	391
28	376	18	358	394	378	18	360	396
29	380	18	362	398	383	17	366	400
30	386	18	368	404	388	19	369	407
31	390	18	372	408	392	18	374	410
32	395	18	377	413	397	18	379	415
33	400	18	382	418	402	18	384	420
34	405	18	387	423	407	20	387	427
35	410	18	392	428	411	16	395	427
36	415	18	397	433	416	18	398	434
37	420	18	402	438	421	18	403	439
38	425	18	407	443	426	22	404	448
39	430	18	412	448	432	18	414	450
40	436	19	417	455	436	19	417	455
41	441	19	422	460	442	27	415	469
42	447	19	428	466	447	18	429	465
43	453	20	433	473	453	18	435	471
44	459	20	439	479	459	20	439	479
45	464	20	444	484	465	17	448	482
46	471	21	450	492	471	16	455	487
47	478	21	457	499	478	21	457	499
48	485	22	463	507	485	17	468	502
49	492	22	470	514	492	17	475	509
50	500	24	476	524	500	19	481	519
51	509	24	485	533	509	24	485	533
52	518	26	492	544	518	18	500	536
53	529	27	502	556	528	18	510	546
54	541	29	512	570	540	16	524	556
55	555	31	524	586	553	31	522	584
56	570	34	536	600	570	17	553	587
57	591	39	552	600	590	18	572	600



Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	47	553	600	600	20	580	600
59	600	66	534	600	600	21	579	600
60	600	0	600	600	600	18	582	600

**Table 6.6.12 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 1/Main Prompt and Core 1/Alternate Prompt**

Raw Score	Core 1/ Main				Core 1/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	29	75	0	104	32	76	0	108
2	55	75	0	130	61	76	0	137
3	81	75	6	156	90	76	14	166
4	107	75	32	182	119	76	43	195
5	133	75	58	208	148	76	72	224
6	159	75	84	234	177	76	101	253
7	209	37	172	246	227	37	190	264
8	235	28	207	263	251	26	225	277
9	252	24	228	276	265	21	244	286
10	265	21	244	286	276	19	257	295
11	276	20	256	296	285	18	267	303
12	286	19	267	305	293	17	276	310
13	295	18	277	313	300	16	284	316
14	303	18	285	321	306	16	290	322
15	311	18	293	329	313	16	297	329
16	318	17	301	335	319	16	303	335
17	326	17	309	343	326	16	310	342
18	333	16	317	349	332	16	316	348
19	340	16	324	356	338	16	322	354
20	346	16	330	362	344	15	329	359
21	353	16	337	369	350	15	335	365
22	359	16	343	375	356	15	341	371
23	366	16	350	382	362	15	347	377
24	372	16	356	388	368	15	353	383
25	378	15	363	393	374	15	359	389
26	384	15	369	399	379	15	364	394
27	390	16	374	406	385	15	370	400
28	396	16	380	412	391	15	376	406
29	402	16	386	418	397	16	381	413
30	409	16	393	425	404	16	388	420
31	415	16	399	431	411	16	395	427
32	422	17	405	439	418	17	401	435
33	429	17	412	446	426	18	408	444
34	437	18	419	455	434	18	416	452
35	445	18	427	463	443	19	424	462
36	453	18	435	471	453	19	434	472
37	461	18	443	479	463	20	443	483
38	470	19	451	489	473	20	453	493
39	479	19	460	498	483	21	462	504
40	489	20	469	509	495	21	474	516
41	500	22	478	522	507	24	483	531
42	516	26	490	542	524	28	496	552
43	540	37	503	577	550	38	512	588
44	600	76	524	600	600	77	523	600

**Table 6.6.13 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 2/Main Prompt and Core 2/Alternate Prompt**

Raw Score	Core 2/ Main				Core 2/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	28	76	0	104	32	77	0	109
2	53	76	0	129	59	77	0	136
3	78	76	2	154	86	77	9	163
4	103	76	27	179	113	77	36	190
5	128	76	52	204	140	77	63	217
6	153	76	77	229	167	77	90	244
7	204	38	166	242	219	38	181	257
8	230	28	202	258	245	26	219	271
9	246	23	223	269	260	22	238	282
10	259	21	238	280	271	19	252	290
11	270	20	250	290	279	18	261	297
12	280	19	261	299	287	17	270	304
13	288	18	270	306	295	16	279	311
14	296	18	278	314	301	16	285	317
15	304	17	287	321	307	16	291	323
16	312	17	295	329	314	16	298	330
17	319	17	302	336	320	16	304	336
18	326	16	310	342	326	16	310	342
19	333	16	317	349	332	15	317	347
20	340	16	324	356	338	15	323	353
21	346	16	330	362	344	15	329	359
22	353	16	337	369	350	15	335	365
23	359	16	343	375	356	15	341	371
24	365	16	349	381	362	15	347	377
25	371	16	355	387	367	15	352	382
26	377	16	361	393	373	15	358	388
27	384	16	368	400	379	15	364	394
28	389	16	373	405	385	15	370	400
29	396	16	380	412	391	16	375	407
30	402	16	386	418	397	16	381	413
31	409	16	393	425	404	16	388	420
32	415	16	399	431	411	17	394	428
33	422	17	405	439	418	18	400	436
34	430	17	413	447	426	18	408	444
35	438	18	420	456	435	19	416	454
36	446	18	428	464	444	19	425	463
37	454	18	436	472	454	20	434	474
38	463	19	444	482	465	21	444	486
39	473	19	454	492	476	21	455	497
40	483	20	463	503	488	22	466	510
41	494	22	472	516	501	24	477	525
42	509	26	483	535	518	27	491	545
43	532	35	497	567	543	37	506	580
44	600	74	526	600	600	75	525	600

**Table 6.6.14 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 3/Main Prompt and Core 3/Alternate Prompt**

Raw Score	Core 3/ Main				Core 3/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	29	76	0	105	30	77	0	107
2	54	76	0	130	58	77	0	135
3	79	76	3	155	86	77	9	163
4	104	76	28	180	114	77	37	191
5	129	76	53	205	142	77	65	219
6	154	76	78	230	170	77	93	247
7	205	38	167	243	222	38	184	260
8	232	28	204	260	247	26	221	273
9	248	24	224	272	262	22	240	284
10	261	21	240	282	273	19	254	292
11	272	20	252	292	282	18	264	300
12	282	19	263	301	289	17	272	306
13	291	18	273	309	297	17	280	314
14	300	18	282	318	304	16	288	320
15	308	18	290	326	311	16	295	327
16	316	17	299	333	317	16	301	333
17	323	17	306	340	323	16	307	339
18	330	17	313	347	330	16	314	346
19	337	17	320	354	336	16	320	352
20	344	16	328	360	342	16	326	358
21	351	16	335	367	349	16	333	365
22	358	16	342	374	354	15	339	369
23	364	16	348	380	361	15	346	376
24	370	16	354	386	367	15	352	382
25	376	16	360	392	372	15	357	387
26	382	15	367	397	378	15	363	393
27	388	15	373	403	384	15	369	399
28	395	15	380	410	390	15	375	405
29	400	16	384	416	396	16	380	412
30	407	16	391	423	402	16	386	418
31	413	16	397	429	409	16	393	425
32	420	16	404	436	416	17	399	433
33	427	17	410	444	423	17	406	440
34	434	17	417	451	431	18	413	449
35	442	18	424	460	439	19	420	458
36	449	18	431	467	449	19	430	468
37	458	18	440	476	458	19	439	477
38	466	18	448	484	468	20	448	488
39	475	19	456	494	479	21	458	500
40	485	20	465	505	490	21	469	511
41	496	22	474	518	503	23	480	526
42	511	26	485	537	519	27	492	546
43	533	36	497	569	545	37	508	582
44	600	74	526	600	600	76	524	600

**Table 6.6.15 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Writing – Core 1/Main Prompt and Core 1/Alternate Prompt**

Raw Score	Core 1/ Main				Core 1/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	19	89	0	108	20	89	0	109
2	37	89	0	126	38	89	0	127
3	55	89	0	144	56	89	0	145
4	73	89	0	162	74	89	0	163
5	91	89	2	180	92	89	3	181
6	109	89	20	198	110	89	21	199
7	171	45	126	216	172	45	127	217
8	203	32	171	235	204	32	172	236
9	221	26	195	247	222	26	196	248
10	235	23	212	258	235	23	212	258
11	246	21	225	267	246	21	225	267
12	255	20	235	275	255	20	235	275
13	263	19	244	282	263	19	244	282
14	271	18	253	289	270	18	252	288
15	278	17	261	295	277	17	260	294
16	284	17	267	301	284	17	267	301
17	291	17	274	308	290	17	273	307
18	297	17	280	314	296	17	279	313
19	304	17	287	321	303	17	286	320
20	309	17	292	326	308	17	291	325
21	316	17	299	333	314	16	298	330
22	321	16	305	337	321	16	305	337
23	327	16	311	343	326	16	310	342
24	333	16	317	349	332	16	316	348
25	339	16	323	355	338	16	322	354
26	345	16	329	361	343	16	327	359
27	350	16	334	366	349	16	333	365
28	356	16	340	372	354	16	338	370
29	362	16	346	378	360	16	344	376
30	367	16	351	383	366	16	350	382
31	373	16	357	389	371	16	355	387
32	379	16	363	395	376	16	360	392
33	384	16	368	400	382	16	366	398
34	390	16	374	406	388	16	372	404
35	396	16	380	412	393	16	377	409
36	401	16	385	417	399	16	383	415
37	407	17	390	424	404	17	387	421
38	413	17	396	430	411	17	394	428
39	420	17	403	437	417	17	400	434
40	426	18	408	444	424	18	406	442
41	434	18	416	452	432	19	413	451
42	442	19	423	461	440	19	421	459
43	450	21	429	471	449	21	428	470
44	461	22	439	483	458	21	437	479
45	472	23	449	495	470	23	447	493
46	485	25	460	510	482	24	458	506
47	500	26	474	526	496	25	471	521
48	516	28	488	544	511	26	485	537
49	534	29	505	563	527	27	500	554
50	554	30	524	584	544	28	516	572
51	575	31	544	600	562	29	533	591
52	599	34	565	600	583	33	550	600
53	600	44	556	600	600	43	557	600
54	600	86	514	600	600	87	513	600

**Table 6.6.16 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Writing – Core 2/Main Prompt and Core 2/Alternate Prompt**

Raw Score	Core 2/ Main				Core 2/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	24	89	0	113	23	89	0	112
2	54	89	0	143	43	89	0	132
3	66	89	0	155	63	89	0	152
4	87	89	0	176	83	89	0	172
5	108	89	19	197	103	89	14	192
6	129	89	40	218	123	89	34	212
7	192	45	147	237	185	45	140	230
8	223	32	191	255	216	32	184	248
9	242	26	216	268	234	26	208	260
10	255	23	232	278	247	23	224	270
11	266	21	245	287	258	21	237	279
12	275	19	256	294	267	19	248	286
13	283	18	265	301	275	18	257	293
14	290	17	273	307	282	18	264	300
15	296	17	279	313	289	17	272	306
16	303	17	286	320	296	17	279	313
17	308	16	292	324	302	17	285	319
18	314	16	298	330	308	17	291	325
19	320	16	304	336	314	16	298	330
20	325	16	309	341	320	16	304	336
21	331	16	315	347	325	16	309	341
22	336	15	321	351	331	16	315	347
23	342	15	327	357	337	16	321	353
24	347	15	332	362	342	16	326	358
25	352	15	337	367	348	16	332	364
26	357	15	342	372	353	16	337	369
27	362	15	347	377	358	16	342	374
28	367	15	352	382	364	16	348	380
29	372	15	357	387	369	15	354	384
30	378	15	363	393	375	15	360	390
31	383	15	368	398	380	15	365	395
32	388	15	373	403	385	15	370	400
33	393	15	378	408	390	15	375	405
34	398	15	383	413	396	16	380	412
35	404	16	388	420	401	16	385	417
36	409	16	393	425	407	16	391	423
37	415	16	399	431	412	16	396	428
38	421	16	405	437	418	16	402	434
39	426	17	409	443	424	17	407	441
40	433	17	416	450	430	17	413	447
41	440	18	422	458	438	18	420	456
42	447	19	428	466	445	19	426	464
43	455	20	435	475	453	20	433	473
44	464	21	443	485	462	21	441	483
45	475	22	453	497	472	22	450	494
46	487	24	463	511	484	24	460	508
47	500	25	475	525	498	25	473	523
48	515	27	488	542	512	26	486	538
49	532	28	504	560	528	26	502	554
50	550	29	521	579	544	27	517	571
51	569	31	538	600	561	28	533	589
52	592	34	558	600	580	32	548	600
53	600	45	555	600	600	42	558	600
54	600	88	512	600	600	85	515	600

**Table 6.6.17 Fall 2003 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Writing – Core 3/Main Prompt and Core 3/Alternate Prompt**

Raw Score	Core 3/ Main				Core 3/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	27	89	0	116	27	90	0	117
2	50	89	0	139	50	90	0	140
3	73	89	0	162	73	90	0	163
4	96	89	7	185	96	90	6	186
5	119	89	30	208	119	90	29	209
6	142	89	53	231	142	90	52	232
7	204	45	159	249	204	45	159	249
8	236	32	204	268	236	32	204	268
9	254	26	228	280	255	26	229	281
10	268	23	245	291	269	23	246	292
11	279	21	258	300	279	21	258	300
12	288	20	268	308	289	20	269	309
13	296	18	278	314	297	18	279	315
14	304	17	287	321	304	17	287	321
15	310	17	293	327	311	17	294	328
16	317	17	300	334	317	17	300	334
17	322	16	306	338	323	16	307	339
18	328	16	312	344	328	16	312	344
19	333	16	317	349	333	16	317	349
20	339	15	324	354	339	15	324	354
21	344	15	329	359	344	15	329	359
22	349	15	334	364	349	15	334	364
23	354	15	339	369	354	15	339	369
24	359	15	344	374	359	15	344	374
25	364	15	349	379	364	15	349	379
26	369	15	354	384	368	15	353	383
27	374	15	359	389	373	15	358	388
28	378	15	363	393	378	14	364	392
29	383	14	369	397	383	14	369	397
30	388	14	374	402	388	14	374	402
31	392	14	378	406	392	14	378	406
32	397	15	382	412	397	14	383	411
33	402	15	387	417	401	15	386	416
34	407	15	392	422	406	15	391	421
35	411	15	396	426	411	15	396	426
36	416	15	401	431	416	15	401	431
37	421	15	406	436	421	15	406	436
38	426	15	411	441	426	15	411	441
39	432	16	416	448	431	16	415	447
40	437	16	421	453	437	16	421	453
41	443	16	427	459	443	17	426	460
42	449	17	432	466	449	17	432	466
43	455	17	438	472	455	17	438	472
44	461	17	444	478	463	18	445	481
45	468	18	450	486	470	18	452	488
46	475	18	457	493	477	19	458	496
47	483	19	464	502	486	20	466	506
48	491	20	471	511	495	21	474	516
49	500	21	479	521	504	21	483	525
50	511	23	488	534	515	23	492	538
51	524	25	499	549	529	26	503	555
52	541	31	510	572	546	31	515	577
53	570	43	527	600	575	43	532	600
54	600	88	512	600	600	88	512	600

## **7. SPRING 2004 STATISTICAL SUMMARY**

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**Table 7.1.1 Spring 2004 Virginia SOL Assessments: Assessment Pass Rates (2001 Standards)**

Standards of Learning Assessment	N	% Fail	% Pass		
			Proficient	Advanced	Overall
Grade 3					
English: Reading/Writing	85,027	29	58	14	72
Mathematics	78,874	12	37	51	88
History/Social Science	81,029	13	36	51	87
Science	84,468	14	48	38	86
Grade 5					
English: Reading/Lit. & Research.	88,441	15	53	31	84
English: Writing	87,041	12	63	26	89
Mathematics	81,151	18	60	21	81
History/Social Science	86,413	14	48	38	86
Science	87,364	16	62	22	84
Grade 8					
English: Reading/Lit. & Research.	92,659	28	49	23	72
English: Writing	89,234	23	66	10	76
Mathematics	88,877	18	59	23	82
History/Social Science	22,954	17	53	30	83
Science	87,866	12	60	28	88
High School End-of-Course					
English: Reading/Lit. & Research.	68,781	11	58	30	88
English: Writing	70,826	13	66	21	87
Algebra I	81,995	18	64	18	82
Geometry	69,204	17	60	23	83
Algebra II	50,281	13	54	32	86
Virginia and United States History	69,384	13	54	33	87
World History I	63,043	17	56	27	83
World History II	55,631	17	59	24	83
World Geography	33,157	29	51	20	71
Earth Science	77,866	29	59	11	70
Biology	79,196	20	71	9	80
Chemistry	45,893	14	74	12	86
History Grades 5, 6 and 7					
United States History to 1877	61,904	42	49	10	59
United States History from 1877	64,531	24	51	26	77
Civics and Economics	65,581	19	58	23	81

Note: Percentages may not add to 100% due to rounding

**Table 7.1.2 Spring 2004 Virginia SOL Assessments: Assessment Pass Rates (1995 Standards)**

Standards of Learning Assessment	N	% Fail	% Pass		
			Proficient	Advanced	Overall
Grade 3					
English: Reading/Writing	85,027	29	58	14	72
Mathematics	78,874	12	37	51	88
History/Social Science	3,365	13	66	21	87
Science	84,468	14	48	38	86
Grade 5					
English: Reading/Lit. & Research.	88,441	15	53	31	84
English: Writing	87,041	12	63	26	89
Mathematics	81,151	18	60	21	81
History/Social Science	286	30	56	14	70
Science	87,364	16	62	22	84
Grade 8					
English: Reading/Lit. & Research.	92,659	28	49	23	72
English: Writing	89,234	23	66	10	76
Mathematics	88,877	18	59	23	82
History/Social Science	466	33	62	6	68
Science	87,866	12	60	28	88
High School End-of-Course					
English: Reading/Lit. & Research.	68,781	11	58	30	88
English: Writing	70,826	13	66	21	87
Algebra I	3,003	60	39	1	40
Geometry	1,452	57	38	4	42
Algebra II	1,788	38	56	6	62
Virginia and United States History	2,132	84	15	1	16
World History I	1,647	66	31	3	34
World History II	1,777	64	30	6	36
World Geography	1,593	48	41	11	52
Earth Science	77,866	29	59	11	70
Biology	79,196	20	71	9	80
Chemistry	45,893	14	74	12	86
History Grades 5, 6 and 7					
United States History to 1877	61,904	42	49	10	59
United States History from 1877	64,531	24	51	26	77
Civics and Economics	65,581	19	58	23	81

Note: Percentages may not add to 100% due to rounding

**Table 7.2.1 Spring 2004 Virginia Grade 3 Assessments:  
Scale Score Summary and Reliabilities**

SOL Assessment	Form	# Items	N	Mean	SD	Mean Prop. Correct	KR20	SEM	Conditional SEM at Cut	
									Prof.	Adv.
English: Reading +Writing	Core 1	45	71,564	437.0	65.7	0.80	0.87	30.4	20	41
	Core 2	45	9,993	441.1	68.8	0.80	0.88	30.7	20	40
Mathematics	Core 1	50	66,603	502.6	81.3	0.85	0.89	27.2	25	37
	Core 2	50	9,160	497.4	82.2	0.85	0.89	27.1	25	37
History/Social Science	Core 1	40	71,281	492.4	82.4	0.83	0.86	30.3	27	37
	Core 2	40	9,731	496.1	79.0	0.83	0.85	30.9	28	37
Science	Core 1	40	71,334	473.5	70.9	0.81	0.86	26.7	22	32
	Core 2	40	9,753	478.0	68.1	0.82	0.85	26.8	22	33

**Table 7.2.2 Spring 2004 Virginia Grade 5 Assessments:  
Scale Score Summary and Reliabilities**

SOL Assessment	Form	# Items	N	Mean	SD	Mean Prop. Correct	KR20	SEM	Conditional SEM at Cut	
									Prof.	Adv.
English: Reading/Lit. & Res.	Core 1	42	74,303	467.9	66.3	0.81	0.89	21.5	17	31
	Core 2	42	10,579	459.5	63.4	0.81	0.89	21.5	18	31
Mathematics	Core 1	50	68,498	455.1	63.8	0.80	0.89	21.6	17	32
	Core 2	50	9,523	457.7	68.0	0.80	0.90	21.6	17	28
History/Social Science	Core 1	40	80,220	474.0	70.7	0.79	0.86	26.9	22	31
	Core 2	40	6,184	479.6	75.8	0.80	0.87	27.1	23	34
Science	Core 1	40	73,789	456.6	57.9	0.79	0.85	22.2	18	30
	Core 2	40	10,185	450.9	59.7	0.80	0.85	22.8	18	36

**Table 7.2.3 Spring 2004 Virginia Grade 8 Assessments:  
Scale Score Summary and Reliabilities**

SOL Assessment	Form	# Items	N	Mean	SD	Mean Prop. Correct	KR20	SEM	Conditional SEM at Cut	
									Prof.	Adv.
English: Reading/Lit. & Res.	Core 1	42	77,400	442.3	78.0	0.76	0.89	26.0	23	35
	Core 2	42	11,635	432.6	83.5	0.73	0.91	25.4	23	35
Mathematics	Core 1	60	76,549	463.1	64.6	0.74	0.92	18.0	14	22
	Core 2	60	9,176	436.2	65.1	0.71	0.94	16.4	14	24
History/Social Science	Core 1	50	20,877	462.9	67.4	0.72	0.91	19.8	16	22
	Core 2	50	2,074	446.9	63.7	0.68	0.91	18.9	16	24
Science	Core 1	50	74,104	467.8	59.0	0.77	0.90	19.1	15	24
	Core 2	50	10,691	466.8	63.9	0.77	0.91	19.2	15	24

**Table 7.2.4 Spring 2004 Virginia High School End-of-Course Assessments:  
Scale Score Summary and Reliabilities**

SOL Assessment	Form	# Items	N	Mean	SD	Mean Prop. Correct	KR20	SEM	Conditional SEM at Cut	
									Prof.	Adv.
English: Reading/Lit. & Res.	Core 1	42	41,796	478.3	56.4	0.80	0.83	23.3	19	27
	Core 2	42	15,248	468.9	58.1	0.80	0.85	22.7	19	29
Algebra I	Core 1	50	59,822	453.4	57.2	0.74	0.91	17.2	14	24
	Core 2	50	11,945	449.8	57.7	0.71	0.91	17.1	14	21
Geometry	Core 1	45	55,724	460.9	60.7	0.76	0.89	20.5	16	26
	Core 2	45	10,830	455.4	63.8	0.75	0.90	20.1	16	26
Algebra II	Core 1	50	35,709	475.6	66.9	0.80	0.89	21.8	17	27
	Core 2	50	8,571	466.8	65.0	0.78	0.89	21.7	17	27
Virginia & United States History	Core 1	60	45,259	472.1	62.4	0.74	0.92	17.4	14	19
	Core 2	60	23,639	470.8	59.4	0.70	0.92	17.2	14	18
World History I	Core 1	60	41,427	465.0	64.1	0.70	0.92	18.7	16	20
	Core 2	60	21,431	459.2	62.2	0.68	0.91	18.7	16	20
World History II	Core 1	60	39,626	456.2	60.8	0.66	0.92	17.7	15	20
	Core 2	60	15,825	463.4	57.2	0.68	0.90	18.2	15	19
World Geography	Core 1	60	18,499	442.9	66.6	0.65	0.90	20.9	18	23
	Core 2	60	13,970	439.2	66.0	0.63	0.90	20.5	18	23
Earth Science	Core 1	50	43,844	434.6	57.5	0.71	0.89	18.7	15	27
	Core 2	50	17,566	431.8	52.8	0.69	0.87	18.7	16	27
Biology	Core 1	50	54,264	441.9	45.6	0.71	0.87	16.2	13	23
	Core 2	50	12,689	441.8	52.2	0.70	0.91	16.1	13	23
Chemistry	Core 1	50	29,469	450.9	47.9	0.71	0.87	17.0	14	22
	Core 2	50	9,404	454.0	44.7	0.72	0.86	16.9	14	22

**Table 7.2.5 Spring 2004 Virginia SOL Grade 5 Writing Assessments:  
Scale Score Summary and Reliabilities**

Assessment Configuration		# Items	Max. Score	N	Mean	SD	Mean Prop. Correct	Alpha	SEM	Conditional SEM at Cut	
MC	Prompt									Prof.	Adv.
Core 1	Core 1	23	44	47,505	471.8	58.4	0.78	0.73	30.4	20	32
Core 1	Core 2	23	44	22,386	467.4	57.0	0.73	0.74	29.1	20	27
Core 2	Core 1	23	44	8,516	424.0	59.9	0.62	0.81	26.0	19	29
Core 2	Core 2	23	44	3,276	452.0	67.6	0.69	0.80	30.4	20	27
Core 3	Core 1	23	44	1,702	471.3	61.7	0.75	0.76	30.1	19	30
Core 3	Core 2	23	44	3,477	467.0	59.9	0.72	0.75	30.0	20	27

**Table 7.2.6 Spring 2004 Virginia SOL Grade 8 Writing Assessments:  
Scale Score Summary and Reliabilities**

Assessment Configuration		# Items	Max. Score	N	Mean	SD	Mean Prop. Correct	Alpha	SEM	Conditional SEM at Cut	
MC	Prompt									Prof.	Adv.
Core 1	Core 1	23	44	51,071	442.0	51.5	0.73	0.80	23.0	17	25
Core 1	Core 2	23	44	23,977	431.6	47.8	0.70	0.81	20.9	16	25
Core 2	Core 1	23	44	5,229	385.0	54.5	0.55	0.85	21.4	16	26
Core 2	Core 2	23	44	3,550	417.8	54.9	0.66	0.84	22.0	16	26
Core 3	Core 1	23	44	1,862	434.4	52.4	0.70	0.81	22.7	16	26
Core 3	Core 2	23	44	3,453	433.1	48.5	0.71	0.80	21.7	16	27

**Table 7.2.7 Spring 2004 Virginia SOL High School End-of-Course Writing Assessments:  
Scale Score Summary and Reliabilities**

Assessment Configuration		# Items	Max. Score	N	Mean	SD	Mean Prop. Correct	Alpha	SEM	Conditional SEM at Cut	
MC	Prompt									Prof.	Adv.
Core 1	Core 1	33	54	42,537	462.9	55.2	0.80	0.81	23.8	16	29
Core 1	Core 2	33	54	19,736	456.9	54.7	0.79	0.82	23.1	16	29
Core 2	Core 1	33	54	3,675	427.6	66.0	0.68	0.88	22.5	16	27
Core 2	Core 2	33	54	4,603	447.2	63.6	0.72	0.87	23.0	16	28

**Table 7.2.8 Spring 2004 Virginia SOL Grades 5, 6 and 7 History Assessments:  
Scale Score Summary and Reliabilities**

SOL Assessment	Form	# Items	N	Mean	SD	Mean Prop. Correct	KR20	SEM	<u>Conditional SEM at Cut</u>	
									Prof.	Adv.
US History to 1877	Core 1	40	44,677	415.1	60.2	0.65	0.87	21.7	19	29
	Core 2	40	17,144	415.2	64.1	0.66	0.88	21.9	19	33
US History from 1877	Core 1	40	46,763	447.5	69.3	0.69	0.87	24.9	21	29
	Core 2	40	17,709	450.1	71.8	0.70	0.88	25.1	21	29
Civics and Economics	Core 1	40	46,845	450.0	61.2	0.68	0.86	22.6	19	26
	Core 2	40	18,704	455.1	63.3	0.70	0.87	23.1	19	27

**Table 7.3.1 Spring 2004 Virginia SOL Grade 3 Assessments:  
Correlations Among Assessments**

Standards of Learning Assessment	1	2	3	4
Core 1				
1. English: Reading +Writing	1.000	0.729	0.751	0.698
2. Mathematics		1.000	0.732	0.673
3. Science			1.000	0.747
4. History & Social Science				1.000
Core 2				
1. English: Reading +Writing	1.000	0.736	0.745	0.715
2. Mathematics		1.000	0.728	0.697
3. Science			1.000	0.760
4. History & Social Science				1.000

**Table 7.3.2 Spring 2004 Virginia SOL Grade 5 Assessments:  
Correlations Among Assessments**

Standards of Learning Assessment	1	2	3	4
Core 1				
1. English: Reading/Lit. & Res.	1.000	0.701	0.740	0.677
2. Mathematics		1.000	0.726	0.672
3. Science			1.000	0.722
4. History & Social Science				1.000
Core 2				
1. English: Reading/ Lit. & Res.	1.000	0.698	0.742	0.693
2. Mathematics		1.000	0.744	0.699
3. Science			1.000	0.748
4. History & Social Science				1.000

**Table 7.3.3 Spring 2004 Virginia SOL Grade 8 Assessments:  
Correlations Among Assessments**

Standards of Learning Assessment	1	2	3	4
Core 1				
1. English: Reading/Lit. & Res.	1.000	0.696	0.745	0.745
2. Mathematics		1.000	0.754	0.685
3. Science			1.000	0.780
4. History & Social Science				1.000
Core 2				
1. English: Reading/ Lit. & Res.	1.000	0.769	0.773	0.763
2. Mathematics		1.000	0.797	0.743
3. Science			1.000	0.802
4. History & Social Science				1.000



**Table 7.4.1 Spring 2004 Virginia SOL Assessments:  
Grade 3 Decision Consistency and Accuracy Indices**

Standards of Learning Assessment	Form	Accuracy	False Positives	False Negatives	Consistency
English: Reading +Writing	Core 1	0.90	0.05	0.04	0.87
	Core 2	0.92	0.04	0.04	0.89
Mathematics	Core 1	0.96	0.02	0.02	0.94
	Core 2	0.95	0.02	0.02	0.94
History/Social Science	Core 1	0.94	0.03	0.03	0.91
	Core 2	0.94	0.03	0.03	0.92
Science	Core 1	0.94	0.03	0.03	0.91
	Core 2	0.94	0.03	0.03	0.92

**Table 7.4.2 Spring 2004 Virginia SOL Assessments:  
Grade 5 Decision Consistency and Accuracy Indices**

Standards of Learning Assessment	Form	Accuracy	False Positives	False Negatives	Consistency
English: Reading/Lit. & Res.	Core 1	0.95	0.03	0.02	0.93
	Core 2	0.94	0.03	0.03	0.92
Mathematics	Core 1	0.93	0.03	0.03	0.91
	Core 2	0.93	0.03	0.03	0.91
History/Social Science	Core 1	0.92	0.04	0.04	0.89
	Core 2	0.94	0.03	0.03	0.91
Science	Core 1	0.93	0.03	0.03	0.91
	Core 2	0.92	0.04	0.04	0.89

**Table 7.4.3 Spring 2004 Virginia SOL Assessments:  
Grade 8 Decision Consistency and Accuracy Indices**

Standards of Learning Assessment	Form	Accuracy	False Positives	False Negatives	Consistency
English: Reading/Lit. & Res.	Core 1	0.92	0.05	0.04	0.88
	Core 2	0.92	0.05	0.03	0.89
Mathematics	Core 1	0.94	0.03	0.03	0.92
	Core 2	0.94	0.03	0.03	0.91
History/Social Science	Core 1	0.95	0.03	0.03	0.93
	Core 2	0.94	0.03	0.03	0.91
Science	Core 1	0.95	0.03	0.03	0.93
	Core 2	0.95	0.02	0.02	0.93

**Table 7.4.4 Spring 2004 Virginia SOL Assessments:  
High School End-of-Course Decision Consistency and Accuracy Indices**

Standards of Learning Assessment	Form	Accuracy	False Positives	False Negatives	Consistency
English: Reading/Lit. & Res.	Core 1	0.96	0.02	0.02	0.95
	Core 2	0.96	0.02	0.02	0.94
Algebra I	Core 1	0.95	0.03	0.03	0.92
	Core 2	0.94	0.03	0.03	0.92
Geometry	Core 1	0.94	0.03	0.03	0.91
	Core 2	0.93	0.04	0.03	0.90
Algebra II	Core 1	0.95	0.02	0.02	0.93
	Core 2	0.94	0.03	0.03	0.92
Virginia & United States History	Core 1	0.96	0.02	0.02	0.94
	Core 2	0.95	0.02	0.02	0.93
World History I	Core 1	0.95	0.03	0.03	0.92
	Core 2	0.93	0.04	0.03	0.90
World History II	Core 1	0.94	0.03	0.03	0.91
	Core 2	0.94	0.03	0.03	0.92
World Geography	Core 1	0.92	0.04	0.04	0.89
	Core 2	0.93	0.04	0.04	0.90
Earth Science	Core 1	0.92	0.05	0.04	0.88
	Core 2	0.91	0.05	0.04	0.87
Biology	Core 1	0.93	0.03	0.03	0.91
	Core 2	0.93	0.04	0.03	0.90
Chemistry	Core 1	0.94	0.03	0.03	0.91
	Core 2	0.95	0.02	0.03	0.92

**Table 7.4.5 Spring 2004 Virginia SOL Assessments:  
Grade 5 Writing Decision Consistency and Accuracy Indices**

Assessment Configuration		Accuracy	False Positives	False Negatives	Consistency
MC	Prompt				
Core 1	Core 1	0.94	0.02	0.04	0.92
Core 1	Core 2	0.94	0.02	0.04	0.91
Core 2	Core 1	0.89	0.05	0.06	0.85
Core 2	Core 2	0.92	0.04	0.05	0.89
Core 3	Core 1	0.94	0.02	0.03	0.92
Core 3	Core 2	0.92	0.02	0.05	0.89

**Table 7.4.6 Spring 2004 Virginia SOL Assessments:  
Grade 8 Writing Decision Consistency and Accuracy Indices**

Assessment Configuration		Accuracy	False Positives	False Negatives	Consistency
MC	Prompt				
Core 1	Core 1	0.91	0.03	0.06	0.87
Core 1	Core 2	0.90	0.04	0.06	0.85
Core 2	Core 1	0.91	0.06	0.04	0.87
Core 2	Core 2	0.90	0.05	0.05	0.86
Core 3	Core 1	0.91	0.04	0.05	0.87
Core 3	Core 2	0.90	0.04	0.06	0.85

**Table 7.4.7 Spring 2004 Virginia SOL Assessments:  
High School End-of-Course Writing Decision Consistency and Accuracy Indices**

Assessment Configuration		Accuracy	False Positives	False Negatives	Consistency
MC	Prompt				
Core 1	Core 1	0.95	0.02	0.03	0.93
Core 1	Core 2	0.94	0.03	0.03	0.92
Core 2	Core 1	0.91	0.05	0.04	0.88
Core 2	Core 2	0.93	0.04	0.03	0.90

**Table 7.4.8 Spring 2004 Virginia SOL Assessments:  
Grades 5, 6, and 7 History Decision Consistency and Accuracy Indices**

<b>Standards of Learning Assessment</b>	<b>Form</b>	<b>Accuracy</b>	<b>False Positives</b>	<b>False Negatives</b>	<b>Consistency</b>
United States History to 1877	Core 1	0.89	0.07	0.04	0.84
	Core 2	0.90	0.06	0.04	0.86
United States History from 1877 to Present	Core 1	0.91	0.05	0.04	0.87
	Core 2	0.91	0.05	0.04	0.87
Civics and Economics	Core 1	0.91	0.05	0.04	0.88
	Core 2	0.92	0.04	0.04	0.89

**Table 7.5.1 Spring 2004 Virginia SOL Grade 5 Writing Assessment: Inter-Rater Reliability**

Prompt/Writing Domain Score	N	Percent		
		Perfect Agreement	Adjacent	Non-Adjacent
Core 1				
Composing	60,776	66.0	33.0	0.0
Written Expression	60,776	65.0	34.0	0.0
Usage and Mechanics	60,776	62.0	36.0	2.0
Core 2				
Composing	31,292	69.0	30.0	0.0
Written Expression	31,292	68.0	32.0	0.0
Usage and Mechanics	31,292	63.0	34.0	2.0

**Table 7.5.2 Spring 2004 Virginia SOL Grade 8 Writing Assessment: Inter-Rater Reliability**

Prompt/Writing Domain Score	N	Percent		
		Perfect Agreement	Adjacent	Non-Adjacent
Core 1				
Composing	61,348	67.0	32.0	0.0
Written Expression	61,348	64.0	35.0	0.0
Usage and Mechanics	61,348	60.0	38.0	2.0
Core 2				
Composing	33,087	68.0	32.0	1.0
Written Expression	33,087	65.0	34.0	2.0
Usage and Mechanics	33,087	61.0	37.0	2.0

**Table 7.5.3 Spring 2004 Virginia SOL End-of-Course Writing Assessment: Inter-Rater Reliability**

Prompt/Writing Domain Score	N	Percent		
		Perfect Agreement	Adjacent	Non-Adjacent
Core 1				
Composing	56,786	82.6	17.4	0.0
Written Expression	56,786	81.1	18.8	0.0
Usage and Mechanics	56,786	74.3	25.6	2.0
Core 2				
Composing	17,413	84.5	15.6	0.0
Written Expression	17,413	83.5	16.6	0.0
Usage and Mechanics	17,413	76.1	23.8	0.0

**Table 7.6.1 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 3 English: Reading and Writing**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	108	56	52	164	115	56	59	171
2	148	40	108	188	156	40	116	196
3	172	34	138	206	180	34	146	214
4	190	30	160	220	197	30	167	227
5	204	27	177	231	212	27	185	239
6	216	25	191	241	224	25	199	249
7	227	24	203	251	235	24	211	259
8	236	23	213	259	244	23	221	267
9	245	21	224	266	253	21	232	274
10	253	21	232	274	261	21	240	282
11	261	20	241	281	268	20	248	288
12	268	20	248	288	275	20	255	295
13	275	19	256	294	282	19	263	301
14	281	19	262	300	289	19	270	308
15	287	19	268	306	295	19	276	314
16	294	18	276	312	301	18	283	319
17	300	18	282	318	307	18	289	325
18	306	18	288	324	313	18	295	331
19	312	18	294	330	319	18	301	337
20	318	18	300	336	324	18	306	342
21	323	18	305	341	330	18	312	348
22	329	18	311	347	335	18	317	353
23	335	18	317	353	341	18	323	359
24	341	18	323	359	346	18	328	364
25	346	18	328	364	352	18	334	370
26	352	18	334	370	358	18	340	376
27	358	18	340	376	363	18	345	381
28	364	18	346	382	369	18	351	387
29	370	19	351	389	375	18	357	393
30	377	19	358	396	381	19	362	400
31	384	19	365	403	387	19	368	406
32	390	20	370	410	393	19	374	412
33	397	20	377	417	401	20	381	421
34	405	20	385	425	408	20	388	428
35	413	21	392	434	415	21	394	436
36	421	22	399	443	423	21	402	444
37	430	23	407	453	432	23	409	455
38	440	24	416	464	441	24	417	465
39	451	25	426	476	452	25	427	477
40	464	27	437	491	464	27	437	491
41	479	30	449	509	478	30	448	508
42	497	34	463	531	496	34	462	530
43	522	41	481	563	520	40	480	560
44	562	56	506	600	560	56	504	600
45	600	0	600	600	600	0	600	600

**Table 7.6.2 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 3 Mathematics**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	4	76	0	80	15	76	0	91
2	59	55	4	114	69	54	15	123
3	93	46	47	139	102	46	56	148
4	118	40	78	158	126	40	86	166
5	138	37	101	175	145	37	108	182
6	154	34	120	188	162	34	128	196
7	169	32	137	201	176	31	145	207
8	183	31	152	214	189	30	159	219
9	195	29	166	224	200	28	172	228
10	206	28	178	234	210	28	182	238
11	216	28	188	244	220	27	193	247
12	226	27	199	253	230	26	204	256
13	235	26	209	261	239	25	214	264
14	244	25	219	269	247	25	222	272
15	253	25	228	278	255	25	230	280
16	261	25	236	286	262	24	238	286
17	268	25	243	293	270	24	246	294
18	277	24	253	301	277	23	254	300
19	284	24	260	308	285	23	262	308
20	292	24	268	316	292	23	269	315
21	299	23	276	322	299	23	276	322
22	306	23	283	329	306	22	284	328
23	314	23	291	337	312	22	290	334
24	321	23	298	344	320	22	298	342
25	328	23	305	351	327	22	305	349
26	336	23	313	359	333	22	311	355
27	342	23	319	365	340	22	318	362
28	350	23	327	373	347	22	325	369
29	357	23	334	380	354	23	331	377
30	364	24	340	388	361	23	338	384
31	371	24	347	395	368	23	345	391
32	380	24	356	404	375	23	352	398
33	387	24	363	411	383	24	359	407
34	395	25	370	420	390	24	366	414
35	403	25	378	428	398	25	373	423
36	412	25	387	437	406	25	381	431
37	420	26	394	446	415	25	390	440
38	430	26	404	456	424	26	398	450
39	439	27	412	466	433	27	406	460
40	449	28	421	477	443	28	415	471
41	460	29	431	489	454	29	425	483
42	472	31	441	503	465	30	435	495
43	485	32	453	517	478	31	447	509
44	499	34	465	533	492	34	458	526
45	516	37	479	553	508	37	471	545
46	536	40	496	576	527	40	487	567
47	560	46	514	600	552	46	506	598
48	593	54	539	600	585	54	531	600
49	600	76	524	600	600	76	524	600
50	600	0	600	600	600	0	600	600

**Table 7.6.3 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 3 History/Social Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	33	78	0	111	30	77	0	107
2	90	56	34	146	85	55	30	140
3	125	47	78	172	119	46	73	165
4	151	42	109	193	145	41	104	186
5	172	38	134	210	165	37	128	202
6	190	35	155	225	183	35	148	218
7	205	33	172	238	199	33	166	232
8	219	31	188	250	212	32	180	244
9	231	31	200	262	225	31	194	256
10	243	29	214	272	237	30	207	267
11	254	28	226	282	249	29	220	278
12	265	28	237	293	260	28	232	288
13	275	27	248	302	270	28	242	298
14	285	27	258	312	281	28	253	309
15	294	26	268	320	290	27	263	317
16	303	26	277	329	300	27	273	327
17	312	25	287	337	309	27	282	336
18	321	25	296	346	319	26	293	345
19	329	25	304	354	328	26	302	354
20	338	25	313	363	337	26	311	363
21	346	25	321	371	346	26	320	372
22	355	25	330	380	356	26	330	382
23	364	25	339	389	365	27	338	392
24	372	25	347	397	375	27	348	402
25	381	26	355	407	384	27	357	411
26	391	26	365	417	394	28	366	422
27	400	27	373	427	404	28	376	432
28	410	28	382	438	415	28	387	443
29	420	28	392	448	426	29	397	455
30	431	29	402	460	437	30	407	467
31	443	30	413	473	449	31	418	480
32	454	31	423	485	463	32	431	495
33	468	32	436	500	477	34	443	511
34	483	34	449	517	492	35	457	527
35	500	37	463	537	510	37	473	547
36	519	40	479	559	531	41	490	572
37	545	46	499	591	556	46	510	600
38	578	55	523	600	590	55	535	600
39	600	76	524	600	600	77	523	600
40	600	0	600	600	600	0	600	600



**Table 7.6.4 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 3 Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	109	61	48	170	97	62	35	159
2	153	44	109	197	142	45	97	187
3	180	37	143	217	170	38	132	208
4	201	33	168	234	192	34	158	226
5	217	30	187	247	209	31	178	240
6	231	28	203	259	224	29	195	253
7	243	26	217	269	237	28	209	265
8	254	25	229	279	249	26	223	275
9	265	25	240	290	259	25	234	284
10	274	23	251	297	270	25	245	295
11	283	23	260	306	279	24	255	303
12	292	22	270	314	288	23	265	311
13	300	22	278	322	297	23	274	320
14	308	22	286	330	306	22	284	328
15	316	22	294	338	314	22	292	336
16	323	21	302	344	322	22	300	344
17	330	21	309	351	330	22	308	352
18	338	21	317	359	337	22	315	359
19	345	21	324	366	345	22	323	367
20	352	21	331	373	352	22	330	374
21	359	21	338	380	360	22	338	382
22	367	21	346	388	368	22	346	390
23	374	21	353	395	375	22	353	397
24	381	21	360	402	383	22	361	405
25	389	22	367	411	391	22	369	413
26	396	22	374	418	398	22	376	420
27	404	22	382	426	407	22	385	429
28	412	22	390	434	415	23	392	438
29	421	23	398	444	424	23	401	447
30	430	23	407	453	433	24	409	457
31	439	24	415	463	443	25	418	468
32	449	25	424	474	453	26	427	479
33	460	26	434	486	465	27	438	492
34	472	28	444	500	477	28	449	505
35	486	30	456	516	491	30	461	521
36	502	32	470	534	508	33	475	541
37	522	37	485	559	528	37	491	565
38	549	44	505	593	556	44	512	600
39	593	61	532	600	600	62	538	600
40	600	0	600	600	600	0	600	600

**Table 7.6.5 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 English: Reading/Literature and Research**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	167	51	116	218	157	51	106	208
2	204	37	167	241	194	37	157	231
3	227	31	196	258	217	31	186	248
4	244	28	216	272	234	28	206	262
5	257	25	232	282	247	25	222	272
6	269	23	246	292	259	23	236	282
7	279	22	257	301	269	22	247	291
8	288	21	267	309	278	21	257	299
9	296	20	276	316	286	20	266	306
10	304	19	285	323	294	20	274	314
11	311	19	292	330	301	19	282	320
12	318	18	300	336	308	19	289	327
13	324	18	306	342	314	18	296	332
14	330	18	312	348	321	18	303	339
15	336	17	319	353	327	18	309	345
16	342	17	325	359	333	17	316	350
17	348	17	331	365	339	17	322	356
18	353	17	336	370	344	17	327	361
19	359	17	342	376	350	17	333	367
20	364	17	347	381	356	17	339	373
21	369	17	352	386	361	17	344	378
22	375	17	358	392	367	17	350	384
23	380	17	363	397	372	17	355	389
24	385	17	368	402	378	17	361	395
25	391	17	374	408	384	17	367	401
26	396	17	379	413	389	17	372	406
27	402	17	385	419	395	18	377	413
28	408	17	391	425	401	18	383	419
29	414	18	396	432	407	18	389	425
30	420	18	402	438	414	18	396	432
31	426	18	408	444	421	19	402	440
32	433	19	414	452	428	19	409	447
33	441	20	421	461	435	20	415	455
34	448	20	428	468	444	21	423	465
35	457	22	435	479	453	22	431	475
36	466	23	443	489	463	23	440	486
37	477	25	452	502	474	25	449	499
38	490	27	463	517	487	27	460	514
39	506	31	475	537	504	31	473	535
40	528	37	491	565	526	37	489	563
41	565	51	514	600	563	51	512	600
42	600	0	600	600	600	0	600	600

**Table 7.6.6 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 Mathematics**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	132	54	78	186	128	54	74	182
2	170	38	132	208	166	38	128	204
3	194	32	162	226	190	32	158	222
4	211	28	183	239	207	28	179	235
5	225	26	199	251	221	26	195	247
6	237	24	213	261	233	24	209	257
7	247	23	224	270	243	23	220	266
8	256	22	234	278	252	22	230	274
9	264	21	243	285	260	21	239	281
10	272	20	252	292	268	20	248	288
11	279	19	260	298	275	19	256	294
12	286	18	268	304	282	18	264	300
13	292	18	274	310	288	18	270	306
14	298	18	280	316	295	18	277	313
15	305	17	288	322	301	17	284	318
16	310	17	293	327	306	17	289	323
17	316	17	299	333	312	17	295	329
18	321	17	304	338	317	17	300	334
19	326	16	310	342	323	17	306	340
20	331	16	315	347	328	16	312	344
21	336	16	320	352	333	16	317	349
22	341	16	325	357	338	16	322	354
23	346	16	330	362	343	16	327	359
24	351	16	335	367	348	16	332	364
25	356	16	340	372	353	16	337	369
26	361	16	345	377	358	16	342	374
27	366	16	350	382	363	16	347	379
28	371	16	355	387	368	16	352	384
29	376	16	360	392	373	16	357	389
30	381	16	365	397	378	16	362	394
31	386	16	370	402	384	17	367	401
32	391	17	374	408	389	17	372	406
33	397	17	380	414	395	17	378	412
34	402	17	385	419	400	17	383	417
35	408	17	391	425	406	17	389	423
36	414	17	397	431	412	18	394	430
37	419	18	401	437	418	18	400	436
38	426	18	408	444	424	18	406	442
39	432	19	413	451	431	19	412	450
40	439	19	420	458	438	20	418	458
41	447	21	426	468	446	21	425	467
42	455	21	434	476	454	22	432	476
43	464	22	442	486	464	23	441	487
44	474	24	450	498	474	24	450	498
45	485	26	459	511	485	26	459	511
46	499	28	471	527	500	28	472	528
47	516	32	484	548	517	32	485	549
48	539	38	501	577	540	39	501	579
49	578	54	524	600	579	54	525	600
50	600	0	600	600	600	0	600	600

**Table 7.6.7 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 History/Social Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	104	64	40	168	96	64	32	160
2	151	47	104	198	143	47	96	190
3	181	39	142	220	172	39	133	211
4	202	34	168	236	194	35	159	229
5	219	32	187	251	211	32	179	243
6	234	29	205	263	227	30	197	257
7	248	28	220	276	240	28	212	268
8	259	27	232	286	252	27	225	279
9	270	26	244	296	263	26	237	289
10	280	25	255	305	274	25	249	299
11	289	24	265	313	283	24	259	307
12	299	24	275	323	293	24	269	317
13	308	23	285	331	301	23	278	324
14	316	23	293	339	310	23	287	333
15	324	23	301	347	318	23	295	341
16	332	22	310	354	326	23	303	349
17	339	22	317	361	334	23	311	357
18	347	22	325	369	342	22	320	364
19	354	22	332	376	350	22	328	372
20	362	22	340	384	358	22	336	380
21	369	22	347	391	365	22	343	387
22	377	22	355	399	373	22	351	395
23	384	22	362	406	381	22	359	403
24	392	22	370	414	389	23	366	412
25	400	22	378	422	396	23	373	419
26	408	23	385	431	404	23	381	427
27	416	23	393	439	413	23	390	436
28	424	23	401	447	421	23	398	444
29	433	24	409	457	431	24	407	455
30	442	24	418	466	440	24	416	464
31	452	25	427	477	449	26	423	475
32	462	26	436	488	461	26	435	487
33	474	28	446	502	472	28	444	500
34	486	29	457	515	485	29	456	514
35	500	31	469	531	499	31	468	530
36	517	34	483	551	516	34	482	550
37	538	38	500	576	538	39	499	577
38	566	46	520	600	566	46	520	600
39	600	64	536	600	600	64	536	600
40	600	0	600	600	600	0	600	600

**Table 7.6.8 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	172	50	122	222	152	51	101	203
2	209	36	173	245	189	37	152	226
3	230	30	200	260	212	31	181	243
4	247	27	220	274	229	27	202	256
5	260	24	236	284	243	25	218	268
6	271	22	249	293	255	23	232	278
7	281	21	260	302	266	22	244	288
8	290	20	270	310	275	21	254	296
9	298	20	278	318	284	20	264	304
10	306	19	287	325	291	20	271	311
11	312	19	293	331	299	19	280	318
12	319	18	301	337	306	19	287	325
13	326	18	308	344	313	18	295	331
14	332	18	314	350	320	18	302	338
15	338	17	321	355	326	18	308	344
16	344	17	327	361	332	18	314	350
17	350	17	333	367	338	17	321	355
18	355	17	338	372	344	17	327	361
19	361	17	344	378	350	17	333	367
20	367	17	350	384	356	17	339	373
21	372	17	355	389	362	17	345	379
22	378	17	361	395	368	17	351	385
23	384	17	367	401	374	17	357	391
24	390	17	373	407	380	17	363	397
25	396	17	379	413	386	18	368	404
26	402	18	384	420	392	18	374	410
27	409	18	391	427	398	18	380	416
28	415	18	397	433	405	18	387	423
29	422	19	403	441	412	19	393	431
30	430	19	411	449	419	19	400	438
31	437	20	417	457	427	20	407	447
32	446	20	426	466	435	20	415	455
33	455	21	434	476	444	21	423	465
34	465	23	442	488	454	22	432	476
35	476	24	452	500	465	24	441	489
36	490	27	463	517	478	26	452	504
37	506	30	476	536	494	30	464	524
38	529	36	493	565	516	36	480	552
39	565	50	515	600	552	50	502	600
40	600	0	600	600	600	0	600	600

**Table 7.6.9 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 Writing – Core 1/Main Prompt and Core 1/Alternate Prompt**

Raw Score	Core 1/ Main				Core 1/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	30	95	0	125	32	95	0	127
2	44	95	0	139	47	95	0	142
3	58	95	0	153	62	95	0	157
4	72	95	0	167	77	95	0	172
5	86	95	0	181	92	95	0	187
6	100	95	5	195	107	95	12	202
7	169	49	120	218	175	49	126	224
8	204	35	169	239	212	36	176	248
9	226	29	197	255	235	30	205	265
10	242	26	216	268	252	27	225	279
11	255	23	232	278	266	24	242	290
12	266	22	244	288	277	23	254	300
13	276	21	255	297	288	22	266	310
14	284	20	264	304	297	21	276	318
15	292	19	273	311	306	20	286	326
16	300	19	281	319	314	19	295	333
17	308	19	289	327	322	19	303	341
18	315	19	296	334	329	18	311	347
19	323	18	305	341	336	18	318	354
20	330	18	312	348	343	18	325	361
21	337	18	319	355	350	18	332	368
22	344	19	325	363	357	18	339	375
23	352	19	333	371	364	18	346	382
24	359	19	340	378	372	19	353	391
25	367	19	348	386	379	19	360	398
26	374	19	355	393	387	19	368	406
27	382	19	363	401	394	19	375	413
28	390	19	371	409	403	20	383	423
29	398	19	379	417	411	20	391	431
30	406	20	386	426	420	21	399	441
31	414	20	394	434	429	21	408	450
32	423	20	403	443	439	22	417	461
33	431	21	410	452	450	23	427	473
34	441	22	419	463	461	23	438	484
35	451	23	428	474	473	24	449	497
36	463	24	439	487	486	25	461	511
37	476	26	450	502	501	27	474	528
38	492	29	463	521	517	28	489	545
39	511	32	479	543	536	31	505	567
40	536	36	500	572	558	35	523	593
41	565	39	526	600	588	40	548	600
42	600	43	557	600	600	46	554	600
43	600	54	546	600	600	57	543	600
44	600	97	503	600	600	99	501	600

**Table 7.6.10 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 Writing – Core 2/Main Prompt and Core 2/Alternate Prompt**

Raw Score	Core 2/ Main				Core 2/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	39	94	0	133	34	95	0	129
2	56	94	0	150	49	95	0	144
3	73	94	0	167	64	95	0	159
4	90	94	0	184	79	95	0	174
5	107	94	13	201	94	95	0	189
6	124	94	30	218	109	95	14	204
7	191	48	143	239	176	48	128	224
8	226	35	191	261	212	35	177	247
9	247	29	218	276	234	30	204	264
10	263	26	237	289	250	26	224	276
11	277	23	254	300	263	24	239	287
12	287	22	265	309	275	23	252	298
13	297	21	276	318	285	21	264	306
14	306	20	286	326	294	20	274	314
15	314	19	295	333	302	20	282	322
16	322	19	303	341	310	19	291	329
17	329	18	311	347	318	19	299	337
18	336	18	318	354	325	18	307	343
19	343	18	325	361	333	18	315	351
20	349	18	331	367	340	18	322	358
21	356	18	338	374	347	18	329	365
22	362	18	344	380	354	18	336	372
23	369	18	351	387	362	19	343	381
24	376	18	358	394	369	19	350	388
25	383	18	365	401	377	19	358	396
26	390	18	372	408	385	19	366	404
27	397	18	379	415	393	20	373	413
28	405	19	386	424	401	20	381	421
29	412	19	393	431	410	21	389	431
30	420	19	401	439	420	22	398	442
31	428	20	408	448	430	22	408	452
32	437	20	417	457	441	23	418	464
33	446	21	425	467	452	23	429	475
34	455	22	433	477	464	24	440	488
35	466	23	443	489	477	25	452	502
36	477	24	453	501	491	26	465	517
37	491	26	465	517	505	27	478	532
38	506	29	477	535	522	28	494	550
39	526	32	494	558	540	31	509	571
40	551	36	515	587	562	34	528	596
41	582	40	542	600	589	38	551	600
42	600	44	556	600	600	43	557	600
43	600	54	546	600	600	54	546	600
44	600	97	503	600	600	98	502	600

**Table 7.6.11 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 Writing – Core 3/Main Prompt and Core 3/Alternate Prompt**

Raw Score	Core 3/ Main				Core 3/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	38	94	0	132	37	94	0	131
2	54	94	0	148	53	94	0	147
3	69	94	0	163	69	94	0	163
4	85	94	0	179	85	94	0	179
5	101	94	7	195	101	94	7	195
6	117	94	23	211	117	94	23	211
7	184	48	136	232	184	48	136	232
8	219	35	184	254	219	35	184	254
9	241	29	212	270	241	29	212	270
10	256	26	230	282	257	26	231	283
11	269	23	246	292	270	23	247	293
12	280	22	258	302	281	22	259	303
13	290	21	269	311	291	21	270	312
14	298	20	278	318	300	20	280	320
15	307	19	288	326	308	19	289	327
16	314	19	295	333	315	19	296	334
17	322	18	304	340	323	19	304	342
18	329	18	311	347	331	18	313	349
19	336	18	318	354	338	18	320	356
20	343	18	325	361	345	18	327	363
21	350	18	332	368	352	18	334	370
22	356	18	338	374	359	18	341	377
23	364	18	346	382	366	18	348	384
24	371	18	353	389	373	19	354	392
25	378	19	359	397	381	19	362	400
26	385	19	366	404	389	19	370	408
27	393	19	374	412	396	19	377	415
28	401	19	382	420	405	20	385	425
29	409	20	389	429	413	20	393	433
30	417	20	397	437	422	21	401	443
31	426	20	406	446	431	21	410	452
32	435	21	414	456	440	22	418	462
33	444	22	422	466	451	23	428	474
34	454	23	431	477	462	23	439	485
35	466	23	443	489	474	24	450	498
36	478	25	453	503	487	25	462	512
37	492	27	465	519	501	27	474	528
38	510	30	480	540	518	29	489	547
39	531	33	498	564	538	32	506	570
40	557	36	521	593	562	35	527	597
41	586	38	548	600	590	38	552	600
42	600	41	559	600	600	43	557	600
43	600	52	548	600	600	54	546	600
44	600	96	504	600	600	97	503	600



**Table 7.6.12 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 English: Reading/Literature and Research**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	84	65	19	149	81	65	16	146
2	131	47	84	178	128	47	81	175
3	160	39	121	199	157	40	117	197
4	180	35	145	215	178	35	143	213
5	198	31	167	229	195	32	163	227
6	212	29	183	241	210	29	181	239
7	224	28	196	252	223	28	195	251
8	236	26	210	262	234	27	207	261
9	246	26	220	272	245	26	219	271
10	256	24	232	280	255	25	230	280
11	265	24	241	289	264	24	240	288
12	274	23	251	297	273	24	249	297
13	282	23	259	305	282	23	259	305
14	290	22	268	312	290	22	268	312
15	298	22	276	320	298	22	276	320
16	305	22	283	327	306	22	284	328
17	312	22	290	334	313	22	291	335
18	320	22	298	342	320	22	298	342
19	327	22	305	349	327	22	305	349
20	334	21	313	355	335	22	313	357
21	341	21	320	362	342	22	320	364
22	349	22	327	371	349	22	327	371
23	356	22	334	378	356	22	334	378
24	363	22	341	385	364	22	342	386
25	371	22	349	393	371	22	349	393
26	378	22	356	400	379	22	357	401
27	385	22	363	407	386	22	364	408
28	394	22	372	416	394	22	372	416
29	402	23	379	425	402	23	379	425
30	410	24	386	434	411	24	387	435
31	419	24	395	443	420	24	396	444
32	428	25	403	453	429	25	404	454
33	439	26	413	465	439	26	413	465
34	449	27	422	476	449	27	422	476
35	461	28	433	489	461	28	433	489
36	474	30	444	504	474	29	445	503
37	489	32	457	521	489	32	457	521
38	507	35	472	542	506	35	471	541
39	528	40	488	568	528	40	488	568
40	557	47	510	600	557	47	510	600
41	600	65	535	600	600	66	534	600
42	600	0	600	600	600	0	600	600

**Table 7.6.13 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Mathematics**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	160	50	110	210	157	50	107	207
2	196	36	160	232	191	35	156	226
3	218	30	188	248	213	29	184	242
4	234	27	207	261	228	26	202	254
5	247	24	223	271	240	23	217	263
6	259	22	237	281	251	22	229	273
7	268	21	247	289	260	20	240	280
8	277	20	257	297	268	19	249	287
9	284	19	265	303	275	18	257	293
10	292	18	274	310	282	17	265	299
11	298	17	281	315	288	17	271	305
12	305	17	288	322	294	17	277	311
13	311	17	294	328	299	16	283	315
14	316	17	299	333	305	16	289	321
15	321	16	305	337	310	16	294	326
16	327	16	311	343	314	15	299	329
17	331	16	315	347	319	15	304	334
18	336	15	321	351	323	15	308	338
19	341	15	326	356	328	15	313	343
20	345	15	330	360	332	15	317	347
21	349	15	334	364	337	14	323	351
22	354	15	339	369	340	14	326	354
23	358	14	344	372	344	14	330	358
24	362	14	348	376	348	14	334	362
25	366	14	352	380	353	14	339	367
26	370	14	356	384	357	14	343	371
27	374	14	360	388	360	14	346	374
28	378	14	364	392	364	14	350	378
29	382	14	368	396	368	14	354	382
30	386	14	372	400	372	14	358	386
31	390	14	376	404	375	14	361	389
32	394	14	380	408	379	14	365	393
33	398	14	384	412	383	14	369	397
34	402	14	388	416	387	14	373	401
35	406	14	392	420	391	14	377	405
36	411	14	397	425	395	14	381	409
37	414	14	400	428	399	14	385	413
38	419	15	404	434	403	14	389	417
39	423	15	408	438	407	15	392	422
40	428	15	413	443	411	15	396	426
41	432	15	417	447	416	15	401	431
42	437	15	422	452	421	15	406	436
43	442	16	426	458	425	15	410	440
44	447	16	431	463	430	16	414	446
45	452	16	436	468	435	16	419	451
46	457	17	440	474	440	16	424	456
47	463	17	446	480	445	17	428	462
48	469	17	452	486	451	17	434	468
49	476	18	458	494	457	17	440	474
50	482	19	463	501	464	18	446	482
51	490	20	470	510	471	19	452	490
52	498	21	477	519	478	19	459	497
53	508	22	486	530	487	21	466	508
54	519	24	495	543	496	22	474	518
55	532	27	505	559	507	24	483	531
56	549	30	519	579	519	26	493	545
57	572	36	536	600	535	30	505	565

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	50	550	600	557	36	521	593
59	600	0	600	600	592	50	542	600
60	600	0	600	600	600	0	600	600

**Table 7.6.14 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 History/Social Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	177	54	123	231	174	54	120	228
2	215	39	176	254	213	39	174	252
3	239	32	207	271	236	32	204	268
4	256	28	228	284	253	28	225	281
5	269	25	244	294	267	25	242	292
6	280	24	256	304	278	24	254	302
7	290	22	268	312	288	22	266	310
8	299	21	278	320	297	21	276	318
9	307	20	287	327	305	20	285	325
10	314	20	294	334	312	20	292	332
11	322	19	303	341	319	19	300	338
12	328	19	309	347	325	19	306	344
13	334	18	316	352	332	18	314	350
14	340	17	323	357	337	17	320	354
15	346	17	329	363	343	17	326	360
16	351	17	334	368	349	17	332	366
17	356	16	340	372	354	16	338	370
18	361	16	345	377	359	16	343	375
19	367	16	351	383	364	16	348	380
20	371	16	355	387	369	16	353	385
21	376	16	360	392	373	16	357	389
22	381	16	365	397	378	16	362	394
23	386	16	370	402	383	16	367	399
24	390	16	374	406	388	16	372	404
25	395	16	379	411	392	16	376	408
26	400	16	384	416	397	16	381	413
27	405	16	389	421	402	16	386	418
28	410	16	394	426	407	16	391	423
29	414	16	398	430	411	16	395	427
30	419	16	403	435	416	16	400	432
31	424	16	408	440	421	16	405	437
32	429	16	413	445	426	16	410	442
33	434	16	418	450	431	16	415	447
34	439	17	422	456	436	17	419	453
35	445	17	428	462	442	17	425	459
36	450	17	433	467	447	17	430	464
37	456	18	438	474	453	18	435	471
38	462	19	443	481	459	19	440	478
39	469	19	450	488	466	19	447	485
40	476	20	456	496	473	20	453	493
41	483	20	463	503	480	20	460	500
42	492	21	471	513	488	21	467	509
43	500	22	478	522	497	22	475	519
44	510	24	486	534	507	24	483	531
45	522	25	497	547	518	25	493	543
46	535	28	507	563	532	28	504	560
47	552	32	520	584	549	32	517	581
48	575	39	536	600	573	39	534	600
49	600	54	546	600	600	54	546	600
50	600	0	600	600	600	0	600	600

**Table 7.6.15 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Science**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	182	50	132	232	172	50	122	222
2	217	36	181	253	208	36	172	244
3	238	30	208	268	230	30	200	260
4	255	26	229	281	246	26	220	272
5	267	24	243	291	259	24	235	283
6	278	22	256	300	270	23	247	293
7	287	21	266	308	279	21	258	300
8	295	20	275	315	288	20	268	308
9	303	19	284	322	296	19	277	315
10	310	18	292	328	303	19	284	322
11	316	18	298	334	310	18	292	328
12	323	17	306	340	316	18	298	334
13	329	17	312	346	322	17	305	339
14	334	16	318	350	328	17	311	345
15	339	16	323	355	334	17	317	351
16	345	16	329	361	339	16	323	355
17	350	16	334	366	344	16	328	360
18	355	15	340	370	350	16	334	366
19	359	15	344	374	355	16	339	371
20	364	15	349	379	360	16	344	376
21	369	15	354	384	365	15	350	380
22	373	15	358	388	369	15	354	384
23	378	15	363	393	374	15	359	389
24	382	15	367	397	379	15	364	394
25	387	15	372	402	384	15	369	399
26	391	15	376	406	388	15	373	403
27	396	15	381	411	393	15	378	408
28	400	15	385	415	397	15	382	412
29	405	15	390	420	402	15	387	417
30	409	15	394	424	407	15	392	422
31	414	15	399	429	412	16	396	428
32	419	15	404	434	417	16	401	433
33	424	16	408	440	422	16	406	438
34	429	16	413	445	427	16	411	443
35	433	16	417	449	432	16	416	448
36	439	16	423	455	438	17	421	455
37	445	17	428	462	443	17	426	460
38	450	17	433	467	449	17	432	466
39	457	18	439	475	456	18	438	474
40	463	18	445	481	462	18	444	480
41	470	19	451	489	469	19	450	488
42	477	20	457	497	477	20	457	497
43	485	21	464	506	485	21	464	506
44	495	22	473	517	494	22	472	516
45	505	24	481	529	505	24	481	529
46	518	26	492	544	518	26	492	544
47	533	30	503	563	533	30	503	563
48	555	36	519	591	555	36	519	591
49	590	50	540	600	591	50	541	600
50	600	0	600	600	600	0	600	600

**Table 7.6.16 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 1/Main Prompt and Core 1/Alternate Prompt**

Raw Score	Core 1/ Main				Core 1/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	46	77	0	123	50	78	0	128
2	68	77	0	145	72	78	0	150
3	90	77	13	167	94	78	16	172
4	112	77	35	189	116	78	38	194
5	134	77	57	211	138	78	60	216
6	156	77	79	233	160	78	82	238
7	209	39	170	248	216	40	176	256
8	236	28	208	264	244	28	216	272
9	252	23	229	275	261	24	237	285
10	264	20	244	284	274	21	253	295
11	274	19	255	293	284	19	265	303
12	282	18	264	300	293	18	275	311
13	291	17	274	308	301	17	284	318
14	298	17	281	315	309	16	293	325
15	305	16	289	321	315	16	299	331
16	312	16	296	328	321	16	305	337
17	319	16	303	335	328	16	312	344
18	325	16	309	341	334	15	319	349
19	332	16	316	348	340	15	325	355
20	338	16	322	354	346	15	331	361
21	345	16	329	361	351	15	336	366
22	351	16	335	367	357	15	342	372
23	358	16	342	374	363	15	348	378
24	364	16	348	380	369	15	354	384
25	370	16	354	386	375	15	360	390
26	377	16	361	393	381	16	365	397
27	383	16	367	399	387	16	371	403
28	389	16	373	405	393	16	377	409
29	396	16	380	412	400	16	384	416
30	403	17	386	420	406	16	390	422
31	411	17	394	428	413	16	397	429
32	418	18	400	436	420	17	403	437
33	426	18	408	444	428	17	411	445
34	435	19	416	454	435	18	417	453
35	444	19	425	463	444	18	426	462
36	454	20	434	474	453	19	434	472
37	465	21	444	486	463	20	443	483
38	477	22	455	499	474	21	453	495
39	491	23	468	514	487	23	464	510
40	505	25	480	530	501	25	476	526
41	523	27	496	550	518	27	491	545
42	544	31	513	575	540	32	508	572
43	576	41	535	600	572	42	530	600
44	600	79	521	600	600	79	521	600

**Table 7.6.17 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 2/Main Prompt and Core 2/Alternate Prompt**

Raw Score	Core 2/ Main				Core 2/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	47	78	0	125	50	78	0	128
2	70	78	0	148	73	78	0	151
3	93	78	15	171	96	78	18	174
4	116	78	38	194	119	78	41	197
5	139	78	61	217	142	78	64	220
6	162	78	84	240	165	78	87	243
7	216	39	177	255	220	40	180	260
8	244	28	216	272	248	28	220	276
9	261	23	238	284	265	23	242	288
10	273	21	252	294	277	21	256	298
11	282	19	263	301	288	19	269	307
12	291	18	273	309	296	18	278	314
13	298	17	281	315	304	17	287	321
14	305	16	289	321	311	16	295	327
15	312	16	296	328	317	16	301	333
16	318	15	303	333	323	15	308	338
17	324	15	309	339	329	15	314	344
18	329	15	314	344	335	15	320	350
19	335	15	320	350	340	15	325	355
20	341	15	326	356	346	15	331	361
21	346	15	331	361	351	15	336	366
22	352	15	337	367	357	15	342	372
23	358	15	343	373	362	15	347	377
24	363	15	348	378	368	15	353	383
25	369	15	354	384	374	15	359	389
26	375	15	360	390	379	15	364	394
27	381	15	366	396	385	15	370	400
28	387	15	372	402	391	15	376	406
29	393	16	377	409	396	15	381	411
30	399	16	383	415	403	16	387	419
31	405	16	389	421	409	16	393	425
32	412	16	396	428	416	16	400	432
33	419	17	402	436	423	17	406	440
34	427	18	409	445	430	17	413	447
35	435	18	417	453	438	18	420	456
36	444	19	425	463	446	19	427	465
37	454	20	434	474	456	19	437	475
38	465	21	444	486	466	21	445	487
39	478	23	455	501	478	22	456	500
40	492	25	467	517	492	24	468	516
41	509	26	483	535	508	26	482	534
42	529	30	499	559	529	31	498	560
43	560	40	520	600	561	41	520	600
44	600	78	522	600	600	79	521	600

**Table 7.6.18 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 8 Writing – Core 3/Main Prompt and Core 3/Alternate Prompt**

Raw Score	Core 3/ Main				Core 3/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	45	77	0	122	48	78	0	126
2	67	77	0	144	71	78	0	149
3	89	77	12	166	94	78	16	172
4	111	77	34	188	117	78	39	195
5	133	77	56	210	140	78	62	218
6	155	77	78	232	163	78	85	241
7	208	39	169	247	217	39	178	256
8	235	28	207	263	245	28	217	273
9	251	23	228	274	261	23	238	284
10	263	21	242	284	274	21	253	295
11	274	19	255	293	284	19	265	303
12	282	18	264	300	293	18	275	311
13	291	18	273	309	300	17	283	317
14	299	18	281	317	308	16	292	324
15	307	17	290	324	314	16	298	330
16	314	17	297	331	321	16	305	337
17	321	17	304	338	328	16	312	344
18	329	17	312	346	334	16	318	350
19	336	17	319	353	340	16	324	356
20	343	16	327	359	346	16	330	362
21	350	16	334	366	352	16	336	368
22	356	16	340	372	358	15	343	373
23	363	16	347	379	364	15	349	379
24	369	16	353	385	370	15	355	385
25	375	16	359	391	376	15	361	391
26	382	16	366	398	382	15	367	397
27	388	16	372	404	388	15	373	403
28	394	16	378	410	394	15	379	409
29	401	16	385	417	400	16	384	416
30	407	16	391	423	406	16	390	422
31	414	16	398	430	413	16	397	429
32	421	17	404	438	419	16	403	435
33	429	18	411	447	426	17	409	443
34	437	18	419	455	434	18	416	452
35	446	19	427	465	442	18	424	460
36	456	20	436	476	451	19	432	470
37	467	21	446	488	460	20	440	480
38	479	23	456	502	471	21	450	492
39	494	25	469	519	483	23	460	506
40	511	26	485	537	497	24	473	521
41	530	29	501	559	514	27	487	541
42	554	33	521	587	535	31	504	566
43	589	42	547	600	568	42	526	600
44	600	79	521	600	600	79	521	600



**Table 7.6.19 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course English: Reading/Literature and Research**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	154	55	99	209	148	55	93	203
2	195	40	155	235	188	40	148	228
3	219	33	186	252	212	33	179	245
4	237	29	208	266	230	29	201	259
5	252	27	225	279	245	27	218	272
6	265	25	240	290	257	25	232	282
7	276	24	252	300	268	24	244	292
8	286	23	263	309	278	22	256	300
9	295	22	273	317	287	21	266	308
10	304	21	283	325	295	21	274	316
11	312	21	291	333	303	20	283	323
12	320	20	300	340	311	20	291	331
13	327	20	307	347	318	19	299	337
14	335	19	316	354	325	19	306	344
15	342	19	323	361	332	19	313	351
16	348	19	329	367	339	19	320	358
17	355	19	336	374	345	19	326	364
18	361	19	342	380	351	18	333	369
19	368	19	349	387	358	18	340	376
20	374	18	356	392	364	18	346	382
21	380	18	362	398	370	18	352	388
22	387	18	369	405	376	18	358	394
23	393	18	375	411	382	18	364	400
24	399	19	380	418	389	18	371	407
25	406	19	387	425	395	19	376	414
26	412	19	393	431	402	19	383	421
27	419	19	400	438	408	19	389	427
28	426	19	407	445	415	19	396	434
29	433	20	413	453	422	19	403	441
30	440	20	420	460	429	20	409	449
31	448	20	428	468	437	20	417	457
32	456	21	435	477	445	21	424	466
33	464	21	443	485	453	21	432	474
34	473	22	451	495	462	22	440	484
35	483	24	459	507	472	24	448	496
36	494	25	469	519	483	25	458	508
37	506	27	479	533	496	27	469	523
38	521	29	492	550	510	29	481	539
39	538	33	505	571	528	33	495	561
40	563	40	523	600	552	40	512	592
41	600	55	545	600	593	55	538	600
42	600	0	600	600	600	0	600	600

**Table 7.6.20 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Algebra I (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	190	46	144	236	200	46	154	246
2	223	33	190	256	234	33	201	267
3	244	28	216	272	254	28	226	282
4	259	24	235	283	269	24	245	293
5	271	22	249	293	281	22	259	303
6	281	20	261	301	291	20	271	311
7	290	20	270	310	300	19	281	319
8	298	19	279	317	308	18	290	326
9	306	18	288	324	315	17	298	332
10	313	17	296	330	321	17	304	338
11	319	16	303	335	327	16	311	343
12	325	16	309	341	333	16	317	349
13	330	16	314	346	338	16	322	354
14	336	15	321	351	344	15	329	359
15	341	15	326	356	348	15	333	363
16	346	15	331	361	353	15	338	368
17	350	15	335	365	358	14	344	372
18	355	14	341	369	363	14	349	377
19	360	14	346	374	367	14	353	381
20	364	14	350	378	372	14	358	386
21	369	14	355	383	376	14	362	390
22	373	14	359	387	380	14	366	394
23	377	14	363	391	384	14	370	398
24	381	14	367	395	388	14	374	402
25	385	14	371	399	392	14	378	406
26	390	14	376	404	396	14	382	410
27	394	14	380	408	401	14	387	415
28	398	14	384	412	405	14	391	419
29	402	14	388	416	409	14	395	423
30	407	14	393	421	413	14	399	427
31	411	14	397	425	418	14	404	432
32	416	14	402	430	422	14	408	436
33	420	14	406	434	426	14	412	440
34	425	15	410	440	431	14	417	445
35	429	15	414	444	436	15	421	451
36	435	15	420	450	440	15	425	455
37	440	15	425	455	446	15	431	461
38	445	16	429	461	451	16	435	467
39	451	16	435	467	456	16	440	472
40	457	16	441	473	462	16	446	478
41	463	17	446	480	468	17	451	485
42	470	18	452	488	476	18	458	494
43	478	19	459	497	483	19	464	502
44	486	20	466	506	491	20	471	511
45	496	22	474	518	501	21	480	522
46	508	24	484	532	512	24	488	536
47	522	27	495	549	527	27	500	554
48	542	32	510	574	546	32	514	578
49	574	45	529	600	578	45	533	600
50	600	0	600	600	600	0	600	600

**Table 7.6.21 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Geometry (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	175	50	125	225	182	49	133	231
2	211	36	175	247	217	35	182	252
3	233	30	203	263	239	29	210	268
4	249	27	222	276	255	26	229	281
5	263	24	239	287	268	24	244	292
6	274	23	251	297	278	22	256	300
7	284	21	263	305	288	21	267	309
8	292	20	272	312	296	20	276	316
9	301	19	282	320	304	19	285	323
10	308	19	289	327	311	18	293	329
11	315	18	297	333	318	18	300	336
12	322	18	304	340	324	17	307	341
13	328	17	311	345	330	17	313	347
14	334	17	317	351	336	16	320	352
15	340	17	323	357	342	16	326	358
16	346	16	330	362	347	16	331	363
17	352	16	336	368	352	16	336	368
18	357	16	341	373	358	16	342	374
19	363	16	347	379	363	15	348	378
20	368	16	352	384	368	15	353	383
21	373	16	357	389	373	15	358	388
22	378	16	362	394	378	15	363	393
23	384	16	368	400	383	15	368	398
24	389	16	373	405	388	15	373	403
25	394	16	378	410	393	15	378	408
26	399	16	383	415	398	15	383	413
27	405	16	389	421	403	16	387	419
28	410	16	394	426	408	16	392	424
29	415	16	399	431	413	16	397	429
30	421	16	405	437	419	16	403	435
31	427	17	410	444	424	16	408	440
32	433	17	416	450	430	17	413	447
33	439	17	422	456	436	17	419	453
34	445	18	427	463	443	18	425	461
35	452	18	434	470	449	18	431	467
36	459	19	440	478	457	19	438	476
37	467	20	447	487	464	20	444	484
38	476	21	455	497	473	21	452	494
39	485	22	463	507	482	22	460	504
40	496	24	472	520	493	24	469	517
41	508	26	482	534	506	26	480	532
42	524	29	495	553	522	29	493	551
43	546	35	511	581	544	36	508	580
44	581	49	532	600	579	49	530	600
45	600	0	600	600	600	0	600	600

**Table 7.6.22 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Algebra II (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	144	56	88	200	141	56	85	197
2	184	40	144	224	181	40	141	221
3	208	34	174	242	206	34	172	240
4	226	29	197	255	224	30	194	254
5	240	27	213	267	238	27	211	265
6	252	25	227	277	251	25	226	276
7	263	23	240	286	261	24	237	285
8	272	22	250	294	270	23	247	293
9	281	21	260	302	279	22	257	301
10	288	20	268	308	287	20	267	307
11	295	20	275	315	295	20	275	315
12	302	19	283	321	301	19	282	320
13	309	19	290	328	309	19	290	328
14	315	18	297	333	315	19	296	334
15	321	18	303	339	321	18	303	339
16	326	18	308	344	327	18	309	345
17	332	17	315	349	332	18	314	350
18	337	17	320	354	338	18	320	356
19	342	17	325	359	343	17	326	360
20	348	17	331	365	349	17	332	366
21	353	17	336	370	354	17	337	371
22	358	17	341	375	359	17	342	376
23	363	17	346	380	364	17	347	381
24	368	17	351	385	369	17	352	386
25	373	17	356	390	374	17	357	391
26	378	17	361	395	380	17	363	397
27	383	17	366	400	385	17	368	402
28	388	17	371	405	390	17	373	407
29	393	17	376	410	395	17	378	412
30	398	17	381	415	400	17	383	417
31	403	17	386	420	405	17	388	422
32	408	17	391	425	411	17	394	428
33	414	17	397	431	416	18	398	434
34	419	18	401	437	422	18	404	440
35	425	18	407	443	427	18	409	445
36	431	18	413	449	433	18	415	451
37	437	19	418	456	440	19	421	459
38	444	19	425	463	446	19	427	465
39	450	20	430	470	453	20	433	473
40	457	20	437	477	460	20	440	480
41	465	21	444	486	468	21	447	489
42	473	22	451	495	477	22	455	499
43	483	23	460	506	486	23	463	509
44	493	25	468	518	496	25	471	521
45	505	27	478	532	508	27	481	535
46	519	29	490	548	522	29	493	551
47	537	34	503	571	540	34	506	574
48	562	40	522	600	564	40	524	600
49	600	56	544	600	600	56	544	600
50	600	0	600	600	600	0	600	600

**Table 7.6.23 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Virginia and U.S. History (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	165	52	113	217	183	52	131	235
2	202	37	165	239	220	37	183	257
3	225	31	194	256	243	31	212	274
4	241	28	213	269	259	27	232	286
5	255	25	230	280	272	25	247	297
6	266	23	243	289	283	23	260	306
7	276	22	254	298	293	22	271	315
8	284	21	263	305	301	21	280	322
9	292	19	273	311	309	19	290	328
10	300	19	281	319	316	18	298	334
11	306	18	288	324	323	18	305	341
12	312	18	294	330	329	17	312	346
13	319	17	302	336	335	17	318	352
14	324	17	307	341	340	16	324	356
15	330	16	314	346	345	16	329	361
16	335	16	319	351	351	16	335	367
17	340	16	324	356	355	16	339	371
18	345	16	329	361	360	15	345	375
19	350	15	335	365	364	15	349	379
20	355	15	340	370	369	15	354	384
21	359	15	344	374	373	15	358	388
22	363	15	348	378	378	15	363	393
23	368	15	353	383	382	15	367	397
24	372	15	357	387	386	14	372	400
25	376	15	361	391	390	14	376	404
26	381	15	366	396	394	14	380	408
27	385	15	370	400	398	14	384	412
28	389	14	375	403	402	14	388	416
29	393	14	379	407	406	14	392	420
30	397	14	383	411	410	14	396	424
31	401	14	387	415	414	14	400	428
32	405	14	391	419	418	14	404	432
33	409	14	395	423	422	14	408	436
34	413	15	398	428	425	14	411	439
35	418	15	403	433	429	14	415	443
36	422	15	407	437	434	14	420	448
37	426	15	411	441	438	14	424	452
38	430	15	415	445	442	15	427	457
39	435	15	420	450	446	15	431	461
40	440	15	425	455	451	15	436	466
41	444	15	429	459	455	15	440	470
42	449	16	433	465	459	15	444	474
43	453	16	437	469	464	15	449	479
44	459	16	443	475	469	16	453	485
45	464	16	448	480	474	16	458	490
46	469	17	452	486	479	16	463	495
47	475	17	458	492	484	17	467	501
48	481	17	464	498	491	17	474	508
49	487	18	469	505	496	18	478	514
50	493	19	474	512	503	18	485	521
51	501	19	482	520	510	19	491	529
52	508	21	487	529	517	20	497	537
53	517	22	495	539	526	22	504	548
54	526	23	503	549	535	23	512	558
55	538	25	513	563	546	25	521	571
56	551	27	524	578	559	27	532	586
57	567	31	536	598	575	31	544	600

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	590	37	553	600	598	37	561	600
59	600	52	548	600	600	52	548	600
60	600	0	600	600	600	0	600	600

**Table 7.6.24 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World History I (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	148	57	91	205	150	57	93	207
2	189	41	148	230	191	41	150	232
3	213	34	179	247	215	34	181	249
4	231	30	201	261	233	30	203	263
5	246	27	219	273	247	27	220	274
6	258	25	233	283	260	25	235	285
7	269	23	246	292	270	23	247	293
8	278	22	256	300	280	22	258	302
9	286	21	265	307	288	21	267	309
10	294	21	273	315	296	21	275	317
11	302	20	282	322	303	20	283	323
12	308	20	288	328	310	20	290	330
13	315	19	296	334	317	19	298	336
14	321	18	303	339	323	18	305	341
15	327	18	309	345	328	18	310	346
16	333	18	315	351	334	18	316	352
17	338	17	321	355	339	17	322	356
18	343	17	326	360	345	17	328	362
19	348	17	331	365	350	17	333	367
20	353	17	336	370	355	17	338	372
21	358	16	342	374	360	16	344	376
22	363	16	347	379	365	16	349	381
23	368	16	352	384	369	16	353	385
24	372	16	356	388	374	16	358	390
25	377	16	361	393	379	16	363	395
26	381	16	365	397	383	16	367	399
27	386	16	370	402	388	16	372	404
28	390	16	374	406	392	16	376	408
29	395	16	379	411	396	16	380	412
30	399	16	383	415	401	16	385	417
31	404	16	388	420	405	16	389	421
32	408	16	392	424	409	16	393	425
33	413	16	397	429	414	16	398	430
34	417	16	401	433	418	16	402	434
35	422	16	406	438	423	16	407	439
36	426	16	410	442	427	16	411	443
37	431	16	415	447	432	16	416	448
38	436	16	420	452	436	16	420	452
39	440	16	424	456	441	16	425	457
40	445	17	428	462	446	16	430	462
41	450	17	433	467	451	17	434	468
42	455	17	438	472	456	17	439	473
43	460	17	443	477	461	17	444	478
44	465	17	448	482	466	17	449	483
45	471	18	453	489	471	18	453	489
46	476	18	458	494	477	18	459	495
47	483	18	465	501	483	18	465	501
48	489	19	470	508	489	19	470	508
49	495	20	475	515	496	20	476	516
50	503	20	483	523	503	20	483	523
51	510	21	489	531	511	21	490	532
52	519	22	497	541	519	22	497	541
53	528	23	505	551	528	23	505	551
54	538	25	513	563	538	25	513	563
55	550	27	523	577	551	27	524	578
56	565	30	535	595	565	30	535	595
57	583	34	549	600	583	34	549	600

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	41	559	600	600	41	559	600
59	600	57	543	600	600	57	543	600
60	600	0	600	600	600	0	600	600



**Table 7.6.25 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World History II (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	153	56	97	209	151	57	94	208
2	194	41	153	235	194	42	152	236
3	218	34	184	252	220	35	185	255
4	237	30	207	267	238	30	208	268
5	251	27	224	278	253	28	225	281
6	263	25	238	288	266	25	241	291
7	274	23	251	297	277	24	253	301
8	283	22	261	305	287	23	264	310
9	292	21	271	313	295	22	273	317
10	300	20	280	320	303	20	283	323
11	307	20	287	327	311	20	291	331
12	313	19	294	332	318	19	299	337
13	320	19	301	339	324	19	305	343
14	326	18	308	344	330	18	312	348
15	332	18	314	350	336	18	318	354
16	337	17	320	354	342	18	324	360
17	343	17	326	360	347	17	330	364
18	348	17	331	365	352	17	335	369
19	353	17	336	370	357	17	340	374
20	358	17	341	375	362	17	345	379
21	363	16	347	379	367	16	351	383
22	367	16	351	383	372	16	356	388
23	371	16	355	387	376	16	360	392
24	376	16	360	392	381	16	365	397
25	381	15	366	396	385	15	370	400
26	385	15	370	400	390	15	375	405
27	390	15	375	405	394	15	379	409
28	394	15	379	409	399	15	384	414
29	398	15	383	413	403	15	388	418
30	402	15	387	417	407	15	392	422
31	407	15	392	422	412	15	397	427
32	411	15	396	426	416	15	401	431
33	416	15	401	431	421	15	406	436
34	420	15	405	435	425	15	410	440
35	424	15	409	439	429	15	414	444
36	429	15	414	444	434	16	418	450
37	433	16	417	449	438	16	422	454
38	438	16	422	454	443	16	427	459
39	442	16	426	458	447	16	431	463
40	447	16	431	463	452	17	435	469
41	452	17	435	469	457	17	440	474
42	457	17	440	474	462	17	445	479
43	462	17	445	479	467	17	450	484
44	467	17	450	484	473	17	456	490
45	472	18	454	490	478	18	460	496
46	478	18	460	496	484	18	466	502
47	484	18	466	502	490	18	472	508
48	490	19	471	509	496	19	477	515
49	497	19	478	516	502	19	483	521
50	504	20	484	524	510	20	490	530
51	512	21	491	533	517	21	496	538
52	520	22	498	542	526	22	504	548
53	529	23	506	552	534	23	511	557
54	539	24	515	563	545	25	520	570
55	551	27	524	578	557	27	530	584
56	565	29	536	594	571	29	542	600
57	582	33	549	600	589	33	556	600

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	40	560	600	600	40	560	600
59	600	56	544	600	600	56	544	600
60	600	0	600	600	600	0	600	600

**Table 7.6.26 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Earth Science (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	164	52	112	216	159	52	107	211
2	201	37	164	238	196	37	159	233
3	223	31	192	254	219	31	188	250
4	239	27	212	266	235	27	208	262
5	253	25	228	278	249	25	224	274
6	263	23	240	286	260	23	237	283
7	273	22	251	295	270	22	248	292
8	281	21	260	302	278	21	257	299
9	289	19	270	308	286	19	267	305
10	296	18	278	314	294	19	275	313
11	302	18	284	320	300	18	282	318
12	309	17	292	326	306	18	288	324
13	314	17	297	331	313	17	296	330
14	320	16	304	336	319	17	302	336
15	325	16	309	341	324	17	307	341
16	330	16	314	346	330	16	314	346
17	335	16	319	351	335	16	319	351
18	340	15	325	355	340	16	324	356
19	344	15	329	359	345	16	329	361
20	349	15	334	364	350	16	334	366
21	354	15	339	369	355	16	339	371
22	358	15	343	373	359	15	344	374
23	362	15	347	377	364	15	349	379
24	367	15	352	382	369	15	354	384
25	371	15	356	386	374	15	359	389
26	376	15	361	391	378	15	363	393
27	380	15	365	395	383	15	368	398
28	384	15	369	399	387	15	372	402
29	389	15	374	404	392	16	376	408
30	394	15	379	409	397	16	381	413
31	398	15	383	413	402	16	386	418
32	403	15	388	418	407	16	391	423
33	407	16	391	423	412	16	396	428
34	413	16	397	429	417	16	401	433
35	417	16	401	433	422	17	405	439
36	423	16	407	439	428	17	411	445
37	428	17	411	445	434	17	417	451
38	434	17	417	451	440	18	422	458
39	440	18	422	458	446	18	428	464
40	446	18	428	464	453	19	434	472
41	454	19	435	473	460	19	441	479
42	461	20	441	481	468	21	447	489
43	470	22	448	492	476	22	454	498
44	479	23	456	502	486	23	463	509
45	490	25	465	515	497	25	472	522
46	502	27	475	529	510	27	483	537
47	518	31	487	549	527	31	496	558
48	541	37	504	578	549	37	512	586
49	578	52	526	600	586	52	534	600
50	600	0	600	600	600	0	600	600

**Table 7.6.27 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Biology (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	206	44	162	250	204	44	160	248
2	238	32	206	270	236	32	204	268
3	257	26	231	283	255	26	229	281
4	271	23	248	294	269	23	246	292
5	282	21	261	303	281	21	260	302
6	291	19	272	310	291	20	271	311
7	300	19	281	319	299	19	280	318
8	307	17	290	324	307	18	289	325
9	314	17	297	331	314	17	297	331
10	320	16	304	336	320	16	304	336
11	326	16	310	342	326	16	310	342
12	331	15	316	346	332	16	316	348
13	336	15	321	351	337	15	322	352
14	342	15	327	357	342	15	327	357
15	346	14	332	360	347	14	333	361
16	351	14	337	365	352	14	338	366
17	355	14	341	369	356	14	342	370
18	360	14	346	374	361	14	347	375
19	364	13	351	377	365	14	351	379
20	368	13	355	381	369	13	356	382
21	372	13	359	385	374	13	361	387
22	377	13	364	390	378	13	365	391
23	381	13	368	394	382	13	369	395
24	385	13	372	398	386	13	373	399
25	389	13	376	402	390	13	377	403
26	393	13	380	406	394	13	381	407
27	397	13	384	410	398	13	385	411
28	401	13	388	414	402	13	389	415
29	405	13	392	418	407	13	394	420
30	409	13	396	422	410	13	397	423
31	413	13	400	426	415	13	402	428
32	418	14	404	432	419	14	405	433
33	422	14	408	436	423	14	409	437
34	426	14	412	440	428	14	414	442
35	431	14	417	445	433	14	419	447
36	436	15	421	451	437	15	422	452
37	441	15	426	456	443	15	428	458
38	446	15	431	461	448	15	433	463
39	452	16	436	468	453	16	437	469
40	458	16	442	474	459	16	443	475
41	464	17	447	481	465	17	448	482
42	471	17	454	488	472	18	454	490
43	478	19	459	497	480	19	461	499
44	486	19	467	505	488	19	469	507
45	496	21	475	517	497	21	476	518
46	507	23	484	530	509	23	486	532
47	521	26	495	547	523	26	497	549
48	540	32	508	572	543	32	511	575
49	572	44	528	600	574	44	530	600
50	600	0	600	600	600	0	600	600

**Table 7.6.28 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Chemistry (1995 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	200	46	154	246	195	46	149	241
2	233	33	200	266	229	34	195	263
3	254	27	227	281	251	28	223	279
4	269	24	245	293	267	25	242	292
5	281	22	259	303	280	23	257	303
6	291	20	271	311	290	21	269	311
7	300	19	281	319	300	20	280	320
8	308	18	290	326	309	19	290	328
9	315	18	297	333	316	18	298	334
10	322	17	305	339	323	17	306	340
11	328	16	312	344	330	17	313	347
12	333	16	317	349	336	16	320	352
13	339	15	324	354	342	16	326	358
14	345	15	330	360	347	15	332	362
15	350	15	335	365	352	15	337	367
16	355	15	340	370	358	15	343	373
17	360	15	345	375	363	15	348	378
18	364	14	350	378	367	15	352	382
19	369	14	355	383	372	14	358	386
20	373	14	359	387	376	14	362	390
21	378	14	364	392	381	14	367	395
22	382	14	368	396	385	14	371	399
23	386	14	372	400	390	14	376	404
24	391	14	377	405	394	14	380	408
25	395	14	381	409	398	14	384	412
26	399	14	385	413	402	14	388	416
27	404	14	390	418	406	14	392	420
28	408	14	394	422	411	14	397	425
29	412	14	398	426	415	14	401	429
30	417	14	403	431	419	14	405	433
31	422	14	408	436	424	14	410	438
32	426	14	412	440	428	14	414	442
33	431	15	416	446	432	14	418	446
34	436	15	421	451	437	15	422	452
35	441	15	426	456	442	15	427	457
36	445	15	430	460	447	15	432	462
37	451	15	436	466	452	15	437	467
38	456	16	440	472	457	15	442	472
39	463	16	447	479	463	16	447	479
40	469	17	452	486	469	16	453	485
41	475	18	457	493	475	17	458	492
42	483	18	465	501	482	18	464	500
43	491	19	472	510	490	19	471	509
44	499	20	479	519	498	20	478	518
45	509	22	487	531	508	22	486	530
46	521	24	497	545	519	23	496	542
47	536	27	509	563	533	27	506	560
48	556	33	523	589	553	32	521	585
49	588	45	543	600	585	45	540	600
50	600	0	600	600	600	0	600	600

**Table 7.6.29 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course World Geography (2001 Standards)**

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
0	0	0	0	0	0	0	0	0
1	98	67	31	165	109	66	43	175
2	145	48	97	193	156	47	109	203
3	174	39	135	213	185	39	146	224
4	195	35	160	230	205	35	170	240
5	211	32	179	243	222	32	190	254
6	226	30	196	256	235	29	206	264
7	238	28	210	266	247	27	220	274
8	249	26	223	275	258	26	232	284
9	259	25	234	284	267	24	243	291
10	267	24	243	291	275	24	251	299
11	276	23	253	299	284	23	261	307
12	284	22	262	306	291	22	269	313
13	291	22	269	313	298	22	276	320
14	298	21	277	319	305	21	284	326
15	305	21	284	326	312	20	292	332
16	311	20	291	331	318	20	298	338
17	318	20	298	338	324	20	304	344
18	324	20	304	344	330	20	310	350
19	330	20	310	350	335	19	316	354
20	336	19	317	355	341	19	322	360
21	341	19	322	360	347	18	329	365
22	346	19	327	365	352	18	334	370
23	352	19	333	371	356	18	338	374
24	357	18	339	375	362	18	344	380
25	363	18	345	381	367	18	349	385
26	367	18	349	385	372	18	354	390
27	373	18	355	391	377	18	359	395
28	378	18	360	396	381	18	363	399
29	383	18	365	401	387	18	369	405
30	388	18	370	406	391	18	373	409
31	393	18	375	411	397	18	379	415
32	398	18	380	416	401	18	383	419
33	403	18	385	421	406	18	388	424
34	408	18	390	426	411	18	393	429
35	413	18	395	431	416	18	398	434
36	419	18	401	437	422	18	404	440
37	424	18	406	442	427	18	409	445
38	429	19	410	448	432	18	414	450
39	435	19	416	454	437	19	418	456
40	440	19	421	459	443	19	424	462
41	446	20	426	466	448	19	429	467
42	452	20	432	472	454	20	434	474
43	458	20	438	478	460	20	440	480
44	464	20	444	484	466	20	446	486
45	471	21	450	492	472	20	452	492
46	477	21	456	498	479	21	458	500
47	484	22	462	506	485	22	463	507
48	492	22	470	514	493	22	471	515
49	500	23	477	523	500	23	477	523
50	507	24	483	531	508	24	484	532
51	517	25	492	542	517	24	493	541
52	527	26	501	553	527	26	501	553
53	537	28	509	565	537	27	510	564
54	550	29	521	579	549	29	520	578
55	563	32	531	595	563	32	531	595
56	580	35	545	600	579	35	544	600
57	600	39	561	600	600	39	561	600

Raw Score	Core 1				Core 2			
	SS	SEM	SS - 1SEM	SS + 1SEM	SS	SEM	SS - 1SEM	SS + 1SEM
58	600	48	552	600	600	48	552	600
59	600	67	533	600	600	66	534	600
60	600	0	600	600	600	0	600	600

**Table 7.6.30 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Writing – Core 1/Main Prompt and Core 1/ Alternate Prompt**

Raw Score	Core 1/ Main				Core 1/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	36	90	0	126	34	89	0	123
2	52	90	0	142	50	89	0	139
3	68	90	0	158	66	89	0	155
4	84	90	0	174	82	89	0	171
5	100	90	10	190	98	89	9	187
6	116	90	26	206	114	89	25	203
7	178	45	133	223	176	45	131	221
8	210	32	178	242	208	32	176	240
9	229	26	203	255	226	26	200	252
10	242	23	219	265	239	23	216	262
11	253	21	232	274	250	21	229	271
12	262	19	243	281	259	19	240	278
13	269	18	251	287	267	18	249	285
14	276	17	259	293	274	17	257	291
15	283	17	266	300	280	17	263	297
16	288	16	272	304	287	17	270	304
17	294	16	278	310	293	16	277	309
18	300	15	285	315	299	16	283	315
19	304	15	289	319	304	16	288	320
20	310	15	295	325	310	16	294	326
21	315	15	300	330	315	16	299	331
22	320	15	305	335	321	15	306	336
23	325	15	310	340	326	15	311	341
24	329	15	314	344	331	15	316	346
25	334	15	319	349	336	15	321	351
26	339	15	324	354	341	15	326	356
27	344	15	329	359	346	15	331	361
28	349	15	334	364	351	15	336	366
29	354	15	339	369	356	15	341	371
30	358	15	343	373	361	15	346	376
31	363	15	348	378	366	15	351	381
32	368	15	353	383	371	15	356	386
33	373	15	358	388	376	15	361	391
34	378	15	363	393	381	15	366	396
35	383	15	368	398	386	15	371	401
36	388	16	372	404	392	15	377	407
37	394	16	378	410	397	16	381	413
38	400	16	384	416	402	16	386	418
39	406	17	389	423	408	17	391	425
40	412	17	395	429	414	17	397	431
41	419	18	401	437	421	17	404	438
42	426	19	407	445	428	18	410	446
43	434	20	414	454	436	19	417	455
44	443	21	422	464	445	20	425	465
45	454	22	432	476	454	21	433	475
46	465	24	441	489	466	23	443	489
47	479	25	454	504	479	25	454	504
48	494	27	467	521	493	27	466	520
49	512	29	483	541	512	29	483	541
50	533	31	502	564	532	31	501	563
51	555	32	523	587	554	32	522	586
52	580	35	545	600	579	35	544	600
53	600	45	555	600	600	45	555	600
54	600	87	513	600	600	88	512	600



**Table 7.6.31 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
High School End-of-Course Writing – Core 2/Main Prompt and Core 2/ Alternate Prompt**

Raw Score	Core 2/ Main				Core 2/ Alternate			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	36	90	0	126	38	90	0	128
2	53	90	0	143	55	90	0	145
3	70	90	0	160	72	90	0	162
4	87	90	0	177	89	90	0	179
5	104	90	14	194	106	90	16	196
6	121	90	31	211	123	90	33	213
7	183	45	138	228	186	46	140	232
8	215	32	183	247	218	33	185	251
9	233	26	207	259	238	27	211	265
10	247	23	224	270	252	23	229	275
11	258	21	237	279	263	21	242	284
12	267	20	247	287	272	20	252	292
13	275	18	257	293	280	18	262	298
14	283	17	266	300	287	17	270	304
15	289	17	272	306	294	17	277	311
16	295	17	278	312	300	16	284	316
17	301	16	285	317	305	16	289	321
18	306	16	290	322	311	16	295	327
19	312	16	296	328	317	15	302	332
20	317	15	302	332	321	15	306	336
21	322	15	307	337	327	15	312	342
22	327	15	312	342	332	15	317	347
23	333	15	318	348	337	15	322	352
24	338	15	323	353	342	15	327	357
25	342	15	327	357	346	15	331	361
26	347	15	332	362	351	15	336	366
27	352	15	337	367	357	15	342	372
28	357	15	342	372	362	15	347	377
29	362	15	347	377	367	15	352	382
30	367	15	352	382	371	15	356	386
31	371	15	356	386	376	15	361	391
32	377	15	362	392	382	15	367	397
33	382	15	367	397	387	15	372	402
34	387	15	372	402	392	15	377	407
35	392	15	377	407	397	16	381	413
36	397	16	381	413	403	16	387	419
37	403	16	387	419	408	16	392	424
38	409	17	392	426	414	17	397	431
39	415	17	398	432	421	17	404	438
40	421	17	404	438	427	17	410	444
41	429	18	411	447	434	18	416	452
42	436	19	417	455	442	19	423	461
43	445	20	425	465	450	20	430	470
44	454	21	433	475	459	21	438	480
45	464	22	442	486	469	22	447	491
46	476	24	452	500	481	24	457	505
47	489	25	464	514	494	25	469	519
48	504	27	477	531	510	28	482	538
49	521	29	492	550	529	30	499	559
50	540	30	510	570	551	32	519	583
51	562	32	530	594	575	33	542	600
52	586	35	551	600	600	35	565	600
53	600	45	555	600	600	45	555	600
54	600	88	512	600	600	87	513	600

**Table 7.6.32 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 5 US History to 1877**

Raw Score	Core 1				Core 2			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	149	56	93	205	141	56	85	197
2	189	40	149	229	182	41	141	223
3	214	34	180	248	207	34	173	241
4	232	30	202	262	226	30	196	256
5	247	27	220	274	242	28	214	270
6	260	25	235	285	254	25	229	279
7	271	24	247	295	266	24	242	290
8	281	23	258	304	276	23	253	299
9	290	22	268	312	286	22	264	308
10	299	21	278	320	294	22	272	316
11	307	21	286	328	303	21	282	324
12	315	20	295	335	311	21	290	332
13	322	20	302	342	318	20	298	338
14	329	19	310	348	325	19	306	344
15	336	19	317	355	332	19	313	351
16	343	19	324	362	339	19	320	358
17	349	19	330	368	346	19	327	365
18	356	18	338	374	352	19	333	371
19	362	18	344	380	359	19	340	378
20	368	18	350	386	365	18	347	383
21	375	18	357	393	371	18	353	389
22	381	18	363	399	378	19	359	397
23	387	18	369	405	384	19	365	403
24	394	19	375	413	391	19	372	410
25	400	19	381	419	398	19	379	417
26	406	19	387	425	404	19	385	423
27	414	19	395	433	411	19	392	430
28	421	20	401	441	418	20	398	438
29	428	20	408	448	426	21	405	447
30	436	21	415	457	434	21	413	455
31	444	22	422	466	442	22	420	464
32	453	22	431	475	451	23	428	474
33	463	23	440	486	461	24	437	485
34	473	25	448	498	472	25	447	497
35	485	26	459	511	484	27	457	511
36	500	29	471	529	499	29	470	528
37	518	33	485	551	517	33	484	550
38	542	40	502	582	540	40	500	580
39	581	55	526	600	580	55	525	600
40	600	0	600	600	600	0	600	600

**Table 7.6.33 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 6 US History from 1877 to Present**

Raw Score	Core 1				Core 2			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	126	64	62	190	125	65	60	190
2	172	47	125	219	172	47	125	219
3	201	39	162	240	200	39	161	239
4	222	35	187	257	222	35	187	257
5	239	31	208	270	239	31	208	270
6	254	30	224	284	253	29	224	282
7	267	28	239	295	266	28	238	294
8	278	26	252	304	278	26	252	304
9	289	25	264	314	288	25	263	313
10	299	25	274	324	298	25	273	323
11	308	24	284	332	307	24	283	331
12	317	23	294	340	316	23	293	339
13	325	23	302	348	324	23	301	347
14	333	23	310	356	332	23	309	355
15	341	22	319	363	341	22	319	363
16	349	22	327	371	348	22	326	370
17	357	21	336	378	356	21	335	377
18	364	21	343	385	363	21	342	384
19	371	21	350	392	370	21	349	391
20	379	21	358	400	378	21	357	399
21	386	21	365	407	385	21	364	406
22	393	21	372	414	392	21	371	413
23	400	21	379	421	400	21	379	421
24	408	22	386	430	407	22	385	429
25	415	22	393	437	415	22	393	437
26	423	22	401	445	422	22	400	444
27	431	23	408	454	430	23	407	453
28	439	23	416	462	439	23	416	462
29	448	23	425	471	447	24	423	471
30	457	24	433	481	456	25	431	481
31	466	25	441	491	466	25	441	491
32	476	26	450	502	476	26	450	502
33	487	27	460	514	488	28	460	516
34	500	29	471	529	500	29	471	529
35	514	31	483	545	515	31	484	546
36	531	34	497	565	531	34	497	565
37	552	38	514	590	552	38	514	590
38	579	46	533	600	580	47	533	600
39	600	64	536	600	600	64	536	600
40	600	0	600	600	600	0	600	600

**Table 7.6.34 Spring 2004 Virginia SOL Assessment Raw Score to Scale Score Conversion Table:  
Grade 7 Civics and Economics**

Raw Score	Core 1				Core 2			
	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM	Scale Score (SS)	Standard Error (SEM)	SS-1SEM	SS+1SEM
0	0	0	0	0	0	0	0	0
1	172	58	114	230	161	58	103	219
2	214	42	172	256	203	42	161	245
3	240	35	205	275	229	35	194	264
4	258	31	227	289	248	31	217	279
5	273	28	245	301	264	28	236	292
6	286	26	260	312	277	27	250	304
7	298	24	274	322	289	25	264	314
8	307	23	284	330	300	24	276	324
9	317	23	294	340	309	23	286	332
10	325	21	304	346	318	22	296	340
11	333	21	312	354	326	21	305	347
12	341	20	321	361	334	21	313	355
13	348	20	328	368	342	20	322	362
14	355	20	335	375	349	20	329	369
15	362	19	343	381	356	20	336	376
16	368	19	349	387	364	20	344	384
17	375	19	356	394	370	20	350	390
18	381	19	362	400	377	19	358	396
19	388	19	369	407	383	19	364	402
20	394	19	375	413	390	19	371	409
21	400	19	381	419	396	19	377	415
22	406	19	387	425	403	19	384	422
23	412	19	393	431	410	19	391	429
24	419	19	400	438	417	20	397	437
25	425	19	406	444	424	20	404	444
26	432	20	412	452	430	20	410	450
27	439	20	419	459	438	20	418	458
28	446	20	426	466	445	21	424	466
29	454	21	433	475	453	21	432	474
30	462	21	441	483	461	22	439	483
31	470	22	448	492	470	23	447	493
32	479	23	456	502	480	24	456	504
33	489	24	465	513	490	25	465	515
34	500	26	474	526	501	27	474	528
35	512	28	484	540	514	28	486	542
36	527	31	496	558	530	31	499	561
37	546	34	512	580	549	35	514	584
38	571	41	530	600	575	42	533	600
39	600	58	542	600	600	58	542	600
40	600	0	600	600	600	0	600	600



## REFERENCES

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- Angoff, W. H. (1971). Scales, norms, and equivalent scores. In R. L. Thorndike (Ed.), *Educational measurement* (2<sup>nd</sup> ed.). Washington, D.C.: American Council on Education.
- Camilli, G. & Shepard, L.A. (1994). *Methods for identifying biased test items*. Thousand Oaks, CA: SAGE Publications.
- Crocker, L. & Algina, J. (1986). *Introduction to classical and modern test theory*. New York, NY: Holt Rinehart Wilson.
- Haertel, E. H. (1996). *Estimating the decision consistency from a single administration of a performance assessment battery. A report on the National Board of Professional Teaching Standards McGEN Assessment*. Palo Alto, CA: Stanford University.
- Linacre, J. M. & Wright, B. D. (1991). *BIGSTEPS*. (Rasch model computer program). Chicago, IL: MESA Press.
- Livingston, S. A. & Lewis, C. (1995). Estimating the consistency and accuracy of classifications based on test scores. *Journal of Educational Measurement*, 32, 179-1987.
- Loomis, S.C. & Bourque, M. L. (2001). From tradition to innovation : Standard setting on the National Assessment of Educational Progress. In G. J. Cizek (Ed.), *Setting performance standards* (pp. 175-218). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Lord, F. M. & Wingersky, M. S. (1984). Comparison of IRT true-score and equipercntile observed-score "equatings." *Applied Psychological Measurement*, 8, 452-461.
- Masters, G. N. (1982). A Rasch model for partial credit scoring. *Psychometrika*, 47, 149-174.
- Mitzel, H. C., Lewis, D. M., Patz, R. J., & Green, D. R. (2001). The Bookmark procedure: Psychological perspectives. In G. J. Cizek (Ed.), *Setting performance standards* (pp. 249-282). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Rasch, G. (1980). *Probabilistic models for some intelligence and attainment tests*. Chicago, IL: University of Chicago Press.
- Rentz, R. R. (1980). *TRIAN*. (Rasch model and traditional statistics computer program). Athens, GA: Georgia State University.
- Reckase, M. D. (2000, June). *The evolution of the NAEP Achievement Levels Setting Process: A summary of the research and development efforts conducted by ACT*. (A report for the National Assessment Governing Board, Washington, DC). Iowa City, IA: ACT, Inc.
- Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometric Monograph*, 17.
- SAS Institute. (1989). *SAS System: Version 6.08*. (General purpose statistical software system). Cary, NC: The SAS Institute, Inc.
- Thissen, D. & Steinberg, L. (1986). A taxonomy of item response models. *Psychometrika*, 51, 567-577.
- Virginia Department of Education. (1999, February). *Standards of Learning (SOL) tests validity and reliability information: Spring 1998 administration*. (Report). Virginia Department of Education. Division of Assessment and Reporting. Richmond, VA: Author.
- Virginia Department of Education. (2001, April). *Virginia Standards of Learning Assessments technical report: 1998-1999 administration cycle*. (Technical Report). Virginia Department of Education. Division of Assessment and Reporting. Richmond, VA: Author.

Wright, B. D. & Stone, M. H. (1979). *Best test design*. Chicago, IL: MESA Press.

Young, M. J. & Yoon, B. (1998, April). *Estimating the consistency and accuracy of classifications in a standards-referenced assessment*. (CSE Technical Report 475). Center for the Study of Evaluation, Standards, and Student Testing. Los Angeles, CA: University of California, Los Angeles.

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# Virginia

## Standards of Learning Assessments

### Technical Report: 2003-2004 Administration January 2005 • Appendices



**Virginia**  
***Standards of Learning***  
**Assessments**

**Technical Report:**  
**2003-2004 Administration**  
**January 2005 - Appendices**



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# **APPENDIX A**

Example of Writing Scoring Rubric



## Appendix A: Example of Writing Scoring Rubric

### Grade 8: English Writing Test Composing Rubric

#### Score Point 4

The writer demonstrates consistent, though not necessarily perfect, control of the composing domain's features. Full elaboration focuses the central idea both at the sentence level and throughout the entire piece by providing purposeful examples, anecdotes, illustrations, or details. Narrative organization is intact; in other modes, minor organizational lapses may occur. In all types of writing, a strong organizational plan is apparent. Any organizational lapses that occur do not significantly detract from the presentation. Several elements in the writing provide evidence of unity: appropriate transitions, a consistent point of view (e.g., not switching from "I" to "you"), a lack of digressions, and the presence of a lead and closure that is more than mere repetition of statements.

#### Score Point 3

The writer demonstrates reasonable, but not consistent, control of the composing domain's features; the writer may control some features more than others. Purposeful elaboration focuses the central idea both at the sentence level and throughout the entire piece of writing. However, occasional thinness or unevenness in elaboration may occur. Narrative organization is intact. Organizational lapses may occur (in modes other than narration), but an overall plan is apparent. Unity is evidenced by the fact that few, if any, minor digressions or shifts in point of view occur. Transitions are, on the whole, purposefully used. An opening and closing, though not sophisticated, are present.

#### Score Point 2

The writer demonstrates inconsistent control of several features, indicating significant weakness in the composing domain. At this score point, major digressions may be present, or ideas compete and no one idea emerges as central. Even if a single idea dominates, the writing may be a list of general, underdeveloped statements or a skeletal plot. Often, little elaboration or organization is apparent. Although a contrived closure may be present, inconsistent control of transitions or the lack of a logically elaborated central idea prevent unity from emerging.

#### Score Point 1

The writer demonstrates little or no control of most of the composing domain's features. The focus on a central idea is lacking, or the piece is so sparse that the presence of a clear focus is insufficient for it to earn a higher score. Typically, the writing jumps from point to point, without a unifying central idea. No overall organizational strategy is apparent. The writing seems haphazard, and sentences can be rearranged without substantially changing the meaning. Bare statement is the norm, but even in responses that are several pages long, no purposeful elaboration is present.

### Virginia SOL Assessment: Grade 8

**Source:** Commonwealth of Virginia Department of Education. (1997). *Virginia Standards of Learning Assessments: Blueprints for the grade 8 tests*. Richmond, VA: Author.





# **APPENDIX B**

Fall 2003 & Spring 2004 Scale Score Histograms



Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: English: Reading Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum. Freq	Cum. Freq	Percent	Cum. Percent	
0		3	3	0.06	0.06
218		1	4	0.02	0.07
251		1	5	0.02	0.09
264		1	6	0.02	0.11
275	F	5	11	0.09	0.20
284	F	5	16	0.09	0.30
294	F	8	24	0.15	0.45
302	F	8	32	0.15	0.59
310	F	11	43	0.20	0.80
318	FF	22	65	0.41	1.21
325	FFF	28	93	0.52	1.73
332	FFF	30	123	0.56	2.29
339	FFFF	36	159	0.67	2.95
345	FFFFF	47	206	0.87	3.83
352	FFFFFF	66	272	1.23	5.05
358	FFFFFFF	69	341	1.28	6.34
364	FFFFFFFFF	106	447	1.97	8.31
371	FFFFFFF	84	531	1.56	9.87
377	FFFFFFFFF	104	635	1.93	11.80
383	FFFFFFFFF	131	766	2.43	14.23
389	FFFFFFFFF	150	916	2.79	17.02
395	FFFFFFFFF	162	1078	3.01	20.03
402	PPPPPPPPPPPPPPPP	172	1250	3.20	23.23
408	PPPPPPPPPPPPPPPP	179	1429	3.33	26.55
414	PPPPPPPPPPPPPPPP	169	1598	3.14	29.69
421	PPPPPPPPPPPPPPPP	217	1815	4.03	33.72
428	PPPPPPPPPPPPPPPP	229	2044	4.25	37.98
435	PPPPPPPPPPPPPPPP	254	2298	4.72	42.70
442	PPPPPPPPPPPPPPPP	298	2596	5.54	48.23
450	PPPPPPPPPPPPPPPP	317	2913	5.89	54.12
458	PPPPPPPPPPPPPPPP	307	3220	5.70	59.83
467	PPPPPPPPPPPPPPPP	317	3537	5.89	65.72
477	PPPPPPPPPPPPPPPP	329	3866	6.11	71.83
487	PPPPPPPPPPPPPPPP	340	4206	6.32	78.15
499	PPPPPPPPPPPPPPPP	306	4512	5.69	83.84
514	AAAAAAAAAAAAAAAAA	286	4798	5.31	89.15
532	AAAAAAAAAAAAAAAAA	260	5058	4.83	93.98
555	AAAAAAAAAAAAAAAAA	184	5242	3.42	97.40
595	AAAAAAAAA	102	5344	1.90	99.29
600	AAAA	38	5382	0.71	100.00

-----+-----+-----+-----+-----+-----  
 50 100 150 200 250 300  
 Frequency

Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Algebra I - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
281	2	2	0.02	0.02
291	4	6	0.04	0.06
299	12	18	0.11	0.17
307	19	37	0.18	0.35
314	36	73	0.34	0.69
321	57	130	0.54	1.23
326	85	215	0.80	2.03
332	116	331	1.10	3.13
337	149	480	1.41	4.54
343	172	652	1.63	6.16
348	252	904	2.38	8.54
352	273	1177	2.58	11.12
357	277	1454	2.62	13.74
361	301	1755	2.84	16.58
366	304	2059	2.87	19.45
370	333	2392	3.15	22.60
374	331	2723	3.13	25.73
378	310	3033	2.93	28.66
382	375	3408	3.54	32.20
387	372	3780	3.51	35.71
391	370	4150	3.50	39.21
395	373	4523	3.52	42.73
399	349	4872	3.30	46.03
403	312	5184	2.95	48.98
407	350	5534	3.31	52.29
411	337	5871	3.18	55.47
415	312	6183	2.95	58.42
420	290	6473	2.74	61.16
424	329	6802	3.11	64.27
429	303	7105	2.86	67.13
433	301	7406	2.84	69.97
438	315	7721	2.98	72.95
443	323	8044	3.05	76.00
448	296	8340	2.80	78.80
453	263	8603	2.48	81.28
459	252	8855	2.38	83.66
465	247	9102	2.33	86.00
472	253	9355	2.39	88.39
480	217	9572	2.05	90.44
488	217	9789	2.05	92.49
497	191	9980	1.80	94.29
509	195	10175	1.84	96.14
523	138	10313	1.30	97.44
542	127	10440	1.20	98.64
575	92	10532	0.87	99.51
600	52	10584	0.49	100.00

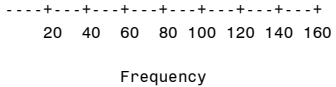
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Geometry - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		6	6	0.07	0.07
271		1	7	0.01	0.08
281		3	10	0.03	0.11
291		8	18	0.09	0.20
300		7	25	0.08	0.28
308	F	15	40	0.17	0.44
315	F	22	62	0.24	0.69
322	FF	44	106	0.49	1.17
328	FFF	69	175	0.76	1.94
335	FFFF	93	268	1.03	2.97
340	FFFFF	105	373	1.16	4.13
346	FFFFFF	122	495	1.35	5.48
351	FFFFFFF	148	643	1.64	7.12
357	FFFFFFF	196	839	2.17	9.29
362	FFFFFFF	203	1042	2.25	11.54
367	FFFFFFF	255	1297	2.82	14.36
372	FFFFFFF	233	1530	2.58	16.94
378	FFFFFFF	254	1784	2.81	19.75
382	FFFFFFF	253	2037	2.80	22.55
388	FFFFFFF	240	2277	2.66	25.21
393	FFFFFFF	271	2548	3.00	28.21
397	FFFFFFF	258	2806	2.86	31.07
403	PPPPPPPP	247	3053	2.73	33.80
408	PPPPPPPP	262	3315	2.90	36.70
413	PPPPPPPP	258	3573	2.86	39.56
418	PPPPPPPP	235	3808	2.60	42.16
423	PPPPPPPP	261	4069	2.89	45.05
429	PPPPPPPP	270	4339	2.99	48.04
435	PPPPPPPP	301	4640	3.33	51.37
441	PPPPPPPP	295	4935	3.27	54.64
447	PPPPPPPP	318	5253	3.52	58.16
454	PPPPPPPP	314	5567	3.48	61.64
461	PPPPPPPP	358	5925	3.96	65.60
469	PPPPPPPP	383	6308	4.24	69.84
477	PPPPPPPP	433	6741	4.79	74.63
486	PPPPPPPP	424	7165	4.69	79.33
497	PPPPPPPP	463	7628	5.13	84.46
509	AAAAAAAA	448	8076	4.96	89.42
525	AAAAAAAA	388	8464	4.30	93.71
547	AAAAAAAA	304	8768	3.37	97.08
582	AAAAA	189	8957	2.09	99.17
600	AAAA	75	9032	0.83	100.00

-----+-----+-----+-----+-----+-----  
 100 200 300 400  
 Frequency

Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Algebra II - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	1	1	0.03	0.03
237	1	2	0.03	0.06
249	1	3	0.03	0.09
260	1	4	0.03	0.12
270	2	6	0.06	0.18
278	F	3	9	0.09
286		2	11	0.06
293	F	3	14	0.09
301	FF	12	26	0.36
307	FFFF	20	46	0.60
314	FF	8	54	0.24
320	FFF	17	71	0.51
325	FFFF	27	98	0.81
332	FFFFF	30	128	0.90
337	FFFFF	31	159	0.93
343	FFFF	24	183	0.72
348	FFFFFF	45	228	1.36
353	FFFFFFF	52	280	1.57
358	FFFFFFF	41	321	1.23
364	FFFFFFF	45	366	1.36
369	FFFFFFF	68	434	2.05
374	FFFFFFF	65	499	1.96
379	FFFFFFF	75	574	2.26
384	FFFFFFF	71	645	2.14
389	FFFFFFF	71	716	2.14
394	FFFFFFF	88	804	2.65
400	PPPPPPPPPPPPPPPP	90	894	2.71
404	PPPPPPPPPPPPPPPP	101	995	3.04
410	PPPPPPPPPPPPPPPP	106	1101	3.19
416	PPPPPPPPPPPPPPPP	96	1197	2.89
421	PPPPPPPPPPPPPPPP	108	1305	3.25
427	PPPPPPPPPPPPPPPP	120	1425	3.61
433	PPPPPPPPPPPPPPPP	138	1563	4.16
439	PPPPPPPPPPPPPPPP	128	1691	3.86
445	PPPPPPPPPPPPPPPP	144	1835	4.34
453	PPPPPPPPPPPPPPPP	158	1993	4.76
460	PPPPPPPPPPPPPPPP	151	2144	4.55
467	PPPPPPPPPPPPPPPP	141	2285	4.25
476	PPPPPPPPPPPPPPPP	133	2418	4.01
485	PPPPPPPPPPPPPPPP	129	2547	3.89
496	PPPPPPPPPPPPPPPP	134	2681	4.04
508	AAAAAAAAAAAAAAAA	146	2827	4.40
522	AAAAAAAAAAAAAAAA	137	2964	4.13
540	AAAAAAAAAAAAAAAA	119	3083	3.58
564	AAAAAAAAAAAAAAAA	117	3200	3.52
600	AAAAAAAAAAAAAAAA	120	3320	3.61







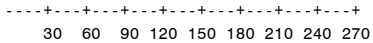
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Virginia and US History - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
305	F	1	1	0.15	0.15
318	FF	4	5	0.58	0.73
324	FFF	4	9	0.58	1.31
330	FFF	6	15	0.87	2.19
335	FFFF	7	22	1.02	3.21
340	FFFFFF	13	35	1.90	5.10
345	FFFFFF	12	47	1.75	6.85
350	FFFFFF	15	62	2.19	9.04
354	FFFFFFF	21	83	3.06	12.10
359	FFFFFFF	18	101	2.62	14.72
363	FFFFFFFF	32	133	4.66	19.39
368	FFFFFFFF	42	175	6.12	25.51
372	FFFFFFFF	25	200	3.64	29.15
376	FFFFFFFF	30	230	4.37	33.53
380	FFFFFFFF	38	268	5.54	39.07
384	FFFFFFFF	35	303	5.10	44.17
388	FFFFFFFF	46	349	6.71	50.87
392	FFFFFFFF	29	378	4.23	55.10
395	FFFFFFFF	37	415	5.39	60.50
399	FFFFFFFF	29	444	4.23	64.72
403	PPPPPPPP	31	475	4.52	69.24
407	PPPPPPPP	20	495	2.92	72.16
411	PPPPPPPP	20	515	2.92	75.07
415	PPPPPPPP	15	530	2.19	77.26
419	PPPPPPPP	16	546	2.33	79.59
423	PPPPPPPP	16	562	2.33	81.92
427	PPPPPP	11	573	1.60	83.53
431	PPPPP	10	583	1.46	84.99
435	PPPPP	9	592	1.31	86.30
439	PPPPP	11	603	1.60	87.90
443	PPPP	7	610	1.02	88.92
448	PPP	6	616	0.87	89.80
452	PPP	5	621	0.73	90.52
457	PP	3	624	0.44	90.96
462	PPPP	8	632	1.17	92.13
466	PPPP	7	639	1.02	93.15
472	PP	4	643	0.58	93.73
477	PPP	6	649	0.87	94.61
483	PPP	5	654	0.73	95.34
489	PPP	5	659	0.73	96.06
495	PPP	6	665	0.87	96.94
502	AAA	6	671	0.87	97.81
509	AAA	5	676	0.73	98.54
518	AA	3	679	0.44	98.98
527	AA	3	682	0.44	99.42
551	A	2	684	0.29	99.71
590	A	1	685	0.15	99.85
600	A	1	686	0.15	100.00

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 10 20 30 40  
 Frequency

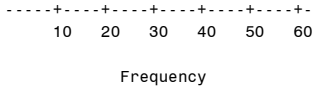
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World History I - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
244		1	1	0.01	0.01
278		1	2	0.01	0.03
287		2	4	0.03	0.05
302	F	4	8	0.05	0.11
309	F	5	13	0.07	0.18
316	FF	15	28	0.20	0.38
322	F	10	38	0.14	0.51
328	FFF	21	59	0.28	0.80
334	FFF	26	85	0.35	1.15
339	FFFF	31	116	0.42	1.57
345	FFFFFFF	58	174	0.78	2.35
350	FFFFFFF	62	236	0.84	3.19
355	FFFFFFFFF	88	324	1.19	4.37
360	FFFFFFFFF	78	402	1.05	5.43
364	FFFFFFFFF	103	505	1.39	6.82
369	FFFFFFFFF	121	626	1.63	8.45
373	FFFFFFFFF	118	744	1.59	10.04
378	FFFFFFFFF	142	886	1.92	11.96
382	FFFFFFFFF	168	1054	2.27	14.23
387	FFFFFFFFF	167	1221	2.25	16.48
391	FFFFFFFFF	159	1380	2.15	18.63
396	FFFFFFFFF	224	1604	3.02	21.66
400	PPPPPPPPPPPPPPPPPPPP	160	1764	2.16	23.82
404	PPPPPPPPPPPPPPPPPPPP	194	1958	2.62	26.43
408	PPPPPPPPPPPPPPPPPPPP	216	2174	2.92	29.35
413	PPPPPPPPPPPPPPPPPPPP	235	2409	3.17	32.52
417	PPPPPPPPPPPPPPPPPPPP	236	2645	3.19	35.71
421	PPPPPPPPPPPPPPPPPPPP	270	2915	3.65	39.35
426	PPPPPPPPPPPPPPPPPPPP	232	3147	3.13	42.49
430	PPPPPPPPPPPPPPPPPPPP	252	3399	3.40	45.89
435	PPPPPPPPPPPPPPPPPPPP	264	3663	3.56	49.45
439	PPPPPPPPPPPPPPPPPPPP	232	3895	3.13	52.59
444	PPPPPPPPPPPPPPPPPPPP	212	4107	2.86	55.45
449	PPPPPPPPPPPPPPPPPPPP	244	4351	3.29	58.74
454	PPPPPPPPPPPPPPPPPPPP	226	4577	3.05	61.79
459	PPPPPPPPPPPPPPPPPPPP	238	4815	3.21	65.01
464	PPPPPPPPPPPPPPPPPPPP	239	5054	3.23	68.23
469	PPPPPPPPPPPPPPPPPPPP	252	5306	3.40	71.63
475	PPPPPPPPPPPPPPPPPPPP	226	5532	3.05	74.69
480	PPPPPPPPPPPPPPPPPPPP	208	5740	2.81	77.49
487	PPPPPPPPPPPPPPPPPPPP	224	5964	3.02	80.52
493	PPPPPPPPPPPPPPPPPPPP	202	6166	2.73	83.25
500	AAAAAAAAAAAAAAAAAAAA	186	6352	2.51	85.76
508	AAAAAAAAAAAAAAAAAAAA	189	6541	2.55	88.31
516	AAAAAAAAAAAAAAAAAAAA	141	6682	1.90	90.21
525	AAAAAAAAAAAAAAAAAAAA	153	6835	2.07	92.28
535	AAAAAAAAAAAAAAAAAAAA	144	6979	1.94	94.22
547	AAAAAAAAAAAAAAAAAAAA	112	7091	1.51	95.73
561	AAAAAAAAAAAAAAAAAAAA	103	7194	1.39	97.12
578	AAAAAAAAAAAAA	83	7277	1.12	98.24
600	AAAAAAAAAAAAAAAAAAAA	130	7407	1.76	100.00



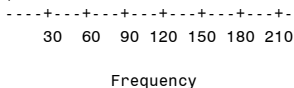
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World History I - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
298	F	1	1	0.12	0.12
306	F	1	2	0.12	0.25
313	F	1	3	0.12	0.37
320	FFFF	7	10	0.87	1.24
326	FF	3	13	0.37	1.61
332	FFFF	7	20	0.87	2.48
339	FFFFF	10	30	1.24	3.71
344	FFFFF	9	39	1.11	4.83
349	FFFFFF	14	53	1.73	6.56
354	FFFFFF	14	67	1.73	8.29
360	FFFFFFF	20	87	2.48	10.77
364	FFFFFFF	24	111	2.97	13.74
369	FFFFFFF	28	139	3.47	17.20
374	FFFFFFF	29	168	3.59	20.79
379	FFFFFFF	41	209	5.07	25.87
383	FFFFFFF	41	250	5.07	30.94
388	FFFFFFF	52	302	6.44	37.38
392	FFFFFFF	56	358	6.93	44.31
397	FFFFFFF	62	420	7.67	51.98
401	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	60	480	7.43	59.41
406	PPPPPPPPPPPPPPPPPPPPPP	41	521	5.07	64.48
410	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	51	572	6.31	70.79
414	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	49	621	6.06	76.86
418	PPPPPPPPPPPPPPPPPPPPPP	46	667	5.69	82.55
423	PPPPPPPPPPPPPPPPPPPP	30	697	3.71	86.26
427	PPPPPPPPPP	22	719	2.72	88.99
432	PPPPPPPPPP	19	738	2.35	91.34
436	PPPPP	10	748	1.24	92.57
441	PPPPP	11	759	1.36	93.94
445	PPPPP	12	771	1.49	95.42
450	PP	4	775	0.50	95.92
455	PPPP	9	784	1.11	97.03
460	PP	3	787	0.37	97.40
465	P	1	788	0.12	97.52
470	PPP	6	794	0.74	98.27
475	P	1	795	0.12	98.39
481	P	1	796	0.12	98.51
487	P	2	798	0.25	98.76
493	P	2	800	0.25	99.01
499	P	1	801	0.12	99.13
513	A	1	802	0.12	99.26
548	AA	3	805	0.37	99.63
560	A	1	806	0.12	99.75
592	A	1	807	0.12	99.88
600	A	1	808	0.12	100.00



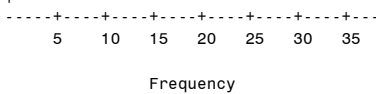
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World History II - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	4	4	0.07	0.07
274		1	5	0.02	0.09
283		1	6	0.02	0.11
292		2	8	0.04	0.15
299		2	10	0.04	0.19
307	F	7	17	0.13	0.32
313	F	10	27	0.19	0.51
319	F	9	36	0.17	0.67
325	FFF	23	59	0.43	1.10
331	FF	16	75	0.30	1.40
336	FF	18	93	0.34	1.74
341	FFFF	32	125	0.60	2.34
346	FFFFF	35	160	0.66	3.00
351	FFFFF	38	198	0.71	3.71
356	FFFFFF	47	245	0.88	4.59
361	FFFFFF	48	293	0.90	5.49
366	FFFFFFFF	70	363	1.31	6.80
370	FFFFFFFF	65	428	1.22	8.01
375	FFFFFFFFFF	80	508	1.50	9.51
378	FFFFFFFFFF	76	584	1.42	10.94
383	FFFFFFFFFF	90	674	1.69	12.62
387	FFFFFFFFFF	98	772	1.84	14.46
392	FFFFFFFFFF	114	886	2.13	16.59
396	FFFFFFFFFF	121	1007	2.27	18.86
400	P	104	1111	1.95	20.81
404	P	127	1238	2.38	23.18
408	P	129	1367	2.42	25.60
413	P	140	1507	2.62	28.22
417	P	144	1651	2.70	30.92
421	P	141	1792	2.64	33.56
425	P	153	1945	2.87	36.42
430	P	126	2071	2.36	38.78
434	P	164	2235	3.07	41.85
439	P	186	2421	3.48	45.34
444	P	161	2582	3.01	48.35
448	P	160	2742	3.00	51.35
453	P	167	2909	3.13	54.48
458	P	171	3080	3.20	57.68
464	P	180	3260	3.37	61.05
469	P	179	3439	3.35	64.40
475	P	217	3656	4.06	68.46
480	P	169	3825	3.16	71.63
486	P	172	3997	3.22	74.85
493	P	183	4180	3.43	78.28
500	A	171	4351	3.20	81.48
508	A	161	4512	3.01	84.49
515	A	144	4656	2.70	87.19
525	A	146	4802	2.73	89.93
535	A	152	4954	2.85	92.77
546	A	116	5070	2.17	94.94
561	A	99	5169	1.85	96.80
578	A	68	5237	1.27	98.07
600	A	103	5340	1.93	100.00



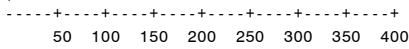
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World History II - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
239	F	1	1	0.19	0.19
295	F	1	2	0.19	0.38
303	FF	2	4	0.38	0.76
310	FFF	3	7	0.57	1.32
317	FF	2	9	0.38	1.70
323	F	1	10	0.19	1.89
329	FFF	3	13	0.57	2.46
335	FFFFFF	7	20	1.32	3.78
340	FF	2	22	0.38	4.16
346	FFFF	4	26	0.76	4.91
351	FFFFFFFFF	10	36	1.89	6.81
356	FFFFFFFFF	10	46	1.89	8.70
361	FFFFFFFFFFFFFF	17	63	3.21	11.91
365	FFFFFFFFFFFFFFFF	23	86	4.35	16.26
370	FFFFFFFFFFFFFF	17	103	3.21	19.47
375	FFFFFFFFFFFFFFFF	26	129	4.91	24.39
379	FFFFFFFFFFFFFFFF	26	155	4.91	29.30
383	FFFFFFFFFFFFFFFF	34	189	6.43	35.73
388	FFFFFFFFFFFFFFFF	32	221	6.05	41.78
392	FFFFFFFFFFFFFFFF	38	259	7.18	48.96
397	FFFFFFFFFFFFFFFF	31	290	5.86	54.82
401	PPPPPPPPPPPPPPPPPPPPPPPP	29	319	5.48	60.30
405	PPPPPPPPPPPPPPPPPPPPPPPP	29	348	5.48	65.78
409	PPPPPPPPPPPPPPPPPPPPPPPP	22	370	4.16	69.94
414	PPPPPPPPPPPPPPPPPPPPPPPP	31	401	5.86	75.80
418	PPPPPPPPPPPPPPPPPPPPPPPP	27	428	5.10	80.91
422	PPPPPPPPPPPPPPPPPPPPPPPP	20	448	3.78	84.69
427	PPPPPPPPPPPPPPPPPPPPPPPP	16	464	3.02	87.71
431	PPPPPPPPPPPPPPPPPPPPPPPP	14	478	2.65	90.36
435	PPPPPPPPPPPPPPPPPPPPPPPP	10	488	1.89	92.25
440	PPPPP	5	493	0.95	93.19
445	PPPP	4	497	0.76	93.95
449	PPPPP	5	502	0.95	94.90
454	PPPP	4	506	0.76	95.65
459	PPPPP	5	511	0.95	96.60
464	PPPP	4	515	0.76	97.35
475	P	1	516	0.19	97.54
486	P	1	517	0.19	97.73
492	PP	2	519	0.38	98.11
499	PPP	3	522	0.57	98.68
506	AAA	3	525	0.57	99.24
531	A	1	526	0.19	99.43
541	AAA	3	529	0.57	100.00



Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Earth Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

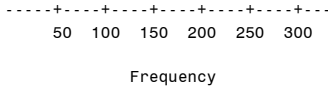
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	FF	15	15	0.16	0.16
198		1	16	0.01	0.17
221		1	17	0.01	0.18
250		1	18	0.01	0.19
261		1	19	0.01	0.20
270		2	21	0.02	0.22
279	F	9	30	0.09	0.31
287	FF	20	50	0.21	0.52
294	FFF	34	84	0.35	0.87
301	FFFF	51	135	0.53	1.40
307	FFFFFFFF	80	215	0.83	2.23
313	FFFFFFFFFF	106	321	1.10	3.34
319	FFFFFFFF	134	455	1.39	4.73
324	FFFFFFFF	187	642	1.94	6.67
329	FFFFFFFF	198	840	2.06	8.73
335	FFFFFFFF	262	1102	2.72	11.46
340	FFFFFFFF	261	1363	2.71	14.17
344	FFFFFFFF	312	1675	3.24	17.41
349	FFFFFFFF	304	1979	3.16	20.57
354	FFFFFFFF	327	2306	3.40	23.97
359	FFFFFFFF	344	2650	3.58	27.55
363	FFFFFFFF	396	3046	4.12	31.66
368	FFFFFFFF	369	3415	3.84	35.50
373	FFFFFFFF	353	3768	3.67	39.17
377	FFFFFFFF	380	4148	3.95	43.12
382	FFFFFFFF	350	4498	3.64	46.76
386	FFFFFFFF	318	4816	3.31	50.06
391	FFFFFFFF	330	5146	3.43	53.49
396	FFFFFFFF	276	5422	2.87	56.36
401	P	291	5713	3.02	59.39
405	P	264	5977	2.74	62.13
410	P	263	6240	2.73	64.86
416	P	262	6502	2.72	67.59
421	P	234	6736	2.43	70.02
427	P	254	6990	2.64	72.66
433	P	241	7231	2.51	75.17
439	P	250	7481	2.60	77.77
446	P	248	7729	2.58	80.34
453	P	238	7967	2.47	82.82
461	P	246	8213	2.56	85.37
469	P	242	8455	2.52	87.89
479	P	236	8691	2.45	90.34
489	P	233	8924	2.42	92.77
503	A	195	9119	2.03	94.79
519	A	190	9309	1.98	96.77
541	A	148	9457	1.54	98.31
579	A	78	9535	0.81	99.12
590	A	66	9601	0.69	99.80
600	AA	19	9620	0.20	100.00



Frequency

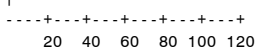
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Biology - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	5	5	0.06	0.06
296		3	8	0.03	0.09
304		2	10	0.02	0.11
312	F	9	19	0.10	0.21
318	FF	16	35	0.18	0.39
325	FFF	28	63	0.31	0.71
330	FFFF	53	116	0.59	1.30
336	FFFFF	60	176	0.67	1.97
341	FFFFFF	107	283	1.20	3.17
346	FFFFFFF	127	410	1.42	4.59
351	FFFFFFF	160	570	1.79	6.38
355	FFFFFFF	177	747	1.98	8.36
360	FFFFFFF	200	947	2.24	10.60
364	FFFFFFF	260	1207	2.91	13.51
368	FFFFFFF	264	1471	2.96	16.47
373	FFFFFFF	288	1759	3.22	19.69
377	FFFFFFF	309	2068	3.46	23.15
381	FFFFFFF	292	2360	3.27	26.42
385	FFFFFFF	294	2654	3.29	29.71
389	FFFFFFF	313	2967	3.50	33.22
393	FFFFFFF	327	3294	3.66	36.88
397	FFFFFFF	288	3582	3.22	40.10
400	PPPPPPPPPPPPPPPPPPPPPP	262	3844	2.93	43.04
404	PPPPPPPPPPPPPPPPPPPPPP	252	4096	2.82	45.86
409	PPPPPPPPPPPPPPPPPPPPPP	248	4344	2.78	48.63
413	PPPPPPPPPPPPPPPPPPPPPP	284	4628	3.18	51.81
416	PPPPPPPPPPPPPPPPPPPPPP	263	4891	2.94	54.76
421	PPPPPPPPPPPPPPPPPPPPPP	243	5134	2.72	57.48
425	PPPPPPPPPPPPPPPPPPPPPP	249	5383	2.79	60.27
429	PPPPPPPPPPPPPPPPPPPPPP	236	5619	2.64	62.91
434	PPPPPPPPPPPPPPPPPPPPPP	275	5894	3.08	65.99
439	PPPPPPPPPPPPPPPPPPPPPP	244	6138	2.73	68.72
444	PPPPPPPPPPPPPPPPPPPPPP	213	6351	2.38	71.10
449	PPPPPPPPPPPPPPPPPPPPPP	241	6592	2.70	73.80
454	PPPPPPPPPPPPPPPPPPPPPP	255	6847	2.85	76.66
460	PPPPPPPPPPPPPPPPPPPPPP	260	7107	2.91	79.57
466	PPPPPPPPPPPPPPPPPPPPPP	267	7374	2.99	82.56
473	PPPPPPPPPPPPPPPPPPPPPP	259	7633	2.90	85.46
480	PPPPPPPPPPPPPPPPPPPPPP	260	7893	2.91	88.37
488	PPPPPPPPPPPPPPPPPPPPPP	258	8151	2.89	91.26
497	PPPPPPPPPPPPPPPPPPPPPP	194	8345	2.17	93.43
509	AAAAAAAAAAAAAAAAAAAA	190	8535	2.13	95.56
523	AAAAAAAAAAAAAAAAAAAA	169	8704	1.89	97.45
542	AAAAAAAAAAAAAAAAAAAA	125	8829	1.40	98.85
573	AAAAAAA	72	8901	0.81	99.65
600	AAA	31	8932	0.35	100.00



Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: Chemistry - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
273		1	1	0.03	0.03
304		2	3	0.06	0.09
312		2	5	0.06	0.16
319	FF	11	16	0.34	0.50
325	FF	12	28	0.37	0.87
331	FFFF	24	52	0.75	1.62
337	FFFFF	32	84	1.00	2.61
342	FFFFFF	33	117	1.03	3.64
347	FFFFFFF	45	162	1.40	5.04
352	FFFFFFF	55	217	1.71	6.75
357	FFFFFFFF	79	296	2.46	9.21
361	FFFFFFFF	81	377	2.52	11.73
366	FFFFFFFF	76	453	2.37	14.10
370	FFFFFFFF	81	534	2.52	16.62
375	FFFFFFFF	87	621	2.71	19.33
379	FFFFFFFF	88	709	2.74	22.07
383	FFFFFFFF	103	812	3.21	25.27
387	FFFFFFFF	84	896	2.61	27.89
391	FFFFFFFF	111	1007	3.45	31.34
395	FFFFFFFF	94	1101	2.93	34.27
399	FFFFFFFF	76	1177	2.37	36.63
403	PPPPPPPPPPPPPPPP	85	1262	2.65	39.28
407	PPPPPPPPPPPPPPPP	89	1351	2.77	42.05
411	PPPPPPPPPPPPPPPP	102	1453	3.17	45.22
416	PPPPPPPPPPPPPPPP	77	1530	2.40	47.62
420	PPPPPPPPPPPPPPPP	92	1622	2.86	50.48
424	PPPPPPPPPPPPPPPP	115	1737	3.58	54.06
429	PPPPPPPPPPPPPPPP	83	1820	2.58	56.64
433	PPPPPPPPPPPPPPPP	106	1926	3.30	59.94
438	PPPPPPPPPPPPPPPP	103	2029	3.21	63.15
443	PPPPPPPPPPPPPPPP	89	2118	2.77	65.92
448	PPPPPPPPPPPPPPPP	101	2219	3.14	69.06
453	PPPPPPPPPPPPPPPP	115	2334	3.58	72.64
459	PPPPPPPPPPPPPPPP	116	2450	3.61	76.25
464	PPPPPPPPPPPPPPPP	121	2571	3.77	80.02
471	PPPPPPPPPPPPPPPP	104	2675	3.24	83.26
478	PPPPPPPPPPPPPPPP	106	2781	3.30	86.55
485	PPPPPPPPPPPPPPPP	82	2863	2.55	89.11
494	PPPPPPPPPPPPPPPP	76	2939	2.37	91.47
503	AAAAAAAAAAAAAAAA	80	3019	2.49	93.96
515	AAAAAAAAAAAA	61	3080	1.90	95.86
529	AAAAAAAAAAAA	51	3131	1.59	97.45
549	AAAAAAA	35	3166	1.09	98.54
581	AAAAAA	31	3197	0.96	99.50
600	AAA	16	3213	0.50	100.00

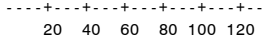


Frequency



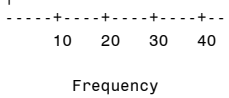
Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World Geography - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		2	2	0.05	0.05
249	F	3	5	0.07	0.12
259	F	4	9	0.10	0.22
268	F	4	13	0.10	0.32
276	F	6	19	0.15	0.46
284	FF	8	27	0.20	0.66
291	FF	11	38	0.27	0.93
298	FFFF	20	58	0.49	1.41
305	FFFFF	27	85	0.66	2.07
311	FFFFF	27	112	0.66	2.73
317	FFFFFFFF	53	165	1.29	4.02
323	FFFFFFFF	45	210	1.10	5.12
329	FFFFFFFF	49	259	1.20	6.32
334	FFFFFFFFFFFF	63	322	1.54	7.85
339	FFFFFFFFFFFF	69	391	1.68	9.54
345	FFFFFFFFFFFF	72	463	1.76	11.29
351	FFFFFFFFFFFFF	86	549	2.10	13.39
355	FFFFFFFFFFFFF	68	617	1.66	15.05
361	FFFFFFFFFFFFF	69	686	1.68	16.73
366	FFFFFFFFFFFFFFFF	114	800	2.78	19.51
370	FFFFFFFFFFFFFFFF	74	874	1.80	21.32
376	FFFFFFFFFFFFFFFF	108	982	2.63	23.95
380	FFFFFFFFFFFFFFFF	106	1088	2.59	26.54
386	FFFFFFFFFFFFFFFF	90	1178	2.20	28.73
390	FFFFFFFFFFFFFFFF	96	1274	2.34	31.07
395	FFFFFFFFFFFFFFFF	127	1401	3.10	34.17
400	PPPPPPPPPPPPPPPPPPPPPP	127	1528	3.10	37.27
405	PPPPPPPPPPPPPPPPPPPPPP	123	1651	3.00	40.27
410	PPPPPPPPPPPPPPPPPPPPPP	117	1768	2.85	43.12
415	PPPPPPPPPPPPPPPPPPPPPP	131	1899	3.20	46.32
420	PPPPPPPPPPPPPPPPPPPPPP	122	2021	2.98	49.29
425	PPPPPPPPPPPPPPPPPPPPPP	113	2134	2.76	52.05
430	PPPPPPPPPPPPPPPPPPPPPP	132	2266	3.22	55.27
436	PPPPPPPPPPPPPPPPPPPPPP	122	2388	2.98	58.24
441	PPPPPPPPPPPPPPPPPPPPPP	128	2516	3.12	61.37
447	PPPPPPPPPPPPPPPPPPPPPP	115	2631	2.80	64.17
453	PPPPPPPPPPPPPPPPPPPPPP	122	2753	2.98	67.15
459	PPPPPPPPPPPPPPPPPPPPPP	132	2885	3.22	70.37
464	PPPPPPPPPPPPPPPPPPPPPP	127	3012	3.10	73.46
471	PPPPPPPPPPPPPPPPPPPPPP	116	3128	2.83	76.29
478	PPPPPPPPPPPPPPPPPPPPPP	101	3229	2.46	78.76
485	PPPPPPPPPPPPPPPPPPPPPP	124	3353	3.02	81.78
492	PPPPPPPPPPPPPPPPPPPPPP	122	3475	2.98	84.76
500	AAAAAAAAAAAAAAAAAAAA	92	3567	2.24	87.00
509	AAAAAAAAAAAAAAAAAAAA	88	3655	2.15	89.15
518	AAAAAAAAAAAAAAAAAAAA	82	3737	2.00	91.15
529	AAAAAAAAAAAAAAAAAAAA	72	3809	1.76	92.90
541	AAAAAAAAAAAAAAAAAAAA	76	3885	1.85	94.76
555	AAAAAAAAAAAAAAAAAAAA	79	3964	1.93	96.68
570	AAAAAAAAAAAA	59	4023	1.44	98.12
591	AAAAAAA	36	4059	0.88	99.00
600	AAAAAAA	41	4100	1.00	100.00



Scale Score Histogram for VASOL: Fall 2003  
 High School EOC: World Geography - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
282	F	1	1	0.14	0.14
289	F	2	3	0.28	0.42
297	F	2	5	0.28	0.71
303	FFF	5	10	0.71	1.41
310	FFFFFF	11	21	1.56	2.97
316	FFFFFFF	13	34	1.84	4.81
322	FFFFFFF	15	49	2.12	6.93
328	FFFFFFF	14	63	1.98	8.91
333	FFFFFFF	17	80	2.40	11.32
338	FFFFFFF	20	100	2.83	14.14
343	FFFFFFF	24	124	3.39	17.54
349	FFFFFFF	23	147	3.25	20.79
354	FFFFFFF	31	178	4.38	25.18
359	FFFFFFF	31	209	4.38	29.56
364	FFFFFFF	34	243	4.81	34.37
368	FFFFFFF	42	285	5.94	40.31
373	FFFFFFF	42	327	5.94	46.25
378	FFFFFFF	29	356	4.10	50.35
383	FFFFFFF	32	388	4.53	54.88
388	FFFFFFF	43	431	6.08	60.96
392	FFFFFFF	42	473	5.94	66.90
397	FFFFFFF	29	502	4.10	71.00
402	PPPPPPPPPPPP	27	529	3.82	74.82
407	PPPPPPPPPPPP	23	552	3.25	78.08
411	PPPPPPPPPPPP	24	576	3.39	81.47
416	PPPPPPPPPP	19	595	2.69	84.16
421	PPPPPPPP	13	608	1.84	86.00
426	PPPPPPPPPPPP	22	630	3.11	89.11
432	PPPPPPPP	13	643	1.84	90.95
436	PPPPPPPP	11	654	1.56	92.50
442	PPPPPPPP	13	667	1.84	94.34
447	PPP	5	672	0.71	95.05
453	PPPP	7	679	0.99	96.04
459	PPP	5	684	0.71	96.75
465	P	2	686	0.28	97.03
471	PPP	5	691	0.71	97.74
478	P	2	693	0.28	98.02
485	P	1	694	0.14	98.16
500	AA	4	698	0.57	98.73
509	A	2	700	0.28	99.01
518	A	2	702	0.28	99.29
528	AA	3	705	0.42	99.72
553	A	1	706	0.14	99.86
590	A	1	707	0.14	100.00



Scale Score Histogram for VASOL: Fall 2003  
 Grade 08 : English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
81	F	1	1	0.13	0.13
265	F	1	2	0.13	0.27
295	FF	4	6	0.53	0.80
303	FF	3	9	0.40	1.19
311	FFF	6	15	0.80	1.99
318	FF	3	18	0.40	2.39
326	FF	3	21	0.40	2.79
333	FFF	5	26	0.66	3.45
340	FFFF	7	33	0.93	4.38
346	FFFFF	9	42	1.19	5.57
353	FFFFFF	11	53	1.46	7.03
359	FFFFFFF	15	68	1.99	9.02
366	FFFFFFFF	22	90	2.92	11.94
372	FFFFFFFF	22	112	2.92	14.85
378	FFFFFFFF	29	141	3.85	18.70
384	FFFFFFFF	27	168	3.58	22.28
390	FFFFFFFF	27	195	3.58	25.86
396	FFFFFFFF	36	231	4.77	30.64
402	P	42	273	5.57	36.21
409	P	49	322	6.50	42.71
415	P	36	358	4.77	47.48
422	P	46	404	6.10	53.58
429	P	40	444	5.31	58.89
437	P	49	493	6.50	65.38
445	P	49	542	6.50	71.88
453	P	53	595	7.03	78.91
461	P	41	636	5.44	84.35
470	P	30	666	3.98	88.33
479	P	18	684	2.39	90.72
489	P	27	711	3.58	94.30
500	A	11	722	1.46	95.76
516	A	17	739	2.25	98.01
540	A	10	749	1.33	99.34
600	A	5	754	0.66	100.00

Scale Score Histogram for VASOL: Fall 2003  
 Grade:11 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		5	5	0.06	0.06
171		1	6	0.01	0.07
203		1	7	0.01	0.09
235		1	8	0.01	0.10
255		1	9	0.01	0.11
263		1	10	0.01	0.12
271		2	12	0.02	0.15
278		5	17	0.06	0.21
284		3	20	0.04	0.25
291		8	28	0.10	0.34
297		8	36	0.10	0.44
304	F	11	47	0.14	0.58
309	F	15	62	0.18	0.76
316	F	17	79	0.21	0.97
321	F	28	107	0.34	1.32
327	FF	35	142	0.43	1.75
333	FF	45	187	0.55	2.30
339	FFF	58	245	0.71	3.02
345	FFFF	70	315	0.86	3.88
350	FFFFF	92	407	1.13	5.01
356	FFFFFF	110	517	1.35	6.36
362	FFFFF	107	624	1.32	7.68
367	FFFFFF	143	767	1.76	9.44
373	FFFFFFF	186	953	2.29	11.73
379	FFFFFFF	243	1196	2.99	14.72
384	FFFFFFF	269	1465	3.31	18.03
390	FFFFFFF	278	1743	3.42	21.45
396	FFFFFFF	301	2044	3.71	25.16
401	PPPPPPPPPPPPPPPP	352	2396	4.33	29.49
407	PPPPPPPPPPPPPPPP	353	2749	4.35	33.84
413	PPPPPPPPPPPPPPPP	357	3106	4.39	38.23
420	PPPPPPPPPPPPPPPP	413	3519	5.08	43.32
426	PPPPPPPPPPPPPPPP	441	3960	5.43	48.74
434	PPPPPPPPPPPPPPPP	437	4397	5.38	54.12
442	PPPPPPPPPPPPPPPP	491	4888	6.04	60.17
450	PPPPPPPPPPPPPPPP	501	5389	6.17	66.33
461	PPPPPPPPPPPPPPPP	485	5874	5.97	72.30
472	PPPPPPPPPPPPPPPP	441	6315	5.43	77.73
485	PPPPPPPPPPPPPPPP	418	6733	5.15	82.88
500	AAAAAAAAAAAAAAAA	372	7105	4.58	87.46
516	AAAAAAAAAAAAAAAA	291	7396	3.58	91.04
534	AAAAAAAAAAAAAAAA	267	7663	3.29	94.33
554	AAAAAAAA	181	7844	2.23	96.55
575	AAAAA	103	7947	1.27	97.82
599	AAAA	84	8031	1.03	98.86
600	AAAAA	93	8124	1.14	100.00

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 100 200 300 400 500  
 Frequency

Scale Score Histogram for VASOL: Fall 2003  
Grade:11 English: Writing  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 2

Scale Score	Cum.		Cum.	
	Freq	Freq	Percent	Percent
0	2	2	0.06	0.06
246	1	3	0.03	0.09
263	3	6	0.09	0.18
270	1	7	0.03	0.21
277	4	11	0.12	0.33
284	3	14	0.09	0.42
290	3	17	0.09	0.51
296	7	24	0.21	0.72
303	2	26	0.06	0.78
308	5	31	0.15	0.93
314	10	41	0.30	1.23
321	17	58	0.51	1.74
326	21	79	0.63	2.38
332	17	96	0.51	2.89
338	23	119	0.69	3.58
343	26	145	0.78	4.36
349	38	183	1.14	5.51
354	55	238	1.65	7.16
360	57	295	1.71	8.87
366	62	357	1.87	10.74
371	94	451	2.83	13.57
376	90	541	2.71	16.28
382	122	663	3.67	19.95
388	135	798	4.06	24.01
393	128	926	3.85	27.86
399	143	1069	4.30	32.16
404	156	1225	4.69	36.85
411	151	1376	4.54	41.40
417	188	1564	5.66	47.05
424	209	1773	6.29	53.34
432	194	1967	5.84	59.18
440	202	2169	6.08	65.25
449	172	2341	5.17	70.43
458	185	2526	5.57	75.99
470	179	2705	5.39	81.38
482	141	2846	4.24	85.62
496	128	2974	3.85	89.47
511	109	3083	3.28	92.75
527	81	3164	2.44	95.19
544	61	3225	1.84	97.02
562	34	3259	1.02	98.04
583	29	3288	0.87	98.92
600	36	3324	1.08	100.00

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30	60	90	120	150	180	210
Frequency						

Scale Score Histogram for VASOL: Fall 2003  
 Grade:11 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 2 Writing Prompt 1

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		2	2	0.09	0.09
129		1	3	0.04	0.13
192		1	4	0.04	0.18
266		1	5	0.04	0.22
275	F	3	8	0.13	0.35
283	F	4	12	0.18	0.53
290	F	3	15	0.13	0.66
296	F	5	20	0.22	0.88
303	F	6	26	0.27	1.15
308		2	28	0.09	1.24
314	F	3	31	0.13	1.37
320	FF	8	39	0.35	1.72
325	FF	8	47	0.35	2.08
331	FFF	14	61	0.62	2.70
336	FF	11	72	0.49	3.18
342	FFFF	21	93	0.93	4.11
347	FFFF	21	114	0.93	5.04
352	FFFF	25	139	1.11	6.15
357	FFFFFF	28	167	1.24	7.39
362	FFFFFF	37	204	1.64	9.02
367	FFFFFF	43	247	1.90	10.92
372	FFFFFF	66	313	2.92	13.84
378	FFFFFF	69	382	3.05	16.90
383	FFFFFF	99	481	4.38	21.27
388	FFFFFF	103	584	4.56	25.83
393	FFFFFF	86	670	3.80	29.63
398	FFFFFF	111	781	4.91	34.54
404	P	109	890	4.82	39.36
409	P	120	1010	5.31	44.67
415	P	122	1132	5.40	50.07
421	P	111	1243	4.91	54.98
426	P	110	1353	4.87	59.84
433	P	95	1448	4.20	64.04
440	P	119	1567	5.26	69.31
447	P	101	1668	4.47	73.77
455	P	94	1762	4.16	77.93
464	P	86	1848	3.80	81.73
475	P	101	1949	4.47	86.20
487	P	75	2024	3.32	89.52
500	A	70	2094	3.10	92.61
515	A	55	2149	2.43	95.05
532	A	39	2188	1.72	96.77
550	A	20	2208	0.88	97.66
569	A	24	2232	1.06	98.72
592	A	9	2241	0.40	99.12
600	A	20	2261	0.88	100.00

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 20 40 60 80 100 120  
 Frequency







Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: English: Reading + Writing - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		26	26	0.04	0.04
204		3	29	0.00	0.04
216		3	32	0.00	0.04
227		17	49	0.02	0.07
236		22	71	0.03	0.10
245		30	101	0.04	0.14
253		44	145	0.06	0.20
261		77	222	0.11	0.31
268		86	308	0.12	0.43
275	F	119	427	0.17	0.60
281	F	154	581	0.22	0.81
287	F	191	772	0.27	1.08
294	F	231	1003	0.32	1.40
300	F	248	1251	0.35	1.75
306	FF	338	1589	0.47	2.22
312	FF	337	1926	0.47	2.69
318	FF	431	2357	0.60	3.30
323	FFF	501	2858	0.70	4.00
329	FFF	618	3476	0.86	4.86
335	FFFF	719	4195	1.01	5.87
341	FFFF	812	5007	1.14	7.00
346	FFFF	865	5872	1.21	8.21
352	FFFFF	1031	6903	1.44	9.65
358	FFFFF	1208	8111	1.69	11.34
364	FFFFFF	1460	9571	2.04	13.38
370	FFFFFFF	1634	11205	2.28	15.67
377	FFFFFFF	1805	13010	2.52	18.19
384	FFFFFFF	2220	15230	3.10	21.29
390	FFFFFFF	2468	17698	3.45	24.74
397	FFFFFFF	2955	20653	4.13	28.88
405	PPPPPPPPPPPPPPPP	3257	23910	4.55	33.43
413	PPPPPPPPPPPPPPPP	3657	27567	5.11	38.54
421	PPPPPPPPPPPPPPPP	4082	31649	5.71	44.25
430	PPPPPPPPPPPPPPPP	4324	35973	6.05	50.29
440	PPPPPPPPPPPPPPPP	4917	40890	6.87	57.17
451	PPPPPPPPPPPPPPPP	5131	46021	7.17	64.34
464	PPPPPPPPPPPPPPPP	5383	51404	7.53	71.87
479	PPPPPPPPPPPPPPPP	5387	56791	7.53	79.40
497	PPPPPPPPPPPPPPPP	5197	61988	7.27	86.67
522	AAAAAAAAAAAAAAAA	4537	66525	6.34	93.01
562	AAAAAAAAAAAAAAAA	3372	69897	4.71	97.72
600	AAAAAAAA	1628	71525	2.28	100.00

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 1000 2000 3000 4000 5000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: English: Reading + Writing - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	5	5	0.05	0.05
197	1	6	0.01	0.06
224	3	9	0.03	0.09
235	1	10	0.01	0.10
244	7	17	0.07	0.17
253	9	26	0.09	0.26
261	10	36	0.10	0.36
268	16	52	0.16	0.52
275	18	70	0.18	0.70
282	33	103	0.33	1.03
289	26	129	0.26	1.28
295	34	163	0.34	1.62
301	39	202	0.39	2.01
307	50	252	0.50	2.51
313	46	298	0.46	2.97
319	61	359	0.61	3.57
324	78	437	0.78	4.35
330	72	509	0.72	5.07
335	81	590	0.81	5.87
341	109	699	1.08	6.96
346	126	825	1.25	8.21
352	130	955	1.29	9.50
358	149	1104	1.48	10.99
363	168	1272	1.67	12.66
369	189	1461	1.88	14.54
375	237	1698	2.36	16.90
381	245	1943	2.44	19.34
387	307	2250	3.06	22.39
393	340	2590	3.38	25.78
401	341	2931	3.39	29.17
408	380	3311	3.78	32.95
415	479	3790	4.77	37.72
423	544	4334	5.41	43.13
432	580	4914	5.77	48.91
441	621	5535	6.18	55.09
452	721	6256	7.18	62.26
464	739	6995	7.35	69.62
478	711	7706	7.08	76.69
496	756	8462	7.52	84.22
520	653	9115	6.50	90.71
560	603	9718	6.00	96.72
600	330	10048	3.28	100.00

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: Mathematics - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	17	17	0.03	0.03
4	4	21	0.01	0.03
59	1	22	0.00	0.03
138	2	24	0.00	0.04
183	1	25	0.00	0.04
195	7	32	0.01	0.05
206	10	42	0.02	0.06
216	18	60	0.03	0.09
226	33	93	0.05	0.14
235	40	133	0.06	0.20
244	61	194	0.09	0.29
253	71	265	0.11	0.40
261	85	350	0.13	0.53
268	96	446	0.14	0.67
277	129	575	0.19	0.86
284	132	707	0.20	1.06
292	151	858	0.23	1.29
299	158	1016	0.24	1.53
306	228	1244	0.34	1.87
314	222	1466	0.33	2.20
321   F	273	1739	0.41	2.61
328   F	312	2051	0.47	3.08
336   F	324	2375	0.49	3.57
342   F	360	2735	0.54	4.11
350   F	442	3177	0.66	4.77
357   F	480	3657	0.72	5.50
364   F	550	4207	0.83	6.32
371   F	662	4869	0.99	7.32
380   FF	776	5645	1.17	8.48
387   FF	889	6534	1.34	9.82
395   FF	1009	7543	1.52	11.33
403   PP	1182	8725	1.78	13.11
412   PPP	1361	10086	2.05	15.16
420   PPP	1574	11660	2.37	17.52
430   PPPP	1902	13562	2.86	20.38
439   PPPP	2097	15659	3.15	23.53
449   PPPPP	2432	18091	3.65	27.19
460   PPPPPP	2851	20942	4.28	31.47
472   PPPPPPP	3284	24226	4.93	36.40
485   PPPPPPPP	3846	28072	5.78	42.18
499   PPPPPPPP	4345	32417	6.53	48.71
516   AAAAAAAAA	4954	37371	7.44	56.16
536   AAAAAAAAA	5735	43106	8.62	64.78
560   AAAAAAAAA	6477	49583	9.73	74.51
593   AAAAAAAAA	6836	56419	10.27	84.78
600   AAAAAAAAA	10128	66547	15.22	100.00

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 4000 8000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: Mathematics - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
0		4	4	0.04	0.04
102		1	5	0.01	0.05
162		1	6	0.01	0.07
189		4	10	0.04	0.11
210		4	14	0.04	0.15
220		7	21	0.08	0.23
230		6	27	0.07	0.29
239		9	36	0.10	0.39
247		4	40	0.04	0.44
255		14	54	0.15	0.59
262		13	67	0.14	0.73
270		15	82	0.16	0.89
277		23	105	0.25	1.14
285		17	122	0.19	1.33
292		21	143	0.23	1.56
299	F	28	171	0.30	1.86
306		23	194	0.25	2.11
312	F	34	228	0.37	2.48
320	F	25	253	0.27	2.76
327	F	44	297	0.48	3.23
333	F	51	348	0.56	3.79
340	F	54	402	0.59	4.38
347	F	47	449	0.51	4.89
354	F	59	508	0.64	5.53
361	FF	75	583	0.82	6.35
368	FF	99	682	1.08	7.43
375	FFF	126	808	1.37	8.80
383	FFF	125	933	1.36	10.16
390	FFF	131	1064	1.43	11.59
398	FFFF	187	1251	2.04	13.62
406	PPPP	198	1449	2.16	15.78
415	PPPP	211	1660	2.30	18.08
424	PPPPP	234	1894	2.55	20.63
433	PPPPP	273	2167	2.97	23.60
443	PPPPPPP	325	2492	3.54	27.14
454	PPPPPPP	353	2845	3.84	30.98
465	PPPPPPPP	435	3280	4.74	35.72
478	PPPPPPPPP	525	3805	5.72	41.44
492	PPPPPPPPP	620	4425	6.75	48.19
508	AAAAAAAAA	656	5081	7.14	55.34
527	AAAAAAAAA	823	5904	8.96	64.30
552	AAAAAAAAA	889	6793	9.68	73.98
585	AAAAAAAAA	1015	7808	11.05	85.04
600	AAAAAAAAA	1374	9182	14.96	100.00

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 400      800      1200  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: History & Social Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		19	19	0.03	0.03
90		1	20	0.00	0.03
151		1	21	0.00	0.03
172		3	24	0.00	0.03
190		4	28	0.01	0.04
205		11	39	0.02	0.05
219		21	60	0.03	0.08
231		30	90	0.04	0.13
243		75	165	0.11	0.23
254		73	238	0.10	0.33
265		115	353	0.16	0.50
275		141	494	0.20	0.69
285		167	661	0.23	0.93
294		226	887	0.32	1.24
303	F	281	1168	0.39	1.64
312	F	335	1503	0.47	2.11
321	F	397	1900	0.56	2.67
329	F	443	2343	0.62	3.29
338	F	553	2896	0.78	4.06
346	F	675	3571	0.95	5.01
355	FF	767	4338	1.08	6.09
364	FF	979	5317	1.37	7.46
372	FF	1131	6448	1.59	9.05
381	FFF	1311	7759	1.84	10.89
391	FFF	1561	9320	2.19	13.08
400	PPPP	1846	11166	2.59	15.67
410	PPPP	2124	13290	2.98	18.65
420	PPPPP	2416	15706	3.39	22.04
431	PPPPPP	2863	18569	4.02	26.05
443	PPPPPPP	3266	21835	4.58	30.63
454	PPPPPPP	3699	25534	5.19	35.82
468	PPPPPPPP	4115	29649	5.77	41.60
483	PPPPPPPPP	4700	34349	6.59	48.19
500	AAAAAAAA	5205	39554	7.30	55.49
519	AAAAAAAAA	5911	45465	8.29	63.79
545	AAAAAAAAA	6592	52057	9.25	73.04
578	AAAAAAAAA	7105	59162	9.97	83.01
600	AAAAAAAAA	12113	71275	16.99	100.00

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 4000 8000 12000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: History & Social Science - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		4	4	0.04	0.04
165		1	5	0.01	0.05
183		1	6	0.01	0.06
199		2	8	0.02	0.08
212		7	15	0.07	0.16
225		6	21	0.06	0.22
237		7	28	0.07	0.29
249		8	36	0.08	0.37
260		9	45	0.09	0.47
270		10	55	0.10	0.57
281		13	68	0.13	0.70
290		21	89	0.22	0.92
300	F	26	115	0.27	1.19
309	F	40	155	0.41	1.61
319	F	35	190	0.36	1.97
328	F	39	229	0.40	2.37
337	F	67	296	0.69	3.07
346	F	72	368	0.75	3.81
356	FF	90	458	0.93	4.74
365	FFF	143	601	1.48	6.22
375	FFF	133	734	1.38	7.60
384	FFF	147	881	1.52	9.12
394	FFFF	208	1089	2.15	11.28
404	PPPPP	256	1345	2.65	13.93
415	PPPPPP	312	1657	3.23	17.16
426	PPPPPPP	374	2031	3.87	21.04
437	PPPPPPPP	449	2480	4.65	25.69
449	PPPPPPPPP	526	3006	5.45	31.13
463	PPPPPPPPP	544	3550	5.63	36.77
477	PPPPPPPPP	633	4183	6.56	43.32
492	PPPPPPPPP	748	4931	7.75	51.07
510	AAAAAAAAAAAA	809	5740	8.38	59.45
531	AAAAAAAAAAAA	823	6563	8.52	67.98
556	AAAAAAAAAAAA	850	7413	8.80	76.78
590	AAAAAAAAAAAA	866	8279	8.97	85.75
600	AAAAAAAAAAAA	1376	9655	14.25	100.00

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 400      800      1200  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 3: Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		15	15	0.02	0.02
109		2	17	0.00	0.02
201		3	20	0.00	0.03
217		2	22	0.00	0.03
231		9	31	0.01	0.04
243		20	51	0.03	0.07
254		34	85	0.05	0.12
265		56	141	0.08	0.20
274		83	224	0.12	0.31
283		96	320	0.13	0.45
292	F	143	463	0.20	0.65
300	F	173	636	0.24	0.89
308	F	212	848	0.30	1.19
316	F	256	1104	0.36	1.55
323	F	269	1373	0.38	1.92
330	FF	378	1751	0.53	2.45
338	FF	418	2169	0.59	3.04
345	FFF	549	2718	0.77	3.81
352	FFF	617	3335	0.87	4.68
359	FFFF	729	4064	1.02	5.70
367	FFFF	894	4958	1.25	6.95
374	FFFFF	1072	6030	1.50	8.45
381	FFFFFF	1258	7288	1.76	10.22
389	FFFFFFF	1469	8757	2.06	12.28
396	FFFFFFFF	1764	10521	2.47	14.75
404	PPPPPPPPP	1988	12509	2.79	17.54
412	PPPPPPPPPPP	2434	14943	3.41	20.95
421	PPPPPPPPPPPPP	2833	17776	3.97	24.92
430	PPPPPPPPPPPPPPP	3265	21041	4.58	29.50
439	PPPPPPPPPPPPPPPPP	3574	24615	5.01	34.51
449	PPPPPPPPPPPPPPPPPPP	4119	28734	5.77	40.29
460	PPPPPPPPPPPPPPPPPPPPP	4598	33332	6.45	46.73
472	PPPPPPPPPPPPPPPPPPPPPPP	5190	38522	7.28	54.01
486	PPPPPPPPPPPPPPPPPPPPPPPPP	5658	44180	7.93	61.94
502	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6139	50319	8.61	70.55
522	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6548	56867	9.18	79.73
549	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6344	63211	8.89	88.62
593	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	5248	68459	7.36	95.98
600	AAAAAAAAAAAAAAAA	2867	71326	4.02	100.00

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 1000 2000 3000 4000 5000 6000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
Grade 3: Science - Core 2  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent	
0		4	4	0.04	0.04
192		1	5	0.01	0.05
209		1	6	0.01	0.06
224		5	11	0.05	0.11
237		2	13	0.02	0.13
249		9	22	0.09	0.22
259		9	31	0.09	0.32
270		9	40	0.09	0.41
279		10	50	0.10	0.51
288		10	60	0.10	0.61
297	F	26	86	0.27	0.88
306	F	31	117	0.32	1.20
314	F	25	142	0.26	1.45
322	F	28	170	0.29	1.74
330	F	35	205	0.36	2.10
337	FF	62	267	0.63	2.73
345	FF	49	316	0.50	3.23
352	FFF	63	379	0.64	3.88
360	FFF	81	460	0.83	4.70
368	FFFF	93	553	0.95	5.65
375	FFFFF	133	686	1.36	7.02
383	FFFFFF	153	839	1.56	8.58
391	FFFFFFF	176	1015	1.80	10.38
398	FFFFFFF	206	1221	2.11	12.49
407	PPPPPPPP	258	1479	2.64	15.12
415	PPPPPPPPPP	321	1800	3.28	18.41
424	PPPPPPPPPPPP	391	2191	4.00	22.41
433	PPPPPPPPPPPPPP	416	2607	4.25	26.66
443	PPPPPPPPPPPPPPPP	565	3172	5.78	32.44
453	PPPPPPPPPPPPPPPPPP	582	3754	5.95	38.39
465	PPPPPPPPPPPPPPPPPPPP	714	4468	7.30	45.69
477	PPPPPPPPPPPPPPPPPPPPPP	740	5208	7.57	53.26
491	PPPPPPPPPPPPPPPPPPPPPPPP	891	6099	9.11	62.37
508	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	998	7097	10.21	72.57
528	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	938	8035	9.59	82.17
556	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	892	8927	9.12	91.29
600	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	852	9779	8.71	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: English: Literature & Research - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		27	27	0.04	0.04
167		3	30	0.00	0.04
227		1	31	0.00	0.04
244		7	38	0.01	0.05
257		11	49	0.01	0.07
269		22	71	0.03	0.10
279		30	101	0.04	0.14
288		53	154	0.07	0.21
296		86	240	0.12	0.32
304	F	133	373	0.18	0.50
311	F	160	533	0.22	0.72
318	F	227	760	0.31	1.02
324	F	279	1039	0.38	1.40
330	F	286	1325	0.38	1.78
336	FF	376	1701	0.51	2.29
342	FF	447	2148	0.60	2.89
348	FFF	553	2701	0.74	3.64
353	FFF	564	3265	0.76	4.39
359	FFF	675	3940	0.91	5.30
364	FFFF	734	4674	0.99	6.29
369	FFFF	855	5529	1.15	7.44
375	FFFFF	932	6461	1.25	8.70
380	FFFFF	1065	7526	1.43	10.13
385	FFFFF	1090	8616	1.47	11.60
391	FFFFFF	1218	9834	1.64	13.24
396	FFFFFF	1395	11229	1.88	15.11
402	PPPPPPPP	1560	12789	2.10	17.21
408	PPPPPPPP	1709	14498	2.30	19.51
414	PPPPPPPP	1983	16481	2.67	22.18
420	PPPPPPPP	2154	18635	2.90	25.08
426	PPPPPPPP	2511	21146	3.38	28.46
433	PPPPPPPP	2748	23894	3.70	32.16
441	PPPPPPPP	3043	26937	4.10	36.26
448	PPPPPPPP	3615	30552	4.87	41.12
457	PPPPPPPP	3914	34466	5.27	46.39
466	PPPPPPPP	4625	39091	6.23	52.62
477	PPPPPPPP	5231	44322	7.04	59.66
490	PPPPPPPP	5864	50186	7.89	67.55
506	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6874	57060	9.25	76.81
528	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	7263	64323	9.78	86.58
565	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6318	70641	8.50	95.09
600	AAAAAAAAAAAAAAAA	3651	74292	4.91	100.00

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 1000 2000 3000 4000 5000 6000 7000

Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: English: Literature & Research - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		4	4	0.04	0.04
157		1	5	0.01	0.05
247		1	6	0.01	0.06
259		1	7	0.01	0.07
269		7	14	0.07	0.13
278		5	19	0.05	0.18
286		12	31	0.11	0.29
294		19	50	0.18	0.47
301	F	31	81	0.29	0.76
308	F	31	112	0.29	1.05
314	F	35	147	0.33	1.38
321	F	45	192	0.42	1.81
327	F	53	245	0.50	2.31
333	F	58	303	0.55	2.85
339	F	49	352	0.46	3.32
344	F	64	416	0.60	3.92
350	FF	87	503	0.82	4.74
356	FF	99	602	0.93	5.67
361	FF	108	710	1.02	6.69
367	FFF	147	857	1.38	8.07
372	FFF	143	1000	1.35	9.42
378	FFF	171	1171	1.61	11.03
384	FFFF	204	1375	1.92	12.95
389	FFF	164	1539	1.54	14.49
395	FFFF	221	1760	2.08	16.58
401	PPPPPP	293	2053	2.76	19.34
407	PPPPPP	284	2337	2.67	22.01
414	PPPPPP	324	2661	3.05	25.06
421	PPPPPP	317	2978	2.99	28.05
428	PPPPPPPP	411	3389	3.87	31.92
435	PPPPPPPP	450	3839	4.24	36.16
444	PPPPPPPPPP	579	4418	5.45	41.61
453	PPPPPPPPPP	670	5088	6.31	47.92
463	PPPPPPPPPPPP	718	5806	6.76	54.68
474	PPPPPPPPPPPPPP	897	6703	8.45	63.13
487	PPPPPPPPPPPPPP	1023	7726	9.63	72.76
504	AAAAAAAAAAAAAAAA	959	8685	9.03	81.80
526	AAAAAAAAAAAAAAAA	912	9597	8.59	90.38
563	AAAAAAAAAAAA	712	10309	6.71	97.09
600	AAAAAA	309	10618	2.91	100.00

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 200 400 600 800 1000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: Mathematics - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		22	22	0.03	0.03
132		2	24	0.00	0.04
170		1	25	0.00	0.04
194		1	26	0.00	0.04
225		2	28	0.00	0.04
237		1	29	0.00	0.04
247		3	32	0.00	0.05
256		9	41	0.01	0.06
264		16	57	0.02	0.08
272		31	88	0.05	0.13
279		33	121	0.05	0.18
286		53	174	0.08	0.25
292		57	231	0.08	0.34
298		90	321	0.13	0.47
305	F	105	426	0.15	0.62
310	F	139	565	0.20	0.83
316	F	187	752	0.27	1.10
321	F	215	967	0.31	1.41
326	F	225	1192	0.33	1.74
331	F	294	1486	0.43	2.17
336	FF	315	1801	0.46	2.64
341	FF	371	2172	0.54	3.18
346	FF	438	2610	0.64	3.82
351	FFF	530	3140	0.78	4.59
356	FFF	543	3683	0.79	5.39
361	FFF	635	4318	0.93	6.32
366	FFFF	761	5079	1.11	7.43
371	FFFF	896	5975	1.31	8.74
376	FFFFF	1001	6976	1.46	10.21
381	FFFFFF	1109	8085	1.62	11.83
386	FFFFFFF	1302	9387	1.91	13.74
391	FFFFFFF	1457	10844	2.13	15.87
397	FFFFFFF	1690	12534	2.47	18.34
402	PPPPPPPP	1890	14424	2.77	21.11
408	PPPPPPPP	2045	16469	2.99	24.10
414	PPPPPPPP	2235	18704	3.27	27.37
419	PPPPPPPPPP	2523	21227	3.69	31.06
426	PPPPPPPPPP	2795	24022	4.09	35.15
432	PPPPPPPPPP	2969	26991	4.34	39.49
439	PPPPPPPPPP	3210	30201	4.70	44.19
447	PPPPPPPPPP	3551	33752	5.20	49.39
455	PPPPPPPPPP	3685	37437	5.39	54.78
464	PPPPPPPPPP	4182	41619	6.12	60.90
474	PPPPPPPPPP	4270	45889	6.25	67.15
485	PPPPPPPPPP	4296	50185	6.29	73.43
499	PPPPPPPPPP	4489	54674	6.57	80.00
516	AAAAAAAAAAAAAAAA	4582	59256	6.70	86.71
539	AAAAAAAAAAAAAAAA	4041	63297	5.91	92.62
578	AAAAAAAAAAAAAAAA	3269	66566	4.78	97.40
600	AAAAAAAA	1775	68341	2.60	100.00

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 1000 2000 3000 4000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
Grade 5: Mathematics - Core 2  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	3	3	0.03	0.03
166	1	4	0.01	0.04
221	1	5	0.01	0.05
233	1	6	0.01	0.06
243	1	7	0.01	0.07
252	3	10	0.03	0.10
260	2	12	0.02	0.12
268   F	10	22	0.10	0.23
275   F	19	41	0.20	0.43
282   F	21	62	0.22	0.64
288   F	17	79	0.18	0.82
295   F	22	101	0.23	1.05
301   F	24	125	0.25	1.30
306   FF	30	155	0.31	1.61
312   F	28	183	0.29	1.90
317   FF	36	219	0.37	2.27
323   FF	43	262	0.45	2.72
328   FF	38	300	0.39	3.11
333   FF	46	346	0.48	3.59
338   FFF	52	398	0.54	4.13
343   FFFF	70	468	0.73	4.86
348   FFF	56	524	0.58	5.44
353   FFFF	81	605	0.84	6.28
358   FFFFF	95	700	0.99	7.26
363   FFFFF	94	794	0.98	8.24
368   FFFFF	109	903	1.13	9.37
373   FFFFFFF	133	1036	1.38	10.75
378   FFFFFFFF	150	1186	1.56	12.31
384   FFFFFFFF	164	1350	1.70	14.01
389   FFFFFFFF	191	1541	1.98	15.99
395   FFFFFFFF	218	1759	2.26	18.25
400   P	253	2012	2.63	20.88
406   P	255	2267	2.65	23.52
412   P	282	2549	2.93	26.45
418   P	347	2896	3.60	30.05
424   P	365	3261	3.79	33.84
431   P	401	3662	4.16	38.00
438   P	442	4104	4.59	42.59
446   P	452	4556	4.69	47.28
454   P	535	5091	5.55	52.83
464   P	528	5619	5.48	58.31
474   P	606	6225	6.29	64.59
485   P	624	6849	6.48	71.07
500   A	647	7496	6.71	77.78
517   A	643	8139	6.67	84.46
540   A	626	8765	6.50	90.95
579   A	576	9341	5.98	96.93
600   A	296	9637	3.07	100.00

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100 200 300 400 500 600

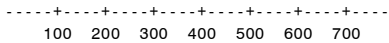
Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: History & Social Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	17	17	0.02	0.02
104	2	19	0.00	0.02
151	3	22	0.00	0.03
181	1	23	0.00	0.03
202	1	24	0.00	0.03
219	3	27	0.00	0.03
234	12	39	0.01	0.05
248	15	54	0.02	0.07
259	45	99	0.06	0.12
270	42	141	0.05	0.18
280	101	242	0.13	0.30
289	121	363	0.15	0.45
299	163	526	0.20	0.66
308	233	759	0.29	0.95
316	267	1026	0.33	1.28
324	330	1356	0.41	1.69
332	390	1746	0.49	2.18
339	538	2284	0.67	2.85
347	639	2923	0.80	3.65
354	833	3756	1.04	4.69
362	955	4711	1.19	5.88
369	1132	5843	1.41	7.30
377	1360	7203	1.70	8.99
384	1610	8813	2.01	11.00
392	1885	10698	2.35	13.36
400	2116	12814	2.64	16.00
408	2490	15304	3.11	19.11
416	2868	18172	3.58	22.69
424	3159	21331	3.94	26.63
433	3527	24858	4.40	31.04
442	4052	28910	5.06	36.10
452	4433	33343	5.54	41.63
462	4912	38255	6.13	47.77
474	5351	43606	6.68	54.45
486	5672	49278	7.08	61.53
500	5970	55248	7.45	68.98
517	6151	61399	7.68	76.66
538	6048	67447	7.55	84.22
566	5520	72967	6.89	91.11
600	7121	80088	8.89	100.00

Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: History & Social Science - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
143		1	1	0.02	0.02
211		1	2	0.02	0.03
240		2	4	0.03	0.06
252		6	10	0.10	0.16
263		4	14	0.06	0.22
274		9	23	0.14	0.37
283	F	12	35	0.19	0.56
293	F	17	52	0.27	0.83
301	F	11	63	0.18	1.00
310	FF	38	101	0.61	1.61
318	F	22	123	0.35	1.96
326	F	28	151	0.45	2.41
334	FF	48	199	0.77	3.17
342	FF	45	244	0.72	3.89
350	FFFF	72	316	1.15	5.04
358	FFFF	74	390	1.18	6.22
365	FFFF	85	475	1.35	7.57
373	FFFF	77	552	1.23	8.80
381	FFFFFF	112	664	1.79	10.58
389	FFFFFFF	157	821	2.50	13.09
396	FFFFFFF	153	974	2.44	15.52
404	PPPPPPPP	193	1167	3.08	18.60
413	PPPPPPPP	195	1362	3.11	21.71
421	PPPPPPPP	221	1583	3.52	25.23
431	PPPPPPPP	256	1839	4.08	29.31
440	PPPPPPPP	287	2126	4.57	33.89
449	PPPPPPPP	309	2435	4.93	38.81
461	PPPPPPPP	339	2774	5.40	44.21
472	PPPPPPPP	385	3159	6.14	50.35
485	PPPPPPPP	426	3585	6.79	57.14
499	PPPPPPPP	447	4032	7.12	64.27
516	AAAAAAAA	474	4506	7.55	71.82
538	AAAAAAAA	478	4984	7.62	79.44
566	AAAAAAAA	504	5488	8.03	87.47
600	AAAAAAAA	786	6274	12.53	100.00



Frequency

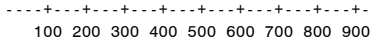
Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	19	19	0.03	0.03
172	1	20	0.00	0.03
230	4	24	0.01	0.03
247	1	25	0.00	0.03
260	2	27	0.00	0.04
271	10	37	0.01	0.05
281	15	52	0.02	0.07
290	31	83	0.04	0.11
298	65	148	0.09	0.20
306	96	244	0.13	0.33
312	121	365	0.16	0.50
319	189	554	0.26	0.75
326	204	758	0.28	1.03
332	225	983	0.31	1.33
338	320	1303	0.43	1.77
344	434	1737	0.59	2.36
350	473	2210	0.64	3.00
355	574	2784	0.78	3.78
361	736	3520	1.00	4.78
367	829	4349	1.13	5.90
372	950	5299	1.29	7.19
378	1205	6504	1.64	8.83
384	1372	7876	1.86	10.69
390	1616	9492	2.19	12.89
396	1823	11315	2.48	15.36
402	2114	13429	2.87	18.23
409	2451	15880	3.33	21.56
415	2895	18775	3.93	25.49
422	3209	21984	4.36	29.85
430	3662	25646	4.97	34.82
437	4104	29750	5.57	40.39
446	4529	34279	6.15	46.54
455	5119	39398	6.95	53.49
465	5689	45087	7.72	61.21
476	6013	51100	8.16	69.38
490	5995	57095	8.14	77.52
506	5960	63055	8.09	85.61
529	5230	68285	7.10	92.71
565	3724	72009	5.06	97.77
600	1645	73654	2.23	100.00

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 1000 2000 3000 4000 5000 6000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: Science - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

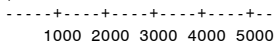
Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	2	2	0.02	0.02
212	1	3	0.01	0.03
243	1	4	0.01	0.04
255	3	7	0.03	0.07
266	3	10	0.03	0.10
275	3	13	0.03	0.13
284	7	20	0.07	0.19
291	13	33	0.13	0.32
299	10	43	0.10	0.42
306	29	72	0.28	0.70
313	25	97	0.24	0.94
320	45	142	0.44	1.37
326	36	178	0.35	1.72
332	41	219	0.40	2.12
338	56	275	0.54	2.66
344	72	347	0.70	3.36
350	78	425	0.75	4.11
356	103	528	1.00	5.11
362	143	671	1.38	6.49
368	153	824	1.48	7.97
374	181	1005	1.75	9.72
380	195	1200	1.89	11.61
386	225	1425	2.18	13.79
392	287	1712	2.78	16.56
398	328	2040	3.17	19.73
405	353	2393	3.41	23.15
412	434	2827	4.20	27.35
419	500	3327	4.84	32.19
427	560	3887	5.42	37.60
435	634	4521	6.13	43.74
444	718	5239	6.95	50.68
454	766	6005	7.41	58.09
465	799	6804	7.73	65.82
478	924	7728	8.94	74.76
494	858	8586	8.30	83.06
516	796	9382	7.70	90.76
552	630	10012	6.09	96.86
600	325	10337	3.14	100.00





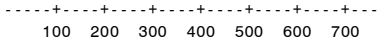
Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: English: Literature and Research - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		49	49	0.06	0.06
131		2	51	0.00	0.07
160		3	54	0.00	0.07
180		7	61	0.01	0.08
198		15	76	0.02	0.10
212		33	109	0.04	0.14
224		72	181	0.09	0.23
236	F	131	312	0.17	0.40
246	F	207	519	0.27	0.67
256	F	299	818	0.39	1.06
265	FF	394	1212	0.51	1.57
274	FF	414	1626	0.54	2.10
282	FF	471	2097	0.61	2.71
290	FFF	559	2656	0.72	3.43
298	FFF	620	3276	0.80	4.23
305	FFF	625	3901	0.81	5.04
312	FFFF	714	4615	0.92	5.97
320	FFFF	763	5378	0.99	6.95
327	FFFF	859	6237	1.11	8.06
334	FFFFF	959	7196	1.24	9.30
341	FFFFFF	1110	8306	1.43	10.74
349	FFFFFF	1229	9535	1.59	12.33
356	FFFFFFF	1382	10917	1.79	14.11
363	FFFFFFF	1547	12464	2.00	16.11
371	FFFFFFF	1797	14261	2.32	18.43
378	FFFFFFF	1978	16239	2.56	20.99
385	FFFFFFF	2218	18457	2.87	23.86
394	FFFFFFF	2539	20996	3.28	27.14
402	PPPPPPPPPP	2719	23715	3.51	30.65
410	PPPPPPPPPP	3187	26902	4.12	34.77
419	PPPPPPPPPP	3652	30554	4.72	39.49
428	PPPPPPPPPP	3963	34517	5.12	44.62
439	PPPPPPPPPP	4389	38906	5.67	50.29
449	PPPPPPPPPP	4651	43557	6.01	56.30
461	PPPPPPPPPP	4980	48537	6.44	62.74
474	PPPPPPPPPP	5348	53885	6.91	69.65
489	PPPPPPPPPP	5432	59317	7.02	76.67
507	AAAAAAAAAAAAAAAA	5210	64527	6.73	83.41
528	AAAAAAAAAAAAAAAA	4882	69409	6.31	89.72
557	AAAAAAAAAAAAAAAA	4057	73466	5.24	94.96
600	AAAAAAAAAAAAAAAA	3896	77362	5.04	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: English: Literature and Research - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

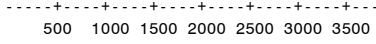
Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0	F	12	12	0.10	0.10
81		2	14	0.02	0.12
157		1	15	0.01	0.13
178		2	17	0.02	0.15
195		3	20	0.03	0.17
210	F	12	32	0.10	0.27
223	F	25	57	0.21	0.49
234	FF	38	95	0.32	0.81
245	FFF	51	146	0.44	1.25
255	FFFF	71	217	0.61	1.85
264	FFFFF	108	325	0.92	2.77
273	FFFFFF	129	454	1.10	3.87
282	FFFFFFF	139	593	1.19	5.06
290	FFFFFFF	125	718	1.07	6.13
298	FFFFFFF	130	848	1.11	7.24
306	FFFFFFF	134	982	1.14	8.38
313	FFFFFFF	150	1132	1.28	9.66
320	FFFFFFF	157	1289	1.34	11.00
327	FFFFFFF	182	1471	1.55	12.55
335	FFFFFFF	195	1666	1.66	14.22
342	FFFFFFF	207	1873	1.77	15.98
349	FFFFFFF	205	2078	1.75	17.73
356	FFFFFFF	222	2300	1.89	19.63
364	FFFFFFF	253	2553	2.16	21.79
371	FFFFFFF	243	2796	2.07	23.86
379	FFFFFFF	304	3100	2.59	26.45
386	FFFFFFF	337	3437	2.88	29.33
394	FFFFFFF	372	3809	3.17	32.50
402	PPPPPPPPPPPPPPPPPP	407	4216	3.47	35.98
411	PPPPPPPPPPPPPPPPPP	458	4674	3.91	39.88
420	PPPPPPPPPPPPPPPPPP	504	5178	4.30	44.18
429	PPPPPPPPPPPPPPPPPP	537	5715	4.58	48.77
439	PPPPPPPPPPPPPPPPPP	570	6285	4.86	53.63
449	PPPPPPPPPPPPPPPPPP	682	6967	5.82	59.45
461	PPPPPPPPPPPPPPPPPP	734	7701	6.26	65.71
474	PPPPPPPPPPPPPPPPPP	752	8453	6.42	72.13
489	PPPPPPPPPPPPPPPPPP	749	9202	6.39	78.52
506	AAAAAAAAAAAAAAAAAAAAAAAA	711	9913	6.07	84.59
528	AAAAAAAAAAAAAAAAAAAAAAAA	713	10626	6.08	90.67
557	AAAAAAAAAAAAAAAAAAAAAAAA	584	11210	4.98	95.66
600	AAAAAAAAAAAAAAAAAAAAAAAA	509	11719	4.34	100.00



Frequency

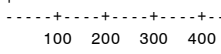
Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: Mathematics - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	50	50	0.07	0.07
160		3	53	0.00	0.07
196		3	56	0.00	0.07
218		2	58	0.00	0.08
234		3	61	0.00	0.08
247		2	63	0.00	0.08
259		7	70	0.01	0.09
268		4	74	0.01	0.10
277		8	82	0.01	0.11
284		8	90	0.01	0.12
292		18	108	0.02	0.14
298		39	147	0.05	0.19
305	F	71	218	0.09	0.29
311	F	94	312	0.12	0.41
316	F	131	443	0.17	0.58
321	FF	198	641	0.26	0.84
327	FF	218	859	0.29	1.12
331	FFF	337	1196	0.44	1.57
336	FFF	339	1535	0.44	2.01
341	FFFF	375	1910	0.49	2.50
345	FFFF	445	2355	0.58	3.08
349	FFFF	436	2791	0.57	3.65
354	FFFFF	499	3290	0.65	4.31
358	FFFFFF	553	3843	0.72	5.03
362	FFFFFF	549	4392	0.72	5.75
366	FFFFFF	645	5037	0.84	6.60
370	FFFFFF	689	5726	0.90	7.50
374	FFFFFF	834	6560	1.09	8.59
378	FFFFFF	755	7315	0.99	9.58
382	FFFFFF	873	8188	1.14	10.72
386	FFFFFF	855	9043	1.12	11.84
390	FFFFFF	981	10024	1.28	13.13
394	FFFFFF	1046	11070	1.37	14.50
398	FFFFFF	1100	12170	1.44	15.94
402	P	1222	13392	1.60	17.54
406	P	1295	14687	1.70	19.23
411	P	1287	15974	1.69	20.92
414	P	1551	17525	2.03	22.95
419	P	1669	19194	2.19	25.13
423	P	1724	20918	2.26	27.39
428	P	1883	22801	2.47	29.86
432	P	1992	24793	2.61	32.46
437	P	2159	26952	2.83	35.29
442	P	2386	29338	3.12	38.42
447	P	2460	31798	3.22	41.64
452	P	2639	34437	3.46	45.09
457	P	2861	37298	3.75	48.84
463	P	2929	40227	3.84	52.67
469	P	3189	43416	4.18	56.85
476	P	3340	46756	4.37	61.22
482	P	3390	50146	4.44	65.66
490	P	3605	53751	4.72	70.38
498	P	3628	57379	4.75	75.13
508	A	3507	60886	4.59	79.73
519	A	3369	64255	4.41	84.14
532	A	3125	67380	4.09	88.23
549	A	2754	70134	3.61	91.83
572	A	2398	72532	3.14	94.97
600	A	3838	76370	5.03	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: Mathematics - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	15	15	0.16	0.16
191		3	18	0.03	0.19
228		1	19	0.01	0.20
240		1	20	0.01	0.21
251		2	22	0.02	0.24
260		3	25	0.03	0.27
268		6	31	0.06	0.33
275		7	38	0.08	0.41
282		8	46	0.09	0.49
288	F	17	63	0.18	0.68
294	F	28	91	0.30	0.98
299	FF	33	124	0.35	1.33
305	FFF	56	180	0.60	1.93
310	FFF	58	238	0.62	2.55
314	FFF	68	306	0.73	3.28
319	FFFF	73	379	0.78	4.06
323	FFFF	79	458	0.85	4.91
328	FFFF	87	545	0.93	5.84
332	FFFFF	92	637	0.99	6.83
337	FFFFF	96	733	1.03	7.85
340	FFFF	81	814	0.87	8.72
344	FFFF	85	899	0.91	9.63
348	FFFFF	95	994	1.02	10.65
353	FFFFF	107	1101	1.15	11.80
357	FFFF	89	1190	0.95	12.75
360	FFFFF	107	1297	1.15	13.90
364	FFFFF	109	1406	1.17	15.07
368	FFFF	109	1515	1.17	16.23
372	FFFFFF	121	1636	1.30	17.53
375	FFFFFF	117	1753	1.25	18.78
379	FFFFFFF	144	1897	1.54	20.33
383	FFFFFFF	149	2046	1.60	21.92
387	FFFFFFFF	166	2212	1.78	23.70
391	FFFFFFFF	149	2361	1.60	25.30
395	FFFFFFFF	161	2522	1.73	27.03
399	FFFFFFFF	167	2689	1.79	28.81
403	P	186	2875	1.99	30.81
407	P	184	3059	1.97	32.78
411	P	192	3251	2.06	34.84
416	P	228	3479	2.44	37.28
421	P	225	3704	2.41	39.69
425	P	271	3975	2.90	42.60
430	P	259	4234	2.78	45.37
435	P	287	4521	3.08	48.45
440	P	324	4845	3.47	51.92
445	P	332	5177	3.56	55.48
451	P	358	5535	3.84	59.31
457	P	366	5901	3.92	63.23
464	P	392	6293	4.20	67.43
471	P	424	6717	4.54	71.98
478	P	442	7159	4.74	76.71
487	P	404	7563	4.33	81.04
496	P	415	7978	4.45	85.49
507	A	363	8341	3.89	89.38
519	A	359	8700	3.85	93.23
535	A	284	8984	3.04	96.27
557	A	205	9189	2.20	98.47
592	A	102	9291	1.09	99.56
600	AA	41	9332	0.44	100.00



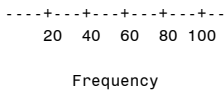
Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: History & Social Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	49	49	0.23	0.23
177		5	54	0.02	0.26
215		1	55	0.00	0.26
280		6	61	0.03	0.29
290		9	70	0.04	0.34
299		9	79	0.04	0.38
307		16	95	0.08	0.46
314		24	119	0.11	0.57
322	F	56	175	0.27	0.84
328	FF	81	256	0.39	1.23
334	FF	108	364	0.52	1.74
340	FF	120	484	0.57	2.32
346	FFF	137	621	0.66	2.97
351	FFF	144	765	0.69	3.66
356	FFFF	200	965	0.96	4.62
361	FFFF	241	1206	1.15	5.78
367	FFFF	221	1427	1.06	6.84
371	FFFF	253	1680	1.21	8.05
376	FFFFF	291	1971	1.39	9.44
381	FFFFF	295	2266	1.41	10.85
386	FFFFF	338	2604	1.62	12.47
390	FFFFF	357	2961	1.71	14.18
395	FFFFF	395	3356	1.89	16.08
400	PPPPPPPP	402	3758	1.93	18.00
405	PPPPPPPP	432	4190	2.07	20.07
410	PPPPPPPP	459	4649	2.20	22.27
414	PPPPPPPP	456	5105	2.18	24.45
419	PPPPPPPP	523	5628	2.51	26.96
424	PPPPPPPP	533	6161	2.55	29.51
429	PPPPPPPP	584	6745	2.80	32.31
434	PPPPPPPP	608	7353	2.91	35.22
439	PPPPPPPP	611	7964	2.93	38.15
445	PPPPPPPP	664	8628	3.18	41.33
450	PPPPPPPP	685	9313	3.28	44.61
456	PPPPPPPP	750	10063	3.59	48.20
462	PPPPPPPP	807	10870	3.87	52.07
469	PPPPPPPP	830	11700	3.98	56.05
476	PPPPPPPP	863	12563	4.13	60.18
483	PPPPPPPP	888	13451	4.25	64.43
492	PPPPPPPP	950	14401	4.55	68.98
500	AAAAAAAAAAAAAAAA	974	15375	4.67	73.65
510	AAAAAAAAAAAAAAAA	1051	16426	5.03	78.68
522	AAAAAAAAAAAAAAAA	1044	17470	5.00	83.68
535	AAAAAAAAAAAAAAAA	968	18438	4.64	88.32
552	AAAAAAAAAAAAAAAA	910	19348	4.36	92.68
575	AAAAAAAAAAAAAAAA	762	20110	3.65	96.33
600	AAAAAAAAAAAAAAAA	766	20876	3.67	100.00

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 Frequency

Scale Score Histogram for VASOL: Spring 2004  
Grade 8: History & Social Science - Core 2  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
0	F	3	3	0.15	0.15
174		2	5	0.10	0.24
288		1	6	0.05	0.29
297	F	5	11	0.24	0.53
305	F	4	15	0.19	0.73
312	FF	8	23	0.39	1.11
319	FF	10	33	0.48	1.60
325	F	5	38	0.24	1.84
332	FFF	15	53	0.73	2.56
337	FFF	14	67	0.68	3.24
343	FFFF	19	86	0.92	4.16
349	FFFF	19	105	0.92	5.08
354	FFFFF	23	128	1.11	6.19
359	FFFFFF	30	158	1.45	7.64
364	FFFFFFF	36	194	1.74	9.39
369	FFFFFFFF	44	238	2.13	11.51
373	FFFFFFFFF	48	286	2.32	13.84
378	FFFFFFF	32	318	1.55	15.38
383	FFFFFFFFF	44	362	2.13	17.51
388	FFFFFFFFF	41	403	1.98	19.50
392	FFFFFFF	37	440	1.79	21.29
397	FFFFFFFFF	47	487	2.27	23.56
402	PPPPPPPP	43	530	2.08	25.64
407	PPPPPPPP	46	576	2.23	27.87
411	PPPPPPPP	52	628	2.52	30.38
416	PPPPPPPP	45	673	2.18	32.56
421	PPPPPPPP	41	714	1.98	34.54
426	PPPPPPPPPP	56	770	2.71	37.25
431	PPPPPPPPPP	59	829	2.85	40.11
436	PPPPPPPPPP	62	891	3.00	43.11
442	PPPPPPPPPP	65	956	3.14	46.25
447	PPPPPPPPPP	71	1027	3.43	49.69
453	PPPPPPPPPPPPPPPP	93	1120	4.50	54.18
459	PPPPPPPPPPPPPPPP	83	1203	4.02	58.20
466	PPPPPPPPPPPPPPPP	95	1298	4.60	62.80
473	PPPPPPPPPPPPPPPP	95	1393	4.60	67.39
480	PPPPPPPPPPPPPPPP	88	1481	4.26	71.65
488	PPPPPPPPPPPPPPPP	91	1572	4.40	76.05
497	PPPPPPPPPPPPPPPP	91	1663	4.40	80.45
507	AAAAAAAAAAAAAAAAA	108	1771	5.22	85.68
518	AAAAAAAAAAAAAAAAA	97	1868	4.69	90.37
532	AAAAAAAAA	66	1934	3.19	93.57
549	AAAAAAAAA	56	1990	2.71	96.27
573	AAAAAAAAA	45	2035	2.18	98.45
600	AAAAAA	32	2067	1.55	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		23	23	0.03	0.03
217		1	24	0.00	0.03
238		1	25	0.00	0.03
255		1	26	0.00	0.04
267		2	28	0.00	0.04
278		4	32	0.01	0.04
287		6	38	0.01	0.05
295		7	45	0.01	0.06
303		26	71	0.04	0.10
310		35	106	0.05	0.14
316		56	162	0.08	0.22
323	F	108	270	0.15	0.36
329	F	120	390	0.16	0.53
334	F	155	545	0.21	0.74
339	F	215	760	0.29	1.03
345	F	262	1022	0.35	1.38
350	F	282	1304	0.38	1.76
355	FF	341	1645	0.46	2.22
359	FF	408	2053	0.55	2.77
364	FF	480	2533	0.65	3.42
369	FFF	577	3110	0.78	4.20
373	FFF	639	3749	0.86	5.06
378	FFFF	749	4498	1.01	6.07
382	FFFF	797	5295	1.08	7.15
387	FFFF	891	6186	1.20	8.35
391	FFFFF	1068	7254	1.44	9.79
396	FFFFFF	1181	8435	1.59	11.39
400	PPPPPP	1263	9698	1.71	13.09
405	PPPPPPP	1438	11136	1.94	15.03
409	PPPPPPP	1498	12634	2.02	17.06
414	PPPPPPP	1676	14310	2.26	19.32
419	PPPPPPP	1812	16122	2.45	21.76
424	PPPPPPP	1963	18085	2.65	24.41
429	PPPPPPP	2128	20213	2.87	27.29
433	PPPPPPP	2314	22527	3.12	30.41
439	PPPPPPP	2390	24917	3.23	33.64
445	PPPPPPP	2870	27787	3.87	37.51
450	PPPPPPP	3023	30810	4.08	41.59
457	PPPPPPP	3155	33965	4.26	45.85
463	PPPPPPP	3424	37389	4.62	50.47
470	PPPPPPP	3639	41028	4.91	55.39
477	PPPPPPP	3878	44906	5.24	60.62
485	PPPPPPP	4068	48974	5.49	66.11
495	PPPPPPP	4266	53240	5.76	71.87
505	AAAAAAAAAAAAAAAAAAAA	4379	57619	5.91	77.78
518	AAAAAAAAAAAAAAAAAAAA	4376	61995	5.91	83.69
533	AAAAAAAAAAAAAAAAAAAA	4171	66166	5.63	89.32
555	AAAAAAAAAAAAAAAAAAAA	3708	69874	5.01	94.33
590	AAAAAAAAAAAA	2784	72658	3.76	98.09
600	AAAAAAA	1418	74076	1.91	100.00

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 1000 2000 3000 4000

Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 8: Science - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		7	7	0.07	0.07
172		1	8	0.01	0.07
246		1	9	0.01	0.08
270		3	12	0.03	0.11
279		4	16	0.04	0.15
288		4	20	0.04	0.19
296		5	25	0.05	0.23
303		7	32	0.07	0.30
310	F	11	43	0.10	0.40
316	F	24	67	0.22	0.62
322	FF	30	97	0.28	0.90
328	FF	40	137	0.37	1.28
334	FF	33	170	0.31	1.58
339	FFF	55	225	0.51	2.10
344	FFF	51	276	0.48	2.57
350	FFF	68	344	0.63	3.20
355	FFFF	79	423	0.74	3.94
360	FFFF	77	500	0.72	4.66
365	FFFFF	96	596	0.89	5.55
369	FFFFF	101	697	0.94	6.49
374	FFFFFF	119	816	1.11	7.60
379	FFFFFF	123	939	1.15	8.75
384	FFFFFFF	148	1087	1.38	10.13
388	FFFFFFF	151	1238	1.41	11.53
393	FFFFFFF	142	1380	1.32	12.86
397	FFFFFFF	191	1571	1.78	14.63
402	PPPPPPPP	213	1784	1.98	16.62
407	PPPPPPPP	208	1992	1.94	18.56
412	PPPPPPPP	256	2248	2.38	20.94
417	PPPPPPPP	209	2457	1.95	22.89
422	PPPPPPPP	280	2737	2.61	25.50
427	PPPPPPPP	293	3030	2.73	28.23
432	PPPPPPPP	295	3325	2.75	30.97
438	PPPPPPPP	329	3654	3.06	34.04
443	PPPPPPPP	348	4002	3.24	37.28
449	PPPPPPPP	423	4425	3.94	41.22
456	PPPPPPPP	437	4862	4.07	45.29
462	PPPPPPPP	479	5341	4.46	49.75
469	PPPPPPPP	519	5860	4.83	54.59
477	PPPPPPPP	558	6418	5.20	59.79
485	PPPPPPPP	509	6927	4.74	64.53
494	PPPPPPPP	611	7538	5.69	70.22
505	AAAAAAAA	656	8194	6.11	76.33
518	AAAAAAAA	663	8857	6.18	82.51
533	AAAAAAAA	623	9480	5.80	88.31
555	AAAAAAAA	570	10050	5.31	93.62
591	AAAAAAAA	466	10516	4.34	97.96
600	AAAAAAAA	219	10735	2.04	100.00

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 100 200 300 400 500 600  
 Frequency



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: English: Literature and Research - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		6	6	0.02	0.02
252		1	7	0.00	0.02
265		2	9	0.01	0.03
276		3	12	0.01	0.04
286		7	19	0.02	0.06
295		15	34	0.05	0.11
304		33	67	0.11	0.21
312		36	103	0.12	0.33
320	F	48	151	0.15	0.48
327	F	46	197	0.15	0.63
335	F	64	261	0.21	0.84
342	F	89	350	0.29	1.12
348	F	107	457	0.34	1.47
355	FF	118	575	0.38	1.84
361	FF	124	699	0.40	2.24
368	FFF	215	914	0.69	2.93
374	FFF	192	1106	0.62	3.55
380	FFF	213	1319	0.68	4.23
387	FFFF	289	1608	0.93	5.16
393	FFFF	337	1945	1.08	6.24
399	FFFFFF	413	2358	1.32	7.56
406	PPPPPP	462	2820	1.48	9.04
412	PPPPPP	558	3378	1.79	10.83
419	PPPPPPPP	664	4042	2.13	12.96
426	PPPPPPPP	858	4900	2.75	15.72
433	PPPPPPPPPP	988	5888	3.17	18.89
440	PPPPPPPPPPPP	1208	7096	3.87	22.76
448	PPPPPPPPPPPPPP	1438	8534	4.61	27.37
456	PPPPPPPPPPPPPPPP	1687	10221	5.41	32.78
464	PPPPPPPPPPPPPPPPPP	2020	12241	6.48	39.26
473	PPPPPPPPPPPPPPPPPPPP	2238	14479	7.18	46.44
483	PPPPPPPPPPPPPPPPPPPPPP	2527	17006	8.11	54.54
494	PPPPPPPPPPPPPPPPPPPPPPPP	2672	19678	8.57	63.12
506	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2773	22451	8.89	72.01
521	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2721	25172	8.73	80.74
538	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2457	27629	7.88	88.62
563	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	1983	29612	6.36	94.98
600	AAAAAAAAAAAAAAAAAAAAAAAAAAAA	1566	31178	5.02	100.00

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 600 1200 1800 2400  
 Frequency



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Algebra I - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		25	25	0.05	0.05
190		1	26	0.00	0.05
244		2	28	0.00	0.06
259		1	29	0.00	0.06
271		4	33	0.01	0.07
281		8	41	0.02	0.08
290		13	54	0.03	0.11
298		26	80	0.05	0.17
306	F	41	121	0.08	0.25
313	F	69	190	0.14	0.39
319	F	93	283	0.19	0.58
325	FF	148	431	0.31	0.89
330	FFF	207	638	0.43	1.32
336	FFF	246	884	0.51	1.83
341	FFF	259	1143	0.54	2.36
346	FFFF	286	1429	0.59	2.95
350	FFFF	336	1765	0.69	3.65
355	FFFFF	355	2120	0.73	4.38
360	FFFFF	368	2488	0.76	5.14
364	FFFFF	392	2880	0.81	5.95
369	FFFFF	453	3333	0.94	6.89
373	FFFFFF	520	3853	1.07	7.96
377	FFFFFF	538	4391	1.11	9.08
381	FFFFFFF	598	4989	1.24	10.31
385	FFFFFFF	672	5661	1.39	11.70
390	FFFFFFF	711	6372	1.47	13.17
394	FFFFFFF	756	7128	1.56	14.73
398	FFFFFFF	851	7979	1.76	16.49
402	PPPPPPPPPP	874	8853	1.81	18.30
407	PPPPPPPPPP	1009	9862	2.09	20.38
411	PPPPPPPPPP	1126	10988	2.33	22.71
416	PPPPPPPPPP	1147	12135	2.37	25.08
420	PPPPPPPPPP	1370	13505	2.83	27.91
425	PPPPPPPPPP	1416	14921	2.93	30.84
429	PPPPPPPPPP	1518	16439	3.14	33.98
435	PPPPPPPPPP	1635	18074	3.38	37.36
440	PPPPPPPPPP	1898	19972	3.92	41.28
445	PPPPPPPPPP	1935	21907	4.00	45.28
451	PPPPPPPPPP	1956	23863	4.04	49.32
457	PPPPPPPPPP	2096	25959	4.33	53.65
463	PPPPPPPPPP	2365	28324	4.89	58.54
470	PPPPPPPPPP	2340	30664	4.84	63.38
478	PPPPPPPPPP	2570	33234	5.31	68.69
486	PPPPPPPPPP	2607	35841	5.39	74.08
496	PPPPPPPPPP	2674	38515	5.53	79.60
508	AAAAAAAAAAAA	2631	41146	5.44	85.04
522	AAAAAAAAAAAA	2489	43635	5.14	90.18
542	AAAAAAAAAAAA	2225	45860	4.60	94.78
574	AAAAAAAAAAAA	1647	47507	3.40	98.19
600	AAAAAAAAAAAA	877	48384	1.81	100.00

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 600 1200 1800 2400  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Algebra I - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Percent
0		6	6	0.07	0.07
291		1	7	0.01	0.08
300		3	10	0.03	0.11
308		4	14	0.05	0.16
315	F	11	25	0.12	0.28
321	F	10	35	0.11	0.40
327	F	18	53	0.20	0.60
333	F	17	70	0.19	0.79
338	FF	34	104	0.39	1.18
344	FFF	50	154	0.57	1.75
348	FFF	51	205	0.58	2.33
353	FFFF	77	282	0.87	3.20
358	FFF	66	348	0.75	3.95
363	FFFF	75	423	0.85	4.80
367	FFFFF	90	513	1.02	5.82
372	FFFFFF	115	628	1.30	7.13
376	FFFFFFF	117	745	1.33	8.45
380	FFFFFFF	139	884	1.58	10.03
384	FFFFFFF	153	1037	1.74	11.77
388	FFFFFFF	163	1200	1.85	13.62
392	FFFFFFF	159	1359	1.80	15.42
396	FFFFFFF	190	1549	2.16	17.58
401	PPPPPPPP	198	1747	2.25	19.82
405	PPPPPPPP	186	1933	2.11	21.93
409	PPPPPPPP	193	2126	2.19	24.12
413	PPPPPPPP	223	2349	2.53	26.65
418	PPPPPPPP	231	2580	2.62	29.27
422	PPPPPPPP	239	2819	2.71	31.99
426	PPPPPPPP	240	3059	2.72	34.71
431	PPPPPPPP	269	3328	3.05	37.76
436	PPPPPPPP	283	3611	3.21	40.97
440	PPPPPPPP	281	3892	3.19	44.16
446	PPPPPPPP	277	4169	3.14	47.31
451	PPPPPPPP	319	4488	3.62	50.92
456	PPPPPPPP	348	4836	3.95	54.87
462	PPPPPPPP	343	5179	3.89	58.77
468	PPPPPPPP	349	5528	3.96	62.73
476	PPPPPPPP	354	5882	4.02	66.74
483	PPPPPPPP	396	6278	4.49	71.24
491	PPPPPPPP	409	6687	4.64	75.88
501	AAAAAAAA	405	7092	4.60	80.47
512	AAAAAAAA	467	7559	5.30	85.77
527	AAAAAAAA	443	8002	5.03	90.80
546	AAAAAAAA	399	8401	4.53	95.33
578	AAAAAAAA	275	8676	3.12	98.45
600	AAAAAA	137	8813	1.55	100.00

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 100 200 300 400  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
High School EOC: Geometry - Core 1  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Bar	Freq	Cum. Freq	Percent	Cum. Percent
0		25	25	0.04	0.04
211		3	28	0.01	0.05
263		2	30	0.00	0.05
274		6	36	0.01	0.06
284		12	48	0.02	0.09
292		16	64	0.03	0.11
301		34	98	0.06	0.18
308	F	60	158	0.11	0.28
315	F	75	233	0.13	0.42
322	F	128	361	0.23	0.65
328	F	146	507	0.26	0.91
334	FF	198	705	0.36	1.27
340	FFF	259	964	0.46	1.73
346	FFF	292	1256	0.52	2.25
352	FFF	339	1595	0.61	2.86
357	FFFF	428	2023	0.77	3.63
363	FFFF	517	2540	0.93	4.56
368	FFFFF	597	3137	1.07	5.63
373	FFFFFF	687	3824	1.23	6.86
378	FFFFFF	796	4620	1.43	8.29
384	FFFFFFF	900	5520	1.62	9.91
389	FFFFFFF	1017	6537	1.83	11.73
394	FFFFFFF	1132	7669	2.03	13.76
399	FFFFFFF	1292	8961	2.32	16.08
405	PPPPPPPPPPPP	1410	10371	2.53	18.61
410	PPPPPPPPPPPP	1483	11854	2.66	21.27
415	PPPPPPPPPPPP	1714	13568	3.08	24.35
421	PPPPPPPPPPPP	1829	15397	3.28	27.63
427	PPPPPPPPPPPP	1959	17356	3.52	31.15
433	PPPPPPPPPPPP	2123	19479	3.81	34.96
439	PPPPPPPPPPPP	2378	21857	4.27	39.22
445	PPPPPPPPPPPP	2450	24307	4.40	43.62
452	PPPPPPPPPPPP	2768	27075	4.97	48.59
459	PPPPPPPPPPPP	2942	30017	5.28	53.87
467	PPPPPPPPPPPP	2974	32991	5.34	59.20
476	PPPPPPPPPPPP	3102	36093	5.57	64.77
485	PPPPPPPPPPPP	3191	39284	5.73	70.50
496	PPPPPPPPPPPP	3343	42627	6.00	76.50
508	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	3306	45933	5.93	82.43
524	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	3166	49099	5.68	88.11
546	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2924	52023	5.25	93.36
581	AAAAAAAAAAAAAAAAAAAAAAAA	2293	54316	4.11	97.47
600	AAAAAAAAAAAA	1408	55724	2.53	100.00

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500 1000 1500 2000 2500 3000  
Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Geometry - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
0		3	3	0.03	0.03
182		2	5	0.02	0.05
239		1	6	0.01	0.06
288		2	8	0.02	0.09
296		3	11	0.03	0.12
304	F	11	22	0.12	0.24
311	F	12	34	0.13	0.36
318	F	18	52	0.19	0.56
324	F	23	75	0.25	0.80
330	FF	37	112	0.40	1.20
336	FFF	63	175	0.67	1.87
342	FFFF	73	248	0.78	2.65
347	FFFF	75	323	0.80	3.45
352	FFFFFF	112	435	1.20	4.65
358	FFFFF	101	536	1.08	5.73
363	FFFFFFF	160	696	1.71	7.44
368	FFFFFFF	158	854	1.69	9.13
373	FFFFFFF	168	1022	1.80	10.92
378	FFFFFFF	187	1209	2.00	12.92
383	FFFFFFF	210	1419	2.24	15.17
388	FFFFFFF	240	1659	2.57	17.73
393	FFFFFFF	223	1882	2.38	20.12
398	FFFFFFF	230	2112	2.46	22.58
403	PPPPPPPP	252	2364	2.69	25.27
408	PPPPPPPP	253	2617	2.70	27.97
413	PPPPPPPP	289	2906	3.09	31.06
419	PPPPPPPP	257	3163	2.75	33.81
424	PPPPPPPP	323	3486	3.45	37.26
430	PPPPPPPP	324	3810	3.46	40.73
436	PPPPPPPP	306	4116	3.27	44.00
443	PPPPPPPP	382	4498	4.08	48.08
449	PPPPPPPP	382	4880	4.08	52.16
457	PPPPPPPP	426	5306	4.55	56.72
464	PPPPPPPP	442	5748	4.72	61.44
473	PPPPPPPP	452	6200	4.83	66.27
482	PPPPPPPP	531	6731	5.68	71.95
493	PPPPPPPP	522	7253	5.58	77.53
506	AAAAAAAA	483	7736	5.16	82.69
522	AAAAAAAA	486	8222	5.20	87.89
544	AAAAAAAA	496	8718	5.30	93.19
579	AAAAAAAA	410	9128	4.38	97.57
600	AAAAAAAA	227	9355	2.43	100.00

Frequency
100
200
300
400
500

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Algebra II - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		22	22	0.08	0.08
240		1	23	0.00	0.08
252		2	25	0.01	0.09
263		6	31	0.02	0.11
272		6	37	0.02	0.13
281		11	48	0.04	0.16
288		19	67	0.07	0.23
295		36	103	0.12	0.35
302	F	39	142	0.13	0.49
309	F	56	198	0.19	0.68
315	F	69	267	0.24	0.92
321	F	63	330	0.22	1.13
326	F	70	400	0.24	1.37
332	F	93	493	0.32	1.69
337	F	88	581	0.30	1.99
342	FF	122	703	0.42	2.41
348	FF	151	854	0.52	2.93
353	FF	145	999	0.50	3.42
358	FF	151	1150	0.52	3.94
363	FFF	217	1367	0.74	4.69
368	FFF	224	1591	0.77	5.45
373	FFFF	266	1857	0.91	6.37
378	FFFF	289	2146	0.99	7.36
383	FFFFF	342	2488	1.17	8.53
388	FFFFF	366	2854	1.25	9.78
393	FFFFFF	432	3286	1.48	11.26
398	FFFFFF	484	3770	1.66	12.92
403	PPPPPPP	525	4295	1.80	14.72
408	PPPPPPP	595	4890	2.04	16.76
414	PPPPPPP	674	5564	2.31	19.07
419	PPPPPPP	734	6298	2.52	21.59
425	PPPPPPP	834	7132	2.86	24.45
431	PPPPPPP	903	8035	3.10	27.54
437	PPPPPPP	1027	9062	3.52	31.06
444	PPPPPPP	1154	10216	3.96	35.02
450	PPPPPPP	1257	11473	4.31	39.33
457	PPPPPPP	1366	12839	4.68	44.01
465	PPPPPPP	1457	14296	4.99	49.01
473	PPPPPPP	1562	15858	5.35	54.36
483	PPPPPPP	1702	17560	5.83	60.19
493	PPPPPPP	1732	19292	5.94	66.13
505	AAAAAAAAAAAAAAAAAAAAAAAA	1902	21194	6.52	72.65
519	AAAAAAAAAAAAAAAAAAAAAAAA	1919	23113	6.58	79.23
537	AAAAAAAAAAAAAAAAAAAAAAAA	1872	24985	6.42	85.65
562	AAAAAAAAAAAAAAAAAAAAAAAA	1812	26797	6.21	91.86
600	AAAAAAAAAAAAAAAAAAAAAAAA	2375	29172	8.14	100.00

-----+-----+-----+-----+  
 600      1200      1800      2400  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Algebra II - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

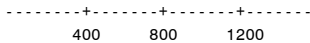
Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		4	4	0.07	0.07
270		1	5	0.02	0.09
279		4	9	0.07	0.16
287		5	14	0.09	0.24
295		5	19	0.09	0.33
301	F	11	30	0.19	0.52
309		9	39	0.16	0.67
315	F	13	52	0.22	0.90
321		9	61	0.16	1.05
327	F	19	80	0.33	1.38
332	F	24	104	0.41	1.79
338	F	24	128	0.41	2.21
343	FF	35	163	0.60	2.81
349	FF	34	197	0.59	3.40
354	FF	42	239	0.72	4.12
359	FF	42	281	0.72	4.85
364	FF	46	327	0.79	5.64
369	FFF	53	380	0.91	6.56
374	FFF	60	440	1.04	7.59
380	FFFF	90	530	1.55	9.14
385	FFFF	88	618	1.52	10.66
390	FFFF	106	724	1.83	12.49
395	FFFF	106	830	1.83	14.32
400	PPPPPP	110	940	1.90	16.22
405	PPPPPP	138	1078	2.38	18.60
411	PPPPPP	136	1214	2.35	20.94
416	PPPPPP	142	1356	2.45	23.39
422	PPPPPPPP	175	1531	3.02	26.41
427	PPPPPPPP	183	1714	3.16	29.57
433	PPPPPPPPPP	219	1933	3.78	33.34
440	PPPPPPPPPP	221	2154	3.81	37.16
446	PPPPPPPPPP	215	2369	3.71	40.87
453	PPPPPPPPPP	233	2602	4.02	44.89
460	PPPPPPPPPP	256	2858	4.42	49.30
468	PPPPPPPPPPPP	292	3150	5.04	54.34
477	PPPPPPPPPPPP	325	3475	5.61	59.94
486	PPPPPPPPPPPP	306	3781	5.28	65.22
496	PPPPPPPPPPPP	347	4128	5.99	71.21
508	AAAAAAAAAAAAAAAA	341	4469	5.88	77.09
522	AAAAAAAAAAAAAAAA	321	4790	5.54	82.63
540	AAAAAAAAAAAAAAAA	307	5097	5.30	87.92
564	AAAAAAAAAAAAAAAA	283	5380	4.88	92.81
600	AAAAAAAAAAAAAAAA	417	5797	7.19	100.00

-----+-----+-----+-----+-----+-----  
 100 200 300 400  
 Frequency

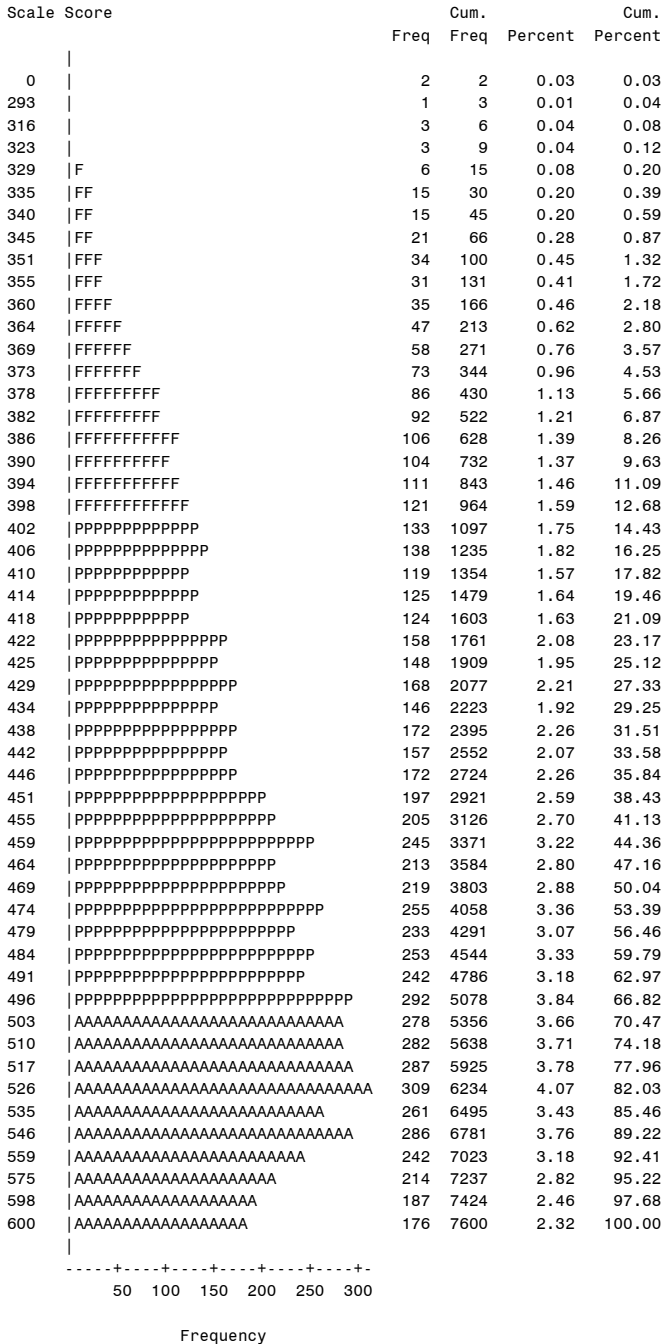


Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Virginia & US History - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		12	12	0.04	0.04
165		1	13	0.00	0.04
266		3	16	0.01	0.05
276		3	19	0.01	0.06
284		3	22	0.01	0.07
292		3	25	0.01	0.08
300		7	32	0.02	0.10
306		16	48	0.05	0.15
312	F	33	81	0.10	0.25
319	F	34	115	0.10	0.35
324	F	59	174	0.18	0.53
330	F	72	246	0.22	0.75
335	FF	109	355	0.33	1.08
340	FFF	125	480	0.38	1.46
345	FFF	172	652	0.52	1.98
350	FFF	162	814	0.49	2.48
355	FFFF	194	1008	0.59	3.07
359	FFFF	216	1224	0.66	3.72
363	FFFFF	243	1467	0.74	4.46
368	FFFFFF	291	1758	0.89	5.35
372	FFFFFF	276	2034	0.84	6.19
376	FFFFFFF	341	2375	1.04	7.22
381	FFFFFFF	328	2703	1.00	8.22
385	FFFFFFF	377	3080	1.15	9.37
389	FFFFFFF	369	3449	1.12	10.49
393	FFFFFFF	411	3860	1.25	11.74
397	FFFFFFF	411	4271	1.25	12.99
401	PPPPPPPPP	476	4747	1.45	14.44
405	PPPPPPPPP	497	5244	1.51	15.95
409	PPPPPPPPP	526	5770	1.60	17.55
413	PPPPPPPPP	557	6327	1.69	19.24
418	PPPPPPPPP	591	6918	1.80	21.04
422	PPPPPPPPP	640	7558	1.95	22.99
426	PPPPPPPPP	636	8194	1.93	24.92
430	PPPPPPPPP	729	8923	2.22	27.14
435	PPPPPPPPP	792	9715	2.41	29.55
440	PPPPPPPPP	781	10496	2.38	31.92
444	PPPPPPPPP	816	11312	2.48	34.40
449	PPPPPPPPP	875	12187	2.66	37.07
453	PPPPPPPPP	906	13093	2.76	39.82
459	PPPPPPPPP	985	14078	3.00	42.82
464	PPPPPPPPP	1044	15122	3.18	45.99
469	PPPPPPPPP	1100	16222	3.35	49.34
475	PPPPPPPPP	1182	17404	3.59	52.93
481	PPPPPPPPP	1205	18609	3.66	56.60
487	PPPPPPPPP	1296	19905	3.94	60.54
493	PPPPPPPPP	1366	21271	4.15	64.69
501	AAAAAAAAA	1421	22692	4.32	69.02
508	AAAAAAAAA	1429	24121	4.35	73.36
517	AAAAAAAAA	1529	25650	4.65	78.01
526	AAAAAAAAA	1536	27186	4.67	82.68
538	AAAAAAAAA	1449	28635	4.41	87.09
551	AAAAAAAAA	1369	30004	4.16	91.26
567	AAAAAAAAA	1194	31198	3.63	94.89
590	AAAAAAAAA	892	32090	2.71	97.60
600	AAAAAAAAA	789	32879	2.40	100.00



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Virginia & US History - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced



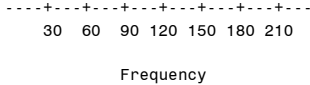
Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World History I - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		18	18	0.06	0.06
189		1	19	0.00	0.06
231		2	21	0.01	0.07
258		1	22	0.00	0.07
278		1	23	0.00	0.08
286		7	30	0.02	0.10
294		14	44	0.05	0.15
302		19	63	0.06	0.21
308	F	36	99	0.12	0.34
315	F	38	137	0.13	0.47
321	F	58	195	0.20	0.66
327	FF	84	279	0.29	0.95
333	FF	112	391	0.38	1.33
338	FFF	174	565	0.59	1.92
343	FFFF	187	752	0.64	2.56
348	FFFF	185	937	0.63	3.19
353	FFFFF	233	1170	0.79	3.98
358	FFFFF	247	1417	0.84	4.83
363	FFFFF	243	1660	0.83	5.65
368	FFFFF	283	1943	0.96	6.62
372	FFFFFF	334	2277	1.14	7.75
377	FFFFFF	336	2613	1.14	8.90
381	FFFFFF	356	2969	1.21	10.11
386	FFFFFF	411	3380	1.40	11.51
390	FFFFFF	423	3803	1.44	12.95
395	FFFFFF	414	4217	1.41	14.36
399	FFFFFF	482	4699	1.64	16.00
404	PPPPPPPPPP	538	5237	1.83	17.83
408	PPPPPPPPPP	539	5776	1.84	19.67
413	PPPPPPPPPP	591	6367	2.01	21.68
417	PPPPPPPPPP	601	6968	2.05	23.73
422	PPPPPPPPPP	703	7671	2.39	26.12
426	PPPPPPPPPP	690	8361	2.35	28.47
431	PPPPPPPPPP	729	9090	2.48	30.96
436	PPPPPPPPPP	742	9832	2.53	33.48
440	PPPPPPPPPP	763	10595	2.60	36.08
445	PPPPPPPPPP	833	11428	2.84	38.92
450	PPPPPPPPPP	890	12318	3.03	41.95
455	PPPPPPPPPP	908	13226	3.09	45.04
460	PPPPPPPPPP	936	14162	3.19	48.23
465	PPPPPPPPPP	982	15144	3.34	51.57
471	PPPPPPPPPP	1012	16156	3.45	55.02
476	PPPPPPPPPP	1046	17202	3.56	58.58
483	PPPPPPPPPP	1070	18272	3.64	62.23
489	PPPPPPPPPP	1132	19404	3.86	66.08
495	PPPPPPPPPP	1074	20478	3.66	69.74
503	AAAAAAAAAAAA	983	21461	3.35	73.09
510	AAAAAAAAAAAA	1101	22562	3.75	76.84
519	AAAAAAAAAAAA	1044	23606	3.56	80.39
528	AAAAAAAAAAAA	1052	24658	3.58	83.97
538	AAAAAAAAAAAA	997	25655	3.40	87.37
550	AAAAAAAAAAAA	955	26610	3.25	90.62
565	AAAAAAAAAAAA	858	27468	2.92	93.54
583	AAAAAAAAAAAA	784	28252	2.67	96.21
600	AAAAAAAAAAAA	1112	29364	3.79	100.00

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 400      800  
 Frequency

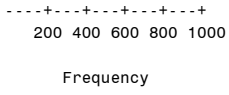
Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World History I - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.02	0.02
247		1	2	0.02	0.03
260		1	3	0.02	0.05
280		1	4	0.02	0.06
288		1	5	0.02	0.08
303	F	4	9	0.06	0.15
310	F	9	18	0.15	0.29
317	F	9	27	0.15	0.44
323	FF	14	41	0.23	0.66
328	FFF	20	61	0.32	0.99
334	FFFF	31	92	0.50	1.49
339	FFFFF	35	127	0.57	2.06
345	FFFF	32	159	0.52	2.58
350	FFFFF	39	198	0.63	3.21
355	FFFFFF	49	247	0.79	4.01
360	FFFFFFF	54	301	0.88	4.88
365	FFFFFFF	75	376	1.22	6.10
369	FFFFFFF	104	480	1.69	7.78
374	FFFFFFF	96	576	1.56	9.34
379	FFFFFFF	127	703	2.06	11.40
383	FFFFFFF	112	815	1.82	13.22
388	FFFFFFF	145	960	2.35	15.57
392	FFFFFFF	126	1086	2.04	17.61
396	FFFFFFF	156	1242	2.53	20.14
401	PPPPPPPPPPPPPPPPPPPP	173	1415	2.81	22.95
405	PPPPPPPPPPPPPPPPPP	152	1567	2.47	25.41
409	PPPPPPPPPPPPPPPPPP	146	1713	2.37	27.78
414	PPPPPPPPPPPPPPPPPP	151	1864	2.45	30.23
418	PPPPPPPPPPPPPPPPPP	137	2001	2.22	32.45
423	PPPPPPPPPPPPPPPPPP	147	2148	2.38	34.84
427	PPPPPPPPPPPPPPPPPP	166	2314	2.69	37.53
432	PPPPPPPPPPPPPPPPPP	156	2470	2.53	40.06
436	PPPPPPPPPPPPPPPPPP	174	2644	2.82	42.88
441	PPPPPPPPPPPPPPPPPP	167	2811	2.71	45.59
446	PPPPPPPPPPPPPPPPPP	152	2963	2.47	48.05
451	PPPPPPPPPPPPPPPPPP	187	3150	3.03	51.09
456	PPPPPPPPPPPPPPPPPP	183	3333	2.97	54.05
461	PPPPPPPPPPPPPPPPPP	176	3509	2.85	56.91
466	PPPPPPPPPPPPPPPPPP	201	3710	3.26	60.17
471	PPPPPPPPPPPPPPPPPP	181	3891	2.94	63.10
477	PPPPPPPPPPPPPPPPPP	190	4081	3.08	66.19
483	PPPPPPPPPPPPPPPPPP	176	4257	2.85	69.04
489	PPPPPPPPPPPPPPPPPP	170	4427	2.76	71.80
496	PPPPPPPPPPPPPPPPPP	181	4608	2.94	74.73
503	AAAAAAAAAAAAAAAAAAAA	169	4777	2.74	77.47
511	AAAAAAAAAAAAAAAAAAAA	159	4936	2.58	80.05
519	AAAAAAAAAAAAAAAAAAAA	175	5111	2.84	82.89
528	AAAAAAAAAAAAAAAAAAAA	187	5298	3.03	85.92
538	AAAAAAAAAAAAAAAAAAAA	169	5467	2.74	88.66
551	AAAAAAAAAAAAAAAAAAAA	181	5648	2.94	91.60
565	AAAAAAAAAAAAAAAAAAAA	176	5824	2.85	94.45
583	AAAAAAAAAAAAAAAAAAAA	112	5936	1.82	96.27
600	AAAAAAAAAAAAAAAAAAAA	230	6166	3.73	100.00



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World History II - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		10	10	0.04	0.04
194		1	11	0.00	0.04
251		1	12	0.00	0.04
274		1	13	0.00	0.05
283		1	14	0.00	0.05
292		10	24	0.04	0.08
300		17	41	0.06	0.14
307		18	59	0.06	0.21
313	F	45	104	0.16	0.37
320	F	64	168	0.23	0.59
326	FF	99	267	0.35	0.94
332	FFF	125	392	0.44	1.38
337	FFF	145	537	0.51	1.89
343	FFFF	194	731	0.68	2.58
348	FFFF	207	938	0.73	3.31
353	FFFFF	235	1173	0.83	4.14
358	FFFFF	261	1434	0.92	5.06
363	FFFFFF	325	1759	1.15	6.21
367	FFFFFF	322	2081	1.14	7.34
371	FFFFFFF	419	2500	1.48	8.82
376	FFFFFFF	419	2919	1.48	10.30
381	FFFFFFF	435	3354	1.53	11.83
385	FFFFFFF	472	3826	1.67	13.50
390	FFFFFFF	494	4320	1.74	15.24
394	FFFFFFF	559	4879	1.97	17.21
398	FFFFFFF	561	5440	1.98	19.19
402	PPPPPPPP	595	6035	2.10	21.29
407	PPPPPPPP	605	6640	2.13	23.43
411	PPPPPPPP	623	7263	2.20	25.62
416	PPPPPPPP	667	7930	2.35	27.98
420	PPPPPPPP	651	8581	2.30	30.27
424	PPPPPPPP	759	9340	2.68	32.95
429	PPPPPPPP	786	10126	2.77	35.73
433	PPPPPPPP	801	10927	2.83	38.55
438	PPPPPPPP	728	11655	2.57	41.12
442	PPPPPPPP	788	12443	2.78	43.90
447	PPPPPPPP	854	13297	3.01	46.91
452	PPPPPPPP	862	14159	3.04	49.95
457	PPPPPPPP	929	15088	3.28	53.23
462	PPPPPPPP	915	16003	3.23	56.46
467	PPPPPPPP	893	16896	3.15	59.61
472	PPPPPPPP	930	17826	3.28	62.89
478	PPPPPPPP	947	18773	3.34	66.23
484	PPPPPPPP	1011	19784	3.57	69.80
490	PPPPPPPP	935	20719	3.30	73.10
497	PPPPPPPP	969	21688	3.42	76.52
504	AAAAAAAA	944	22632	3.33	79.85
512	AAAAAAAA	891	23523	3.14	82.99
520	AAAAAAAA	949	24472	3.35	86.34
529	AAAAAAAA	845	25317	2.98	89.32
539	AAAAAAAA	717	26034	2.53	91.85
551	AAAAAAAA	675	26709	2.38	94.23
565	AAAAAAAA	575	27284	2.03	96.26
582	AAAAAAAA	498	27782	1.76	98.02
600	AAAAAAAA	562	28344	1.98	100.00



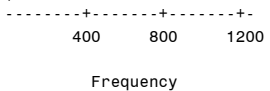
Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World History II - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
253		1	1	0.02	0.02
311		3	4	0.06	0.08
318	F	9	13	0.18	0.26
324	F	7	20	0.14	0.40
330	F	8	28	0.16	0.56
336	FF	14	42	0.28	0.84
342	FF	15	57	0.30	1.14
347	FF	14	71	0.28	1.41
352	FFF	21	92	0.42	1.83
357	FFFF	30	122	0.60	2.43
362	FFFFF	37	159	0.74	3.17
367	FFFFFF	44	203	0.88	4.05
372	FFFFFF	42	245	0.84	4.88
376	FFFFFFF	49	294	0.98	5.86
381	FFFFFFF	63	357	1.26	7.11
385	FFFFFFF	73	430	1.45	8.57
390	FFFFFFF	96	526	1.91	10.48
394	FFFFFFF	81	607	1.61	12.10
399	FFFFFFF	101	708	2.01	14.11
403	PPPPPPPPPP	107	815	2.13	16.24
407	PPPPPPPPPP	116	931	2.31	18.55
412	PPPPPPPPPP	114	1045	2.27	20.83
416	PPPPPPPPPP	128	1173	2.55	23.38
421	PPPPPPPPPP	127	1300	2.53	25.91
425	PPPPPPPPPP	123	1423	2.45	28.36
429	PPPPPPPPPP	123	1546	2.45	30.81
434	PPPPPPPPPP	130	1676	2.59	33.40
438	PPPPPPPPPP	118	1794	2.35	35.75
443	PPPPPPPPPP	137	1931	2.73	38.48
447	PPPPPPPPPP	135	2066	2.69	41.17
452	PPPPPPPPPP	140	2206	2.79	43.96
457	PPPPPPPPPP	148	2354	2.95	46.91
462	PPPPPPPPPP	151	2505	3.01	49.92
467	PPPPPPPPPP	166	2671	3.31	53.23
473	PPPPPPPPPP	158	2829	3.15	56.38
478	PPPPPPPPPP	179	3008	3.57	59.94
484	PPPPPPPPPP	169	3177	3.37	63.31
490	PPPPPPPPPP	181	3358	3.61	66.92
496	PPPPPPPPPP	172	3530	3.43	70.35
502	AAAAAAAAAAAA	175	3705	3.49	73.83
510	AAAAAAAAAAAA	206	3911	4.11	77.94
517	AAAAAAAAAAAA	167	4078	3.33	81.27
526	AAAAAAAAAAAA	176	4254	3.51	84.77
534	AAAAAAAAAAAA	146	4400	2.91	87.68
545	AAAAAAAAAAAA	143	4543	2.85	90.53
557	AAAAAAAAAAAA	142	4685	2.83	93.36
571	AAAAAAAAAAAA	134	4819	2.67	96.03
589	AAAAAAAAAAAA	94	4913	1.87	97.91
600	AAAAAAAAAAAA	105	5018	2.09	100.00

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 30 60 90 120 150 180  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Earth Science - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0	F	32	32	0.12	0.12
164		1	33	0.00	0.13
201		1	34	0.00	0.13
223		2	36	0.01	0.14
263		2	38	0.01	0.15
273		4	42	0.02	0.16
281		12	54	0.05	0.21
289	F	28	82	0.11	0.32
296	F	38	120	0.15	0.46
302	F	52	172	0.20	0.66
309	FF	82	254	0.32	0.98
314	FF	114	368	0.44	1.42
320	FFF	157	525	0.61	2.03
325	FFFF	188	713	0.73	2.76
330	FFFFF	234	947	0.90	3.66
335	FFFFFF	252	1199	0.97	4.63
340	FFFFFF	298	1497	1.15	5.79
344	FFFFFF	332	1829	1.28	7.07
349	FFFFFF	364	2193	1.41	8.48
354	FFFFFF	420	2613	1.62	10.10
358	FFFFFF	442	3055	1.71	11.81
362	FFFFFF	460	3515	1.78	13.59
367	FFFFFF	519	4034	2.01	15.59
371	FFFFFF	541	4575	2.09	17.68
376	FFFFFF	568	5143	2.20	19.88
380	FFFFFF	652	5795	2.52	22.40
384	FFFFFF	633	6428	2.45	24.85
389	FFFFFF	655	7083	2.53	27.38
394	FFFFFF	669	7752	2.59	29.96
398	FFFFFF	719	8471	2.78	32.74
403	P	777	9248	3.00	35.75
407	P	773	10021	2.99	38.73
413	P	847	10868	3.27	42.01
417	P	890	11758	3.44	45.45
423	P	886	12644	3.42	48.87
428	P	1015	13659	3.92	52.79
434	P	1004	14663	3.88	56.68
440	P	1130	15793	4.37	61.04
446	P	1188	16981	4.59	65.63
454	P	1194	18175	4.62	70.25
461	P	1264	19439	4.89	75.14
470	P	1232	20671	4.76	79.90
479	P	1228	21899	4.75	84.64
490	P	1137	23036	4.39	89.04
502	A	979	24015	3.78	92.82
518	A	838	24853	3.24	96.06
541	A	575	25428	2.22	98.28
578	A	325	25753	1.26	99.54
600	AA	119	25872	0.46	100.00



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Earth Science - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		7	7	0.07	0.07
219		1	8	0.01	0.08
270		2	10	0.02	0.10
278		1	11	0.01	0.11
286		8	19	0.08	0.20
294	F	11	30	0.11	0.31
300	F	19	49	0.20	0.51
306	F	24	73	0.25	0.76
313	F	29	102	0.30	1.06
319	FF	45	147	0.47	1.53
324	FF	48	195	0.50	2.03
330	FFF	60	255	0.62	2.65
335	FFFF	70	325	0.73	3.38
340	FFFF	88	413	0.91	4.29
345	FFFFF	105	518	1.09	5.39
350	FFFFFF	112	630	1.16	6.55
355	FFFFFFF	137	767	1.42	7.97
359	FFFFFFF	154	921	1.60	9.58
364	FFFFFFF	177	1098	1.84	11.42
369	FFFFFFF	217	1315	2.26	13.67
374	FFFFFFF	224	1539	2.33	16.00
378	FFFFFFF	234	1773	2.43	18.43
383	FFFFFFF	270	2043	2.81	21.24
387	FFFFFFF	294	2337	3.06	24.30
392	FFFFFFF	292	2629	3.04	27.33
397	FFFFFFF	307	2936	3.19	30.53
402	PPPPPPPPPPPPPPPP	333	3269	3.46	33.99
407	PPPPPPPPPPPPPPPP	327	3596	3.40	37.39
412	PPPPPPPPPPPPPPPP	372	3968	3.87	41.26
417	PPPPPPPPPPPPPPPP	328	4296	3.41	44.67
422	PPPPPPPPPPPPPPPP	338	4634	3.51	48.18
428	PPPPPPPPPPPPPPPP	353	4987	3.67	51.85
434	PPPPPPPPPPPPPPPP	365	5352	3.79	55.65
440	PPPPPPPPPPPPPPPP	358	5710	3.72	59.37
446	PPPPPPPPPPPPPPPP	407	6117	4.23	63.60
453	PPPPPPPPPPPPPPPP	457	6574	4.75	68.35
460	PPPPPPPPPPPPPPPP	395	6969	4.11	72.46
468	PPPPPPPPPPPPPPPP	489	7458	5.08	77.54
476	PPPPPPPPPPPPPPPP	437	7895	4.54	82.09
486	PPPPPPPPPPPPPPPP	428	8323	4.45	86.54
497	PPPPPPPPPPPPPPPP	368	8691	3.83	90.36
510	AAAAAAAAAAAAAAAA	339	9030	3.52	93.89
527	AAAAAAAAAAAAAAAA	270	9300	2.81	96.69
549	AAAAAAAA	184	9484	1.91	98.61
586	AAAAA	106	9590	1.10	99.71
600	A	28	9618	0.29	100.00

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 100 200 300 400  
 Frequency

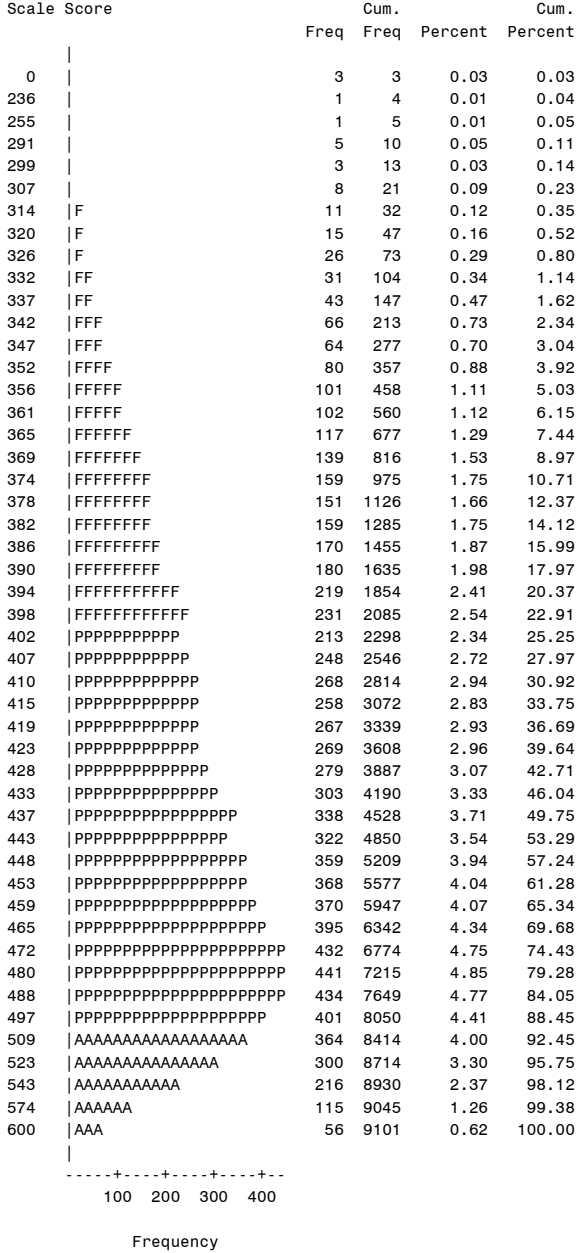


Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Biology - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		21	21	0.05	0.05
206		1	22	0.00	0.05
238		1	23	0.00	0.06
271		2	25	0.00	0.06
291		4	29	0.01	0.07
300		4	33	0.01	0.08
307		8	41	0.02	0.10
314		11	52	0.03	0.13
320		36	88	0.09	0.21
326	F	47	135	0.11	0.33
331	F	65	200	0.16	0.48
336	F	91	291	0.22	0.71
342	FF	124	415	0.30	1.01
346	FF	162	577	0.39	1.40
351	FF	174	751	0.42	1.82
355	FFFF	263	1014	0.64	2.46
360	FFFF	318	1332	0.77	3.23
364	FFFFF	346	1678	0.84	4.07
368	FFFFF	356	2034	0.86	4.93
372	FFFFFF	485	2519	1.18	6.10
377	FFFFFFF	536	3055	1.30	7.40
381	FFFFFFF	607	3662	1.47	8.87
385	FFFFFFF	743	4405	1.80	10.67
389	FFFFFFF	794	5199	1.92	12.60
393	FFFFFFF	829	6028	2.01	14.60
397	FFFFFFF	903	6931	2.19	16.79
401	PPPPPPPPPPPP	1020	7951	2.47	19.26
405	PPPPPPPPPPPP	1089	9040	2.64	21.90
409	PPPPPPPPPPPP	1217	10257	2.95	24.85
413	PPPPPPPPPPPP	1259	11516	3.05	27.90
418	PPPPPPPPPPPP	1376	12892	3.33	31.24
422	PPPPPPPPPPPP	1504	14396	3.64	34.88
426	PPPPPPPPPPPP	1620	16016	3.92	38.80
431	PPPPPPPPPPPP	1774	17790	4.30	43.10
436	PPPPPPPPPPPP	1886	19676	4.57	47.67
441	PPPPPPPPPPPP	1884	21560	4.56	52.24
446	PPPPPPPPPPPP	2004	23564	4.86	57.09
452	PPPPPPPPPPPP	1979	25543	4.79	61.89
458	PPPPPPPPPPPP	2064	27607	5.00	66.89
464	PPPPPPPPPPPP	2108	29715	5.11	71.99
471	PPPPPPPPPPPP	2070	31785	5.02	77.01
478	PPPPPPPPPPPP	1941	33726	4.70	81.71
486	PPPPPPPPPPPP	1886	35612	4.57	86.28
496	PPPPPPPPPPPP	1734	37346	4.20	90.48
507	AAAAAAAAAAAAAAAA	1471	38817	3.56	94.05
521	AAAAAAAAAAAAAAAA	1161	39978	2.81	96.86
540	AAAAAAAAAA	789	40767	1.91	98.77
572	AAAAA	401	41168	0.97	99.74
600	A	106	41274	0.26	100.00

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 600      1200      1800  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
High School EOC: Biology - Core 2  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced



Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: Chemistry - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		14	14	0.06	0.06
200		1	15	0.00	0.06
291		2	17	0.01	0.07
300		1	18	0.00	0.08
308		6	24	0.03	0.10
315		12	36	0.05	0.15
322	F	26	62	0.11	0.27
328	F	38	100	0.16	0.43
333	F	38	138	0.16	0.59
339	F	62	200	0.27	0.86
345	FF	91	291	0.39	1.25
350	FF	112	403	0.48	1.73
355	FFF	146	549	0.63	2.36
360	FF	123	672	0.53	2.88
364	FFF	167	839	0.72	3.60
369	FFFF	204	1043	0.88	4.48
373	FFFFF	228	1271	0.98	5.46
378	FFFFF	265	1536	1.14	6.59
382	FFFFFF	292	1828	1.25	7.85
386	FFFFFFF	363	2191	1.56	9.41
391	FFFFFFF	396	2587	1.70	11.11
395	FFFFFFF	419	3006	1.80	12.90
399	FFFFFFF	491	3497	2.11	15.01
404	PPPPPPPP	531	4028	2.28	17.29
408	PPPPPPPP	583	4611	2.50	19.79
412	PPPPPPPP	630	5241	2.70	22.50
417	PPPPPPPP	704	5945	3.02	25.52
422	PPPPPPPP	771	6716	3.31	28.83
426	PPPPPPPP	842	7558	3.61	32.45
431	PPPPPPPP	884	8442	3.79	36.24
436	PPPPPPPP	1002	9444	4.30	40.54
441	PPPPPPPP	1048	10492	4.50	45.04
445	PPPPPPPP	1097	11589	4.71	49.75
451	PPPPPPPP	1182	12771	5.07	54.83
456	PPPPPPPP	1125	13896	4.83	59.65
463	PPPPPPPP	1185	15081	5.09	64.74
469	PPPPPPPP	1169	16250	5.02	69.76
475	PPPPPPPP	1120	17370	4.81	74.57
483	PPPPPPPP	1094	18464	4.70	79.27
491	PPPPPPPP	1013	19477	4.35	83.61
499	PPPPPPPP	945	20422	4.06	87.67
509	AAAAAAAA	849	21271	3.64	91.32
521	AAAAAAAA	728	21999	3.13	94.44
536	AAAAAAAA	570	22569	2.45	96.89
556	AAAAAAA	385	22954	1.65	98.54
588	AAAAA	246	23200	1.06	99.60
600	AA	94	23294	0.40	100.00

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 400 800 1200  
 Frequency

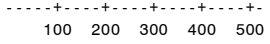
Scale Score Histogram for VASOL: Spring 2004  
High School EOC: Chemistry - Core 2  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	1	1	0.02	0.02
309	1	2	0.02	0.04
316	2	4	0.04	0.08
323	1	5	0.02	0.10
330	1	6	0.02	0.12
336	F	6	0.12	0.24
342	F	8	0.16	0.40
347	FF	12	0.24	0.64
352	FF	18	0.36	1.00
358	FFF	21	0.42	1.42
363	FFF	21	0.42	1.84
367	FFFF	32	0.64	2.47
372	FFFFF	41	0.82	3.29
376	FFFFFF	44	0.88	4.17
381	FFFFFFF	53	1.06	5.23
385	FFFFF	40	0.80	6.03
390	FFFFFFF	63	1.26	7.28
394	FFFFFFFFF	84	1.68	8.96
398	FFFFFFFFF	85	1.70	10.66
402	PPPPPPPPPP	94	1.88	12.53
406	PPPPPPPPPPPP	118	2.35	14.89
411	PPPPPPPPPPPPPP	148	2.95	17.84
415	PPPPPPPPPPPPPP	133	2.65	20.49
419	PPPPPPPPPPPPPPPP	163	3.25	23.75
424	PPPPPPPPPPPPPPPP	148	2.95	26.70
428	PPPPPPPPPPPPPPPPPP	192	3.83	30.53
432	PPPPPPPPPPPPPPPPPP	184	3.67	34.20
437	PPPPPPPPPPPPPPPPPP	207	4.13	38.34
442	PPPPPPPPPPPPPPPPPP	229	4.57	42.91
447	PPPPPPPPPPPPPPPPPP	250	4.99	47.89
452	PPPPPPPPPPPPPPPPPP	253	5.05	52.94
457	PPPPPPPPPPPPPPPPPP	270	5.39	58.33
463	PPPPPPPPPPPPPPPPPP	256	5.11	63.44
469	PPPPPPPPPPPPPPPPPP	260	5.19	68.63
475	PPPPPPPPPPPPPPPPPP	237	4.73	73.36
482	PPPPPPPPPPPPPPPPPP	221	4.41	77.77
490	PPPPPPPPPPPPPPPPPP	220	4.39	82.16
498	PPPPPPPPPPPPPPPPPP	199	3.97	86.13
508	AAAAAAAAAAAAAAAA	188	3.75	89.88
519	AAAAAAAAAAAAAAAA	176	3.51	93.39
533	AAAAAAAAAAAAAAAA	157	3.13	96.53
553	AAAAAAAA	84	1.68	98.20
585	AAAAAAA	71	1.42	99.62
600	AAA	19	0.38	100.00

Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World Geography - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

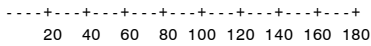
Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		7	7	0.05	0.05
195		2	9	0.01	0.07
211		1	10	0.01	0.07
259		3	13	0.02	0.09
267		3	16	0.02	0.12
276		4	20	0.03	0.15
284	F	15	35	0.11	0.25
291	F	10	45	0.07	0.33
298	F	23	68	0.17	0.49
305	FF	32	100	0.23	0.73
311	FFFF	70	170	0.51	1.23
318	FFFF	82	252	0.59	1.83
324	FFFFF	97	349	0.70	2.53
330	FFFFFF	123	472	0.89	3.42
336	FFFFFFF	140	612	1.02	4.44
341	FFFFFFF	153	765	1.11	5.55
346	FFFFFFF	175	940	1.27	6.82
352	FFFFFFF	197	1137	1.43	8.24
357	FFFFFFF	253	1390	1.83	10.08
363	FFFFFFF	242	1632	1.75	11.83
367	FFFFFFF	253	1885	1.83	13.67
373	FFFFFFF	280	2165	2.03	15.70
378	FFFFFFF	287	2452	2.08	17.78
383	FFFFFFF	331	2783	2.40	20.18
388	FFFFFFF	293	3076	2.12	22.30
393	FFFFFFF	306	3382	2.22	24.52
398	FFFFFFF	358	3740	2.60	27.12
403	PPPPPPPPPPPPPPPP	358	4098	2.60	29.72
408	PPPPPPPPPPPPPPPP	342	4440	2.48	32.19
413	PPPPPPPPPPPPPPPP	350	4790	2.54	34.73
419	PPPPPPPPPPPPPPPP	405	5195	2.94	37.67
424	PPPPPPPPPPPPPPPP	392	5587	2.84	40.51
429	PPPPPPPPPPPPPPPP	412	5999	2.99	43.50
435	PPPPPPPPPPPPPPPP	427	6426	3.10	46.60
440	PPPPPPPPPPPPPPPP	418	6844	3.03	49.63
446	PPPPPPPPPPPPPPPP	417	7261	3.02	52.65
452	PPPPPPPPPPPPPPPP	464	7725	3.36	56.01
458	PPPPPPPPPPPPPPPP	471	8196	3.42	59.43
464	PPPPPPPPPPPPPPPP	482	8678	3.50	62.93
471	PPPPPPPPPPPPPPPP	452	9130	3.28	66.20
477	PPPPPPPPPPPPPPPP	421	9551	3.05	69.26
484	PPPPPPPPPPPPPPPP	519	10070	3.76	73.02
492	PPPPPPPPPPPPPPPP	480	10550	3.48	76.50
500	AAAAAAAAAAAAAAAA	454	11004	3.29	79.79
507	AAAAAAAAAAAAAAAA	510	11514	3.70	83.49
517	AAAAAAAAAAAAAAAA	395	11909	2.86	86.35
527	AAAAAAAAAAAAAAAA	396	12305	2.87	89.22
537	AAAAAAAAAAAAAAAA	364	12669	2.64	91.86
550	AAAAAAAAAAAAAAAA	299	12968	2.17	94.03
563	AAAAAAAAAAAAAAAA	282	13250	2.04	96.08
580	AAAAAAAAAAAA	214	13464	1.55	97.63
600	AAAAAAAAAAAA	327	13791	2.37	100.00



Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School EOC: World Geography - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0	F	3	3	0.06	0.06
222		1	4	0.02	0.08
258		1	5	0.02	0.10
267		2	7	0.04	0.14
275	F	4	11	0.08	0.22
284	F	4	15	0.08	0.30
291	FF	10	25	0.20	0.50
298	FFF	17	42	0.34	0.84
305	FFF	14	56	0.28	1.12
312	FFFFF	31	87	0.62	1.74
318	FFFF	22	109	0.44	2.18
324	FFFFF	32	141	0.64	2.81
330	FFFFFF	37	178	0.74	3.55
335	FFFFFFFF	54	232	1.08	4.63
341	FFFFFFFF	47	279	0.94	5.57
347	FFFFFFFF	50	329	1.00	6.57
352	FFFFFFFF	78	407	1.56	8.12
356	FFFFFFFF	92	499	1.84	9.96
362	FFFFFFFF	61	560	1.22	11.18
367	FFFFFFFF	94	654	1.88	13.05
372	FFFFFFFF	89	743	1.78	14.83
377	FFFFFFFF	101	844	2.02	16.85
381	FFFFFFFF	90	934	1.80	18.64
387	FFFFFFFF	110	1044	2.20	20.84
391	FFFFFFFF	118	1162	2.36	23.19
397	FFFFFFFF	116	1278	2.32	25.51
401	P	123	1401	2.46	27.96
406	P	129	1530	2.57	30.54
411	P	123	1653	2.46	32.99
416	P	138	1791	2.75	35.75
422	P	133	1924	2.65	38.40
427	P	119	2043	2.38	40.78
432	P	138	2181	2.75	43.53
437	P	156	2337	3.11	46.65
443	P	141	2478	2.81	49.46
448	P	156	2634	3.11	52.57
454	P	159	2793	3.17	55.75
460	P	158	2951	3.15	58.90
466	P	181	3132	3.61	62.51
472	P	170	3302	3.39	65.91
479	P	141	3443	2.81	68.72
485	P	170	3613	3.39	72.12
493	P	170	3783	3.39	75.51
500	A	164	3947	3.27	78.78
508	A	181	4128	3.61	82.40
517	A	169	4297	3.37	85.77
527	A	143	4440	2.85	88.62
537	A	126	4566	2.51	91.14
549	A	123	4689	2.46	93.59
563	A	107	4796	2.14	95.73
579	A	87	4883	1.74	97.47
600	A	127	5010	2.53	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade:5 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		5	5	0.01	0.01
44		2	7	0.00	0.01
86		3	10	0.01	0.02
100		4	14	0.01	0.03
169		1	15	0.00	0.03
204		1	16	0.00	0.03
226		3	19	0.01	0.04
242		4	23	0.01	0.05
255		8	31	0.02	0.07
266		10	41	0.02	0.09
276		9	50	0.02	0.11
284		12	62	0.03	0.13
292		17	79	0.04	0.17
300		25	104	0.05	0.22
308		37	141	0.08	0.30
315		32	173	0.07	0.36
323		53	226	0.11	0.48
330		74	300	0.16	0.63
337		67	367	0.14	0.77
344	F	101	468	0.21	0.99
352	F	164	632	0.35	1.33
359	F	223	855	0.47	1.80
367	FF	321	1176	0.68	2.48
374	FF	459	1635	0.97	3.44
382	FFF	588	2223	1.24	4.68
390	FFFF	811	3034	1.71	6.39
398	FFFFF	1098	4132	2.31	8.70
406	PPPPPP	1477	5609	3.11	11.81
414	PPPPPPPP	1999	7608	4.21	16.02
423	PPPPPPPPPP	2499	10107	5.26	21.28
431	PPPPPPPPPPPP	3038	13145	6.40	27.67
441	PPPPPPPPPPPPPP	3475	16620	7.32	34.99
451	PPPPPPPPPPPPPPPP	4004	20624	8.43	43.41
463	PPPPPPPPPPPPPPPPPP	4432	25056	9.33	52.74
476	PPPPPPPPPPPPPPPPPPPP	4764	29820	10.03	62.77
492	PPPPPPPPPPPPPPPPPPPPPP	4729	34549	9.95	72.73
511	AAAAAAAAAAAAAAAAAAAA	4469	39018	9.41	82.13
536	AAAAAAAAAAAAAAAAAAAA	3518	42536	7.41	89.54
565	AAAAAAAAAAAA	1923	44459	4.05	93.59
600	AAAAAAAAAAAA	3046	47505	6.41	100.00

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 1000 2000 3000 4000  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade:5 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		3	3	0.01	0.01
92		1	4	0.00	0.02
107		2	6	0.01	0.03
175		1	7	0.00	0.03
212		3	10	0.01	0.04
235		4	14	0.02	0.06
252		1	15	0.00	0.07
266		5	20	0.02	0.09
277		6	26	0.03	0.12
288		8	34	0.04	0.15
297		11	45	0.05	0.20
306		16	61	0.07	0.27
314		20	81	0.09	0.36
322		33	114	0.15	0.51
329		34	148	0.15	0.66
336	F	41	189	0.18	0.84
343	F	73	262	0.33	1.17
350	F	92	354	0.41	1.58
357	F	103	457	0.46	2.04
364	FF	171	628	0.76	2.81
372	FFF	204	832	0.91	3.72
379	FFFF	285	1117	1.27	4.99
387	FFFFF	384	1501	1.72	6.71
394	FFFFFF	529	2030	2.36	9.07
403	PPPPPPPP	698	2728	3.12	12.19
411	PPPPPPPPPP	885	3613	3.95	16.14
420	PPPPPPPPPPPP	1157	4770	5.17	21.31
429	PPPPPPPPPPPPPP	1447	6217	6.46	27.77
439	PPPPPPPPPPPPPPPP	1638	7855	7.32	35.09
450	PPPPPPPPPPPPPPPPPP	1952	9807	8.72	43.81
461	PPPPPPPPPPPPPPPPPPPP	2140	11947	9.56	53.37
473	PPPPPPPPPPPPPPPPPPPPPP	2160	14107	9.65	63.02
486	PPPPPPPPPPPPPPPPPPPPPP	2019	16126	9.02	72.04
501	AAAAAAAAAAAAAAAAAAAA	1575	17701	7.04	79.07
517	AAAAAAAAAAAAAAAAAAAA	1426	19127	6.37	85.44
536	AAAAAAAAAAAAAAAAAAAA	1094	20221	4.89	90.33
558	AAAAAAAAAAAA	864	21085	3.86	94.19
588	AAAAAA	459	21544	2.05	96.24
600	AAAAAAAAAAAA	842	22386	3.76	100.00

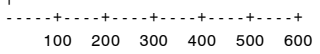
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 600 1200 1800  
 Frequency



Scale Score Histogram for VASOL: Spring 2004  
Grade:5 English: Writing  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 2 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.01	0.01
56		1	2	0.01	0.02
73		5	7	0.06	0.08
90		1	8	0.01	0.09
107		7	15	0.08	0.18
124		5	20	0.06	0.23
191		2	22	0.02	0.26
226		6	28	0.07	0.33
247		9	37	0.11	0.43
263	F	23	60	0.27	0.70
277	F	23	83	0.27	0.97
287	FF	37	120	0.43	1.41
297	FF	41	161	0.48	1.89
306	FF	45	206	0.53	2.42
314	FFFF	77	283	0.90	3.32
322	FFF	68	351	0.80	4.12
329	FFFFF	92	443	1.08	5.20
336	FFFFF	108	551	1.27	6.47
343	FFFFF	124	675	1.46	7.93
349	FFFFFF	158	833	1.86	9.78
356	FFFFFF	159	992	1.87	11.65
362	FFFFFFF	210	1202	2.47	14.11
369	FFFFFFF	243	1445	2.85	16.97
376	FFFFFFF	249	1694	2.92	19.89
383	FFFFFFF	301	1995	3.53	23.43
390	FFFFFFF	382	2377	4.49	27.91
397	FFFFFFF	411	2788	4.83	32.74
405	PPPPPPPPPPPPPPPPPPPP	501	3289	5.88	38.62
412	PPPPPPPPPPPPPPPPPPPP	495	3784	5.81	44.43
420	PPPPPPPPPPPPPPPPPPPP	517	4301	6.07	50.50
428	PPPPPPPPPPPPPPPPPPPP	595	4896	6.99	57.49
437	PPPPPPPPPPPPPPPPPPPP	562	5458	6.60	64.09
446	PPPPPPPPPPPPPPPPPPPP	526	5984	6.18	70.27
455	PPPPPPPPPPPPPPPPPPPP	526	6510	6.18	76.44
466	PPPPPPPPPPPPPPPPPPPP	475	6985	5.58	82.02
477	PPPPPPPPPPPPPPPPPPPP	386	7371	4.53	86.55
491	PPPPPPPPPPPPPPPPPPPP	365	7736	4.29	90.84
506	AAAAAAAAAAAA	275	8011	3.23	94.07
526	AAAAAAAAAAAA	207	8218	2.43	96.50
551	AAAAAA	125	8343	1.47	97.97
582	AAAA	82	8425	0.96	98.93
600	AAAAA	91	8516	1.07	100.00



Frequency

Scale Score Histogram for VASOL: Spring 2004  
Grade:5 English: Writing  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 2 Writing Prompt 2

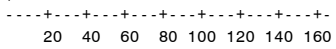
Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
0		3	3	0.09	0.09
94		1	4	0.03	0.12
109		2	6	0.06	0.18
176		2	8	0.06	0.24
212		3	11	0.09	0.34
234		1	12	0.03	0.37
250		3	15	0.09	0.46
263	F	4	19	0.12	0.58
275		3	22	0.09	0.67
285	F	4	26	0.12	0.79
294	F	8	34	0.24	1.04
302	F	11	45	0.34	1.37
310	FF	13	58	0.40	1.77
318	FF	13	71	0.40	2.17
325	FF	13	84	0.40	2.56
333	FFF	25	109	0.76	3.33
340	FFF	23	132	0.70	4.03
347	FFFFF	42	174	1.28	5.31
354	FFFFF	41	215	1.25	6.56
362	FFFFFFF	57	272	1.74	8.30
369	FFFFFFF	64	336	1.95	10.26
377	FFFFFFF	59	395	1.80	12.06
385	FFFFFFF	83	478	2.53	14.59
393	FFFFFFFFF	111	589	3.39	17.98
401	PPPPPPPPPPPPPPPPPP	154	743	4.70	22.68
410	PPPPPPPPPPPPPPPPPP	161	904	4.91	27.59
420	PPPPPPPPPPPPPPPPPP	188	1092	5.74	33.33
430	PPPPPPPPPPPPPPPPPP	233	1325	7.11	40.45
441	PPPPPPPPPPPPPPPPPP	245	1570	7.48	47.92
452	PPPPPPPPPPPPPPPPPP	250	1820	7.63	55.56
464	PPPPPPPPPPPPPPPPPP	261	2081	7.97	63.52
477	PPPPPPPPPPPPPPPPPP	254	2335	7.75	71.28
491	PPPPPPPPPPPPPPPPPP	226	2561	6.90	78.17
505	AAAAAAAAAAAAAAAAAAAA	193	2754	5.89	84.07
522	AAAAAAAAAAAAAAAAAAAA	135	2889	4.12	88.19
540	AAAAAAAAAAAAAAAAAAAA	120	3009	3.66	91.85
562	AAAAAAAAAAAAA	88	3097	2.69	94.54
589	AAAAAAA	56	3153	1.71	96.25
600	AAAAAAAAAAAAAAAAAAAA	123	3276	3.75	100.00

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30 60 90 120 150 180 210 240  
Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade:5 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 3 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.06	0.06
241		1	2	0.06	0.12
280		1	3	0.06	0.18
290		1	4	0.06	0.24
314	F	3	7	0.18	0.41
322	F	3	10	0.18	0.59
329		2	12	0.12	0.71
336	F	4	16	0.24	0.94
343	F	3	19	0.18	1.12
350	F	6	25	0.35	1.47
356	FF	10	35	0.59	2.06
364	FFFF	18	53	1.06	3.11
371	FFF	14	67	0.82	3.94
378	FFFFF	23	90	1.35	5.29
385	FFFFF	24	114	1.41	6.70
393	FFFFFFFF	43	157	2.53	9.22
401	PPPPPPPPPP	53	210	3.11	12.34
409	PPPPPPPPPPPP	65	275	3.82	16.16
417	PPPPPPPPPPPPPP	76	351	4.47	20.62
426	PPPPPPPPPPPPPPPP	91	442	5.35	25.97
435	PPPPPPPPPPPPPPPP	91	533	5.35	31.32
444	PPPPPPPPPPPPPPPPPP	118	651	6.93	38.25
454	PPPPPPPPPPPPPPPPPPPP	130	781	7.64	45.89
466	PPPPPPPPPPPPPPPPPPPP	128	909	7.52	53.41
478	PPPPPPPPPPPPPPPPPPPP	133	1042	7.81	61.22
492	PPPPPPPPPPPPPPPPPPPPPP	167	1209	9.81	71.03
510	AAAAAAAAAAAAAAAAAAAAAAAA	153	1362	8.99	80.02
531	AAAAAAAAAAAAAAAAAAAAAAAA	121	1483	7.11	87.13
557	AAAAAAAAAAAAAAAAAAAAA	83	1566	4.88	92.01
586	AAAAAAAAA	45	1611	2.64	94.65
600	AAAAAAAAAAAAAAAAAAAAA	91	1702	5.35	100.00



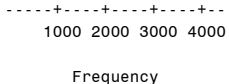
Frequency



Scale Score Histogram for VASOL: Spring 2004  
Grade:8 English: Writing  
Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		7	7	0.01	0.01
90		1	8	0.00	0.02
112		2	10	0.00	0.02
134		5	15	0.01	0.03
156		6	21	0.01	0.04
209		8	29	0.02	0.06
236		3	32	0.01	0.06
252		10	42	0.02	0.08
264		19	61	0.04	0.12
274		19	80	0.04	0.16
282		33	113	0.06	0.22
291		22	135	0.04	0.26
298		52	187	0.10	0.37
305		56	243	0.11	0.48
312		77	320	0.15	0.63
319		99	419	0.19	0.82
325	F	130	549	0.25	1.07
332	F	160	709	0.31	1.39
338	F	234	943	0.46	1.85
345	FF	338	1281	0.66	2.51
351	FF	392	1673	0.77	3.28
358	FF	489	2162	0.96	4.23
364	FFF	691	2853	1.35	5.59
370	FFFF	795	3648	1.56	7.14
377	FFFFF	1038	4686	2.03	9.18
383	FFFFFF	1339	6025	2.62	11.80
389	FFFFFFF	1668	7693	3.27	15.06
396	FFFFFFF	1948	9641	3.81	18.88
403	PPPPPPPPPP	2387	12028	4.67	23.55
411	PPPPPPPPPP	2694	14722	5.28	28.83
418	PPPPPPPPPP	3185	17907	6.24	35.06
426	PPPPPPPPPP	3731	21638	7.31	42.37
435	PPPPPPPPPP	4031	25669	7.89	50.26
444	PPPPPPPPPP	4114	29783	8.06	58.32
454	PPPPPPPPPP	4319	34102	8.46	66.77
465	PPPPPPPPPP	4082	38184	7.99	74.77
477	PPPPPPPPPP	3496	41680	6.85	81.61
491	PPPPPPPPPP	2939	44619	5.75	87.37
505	AAAAAAAAAA	2301	46920	4.51	91.87
523	AAAAAAA	1685	48605	3.30	95.17
544	AAAAA	1187	49792	2.32	97.50
576	AAAA	815	50607	1.60	99.09
600	AA	464	51071	0.91	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade:8 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 1 Writing Prompt 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		2	2	0.01	0.01
94		4	6	0.02	0.03
116		2	8	0.01	0.03
160		1	9	0.00	0.04
216		4	13	0.02	0.05
244		9	22	0.04	0.09
261		8	30	0.03	0.13
274		14	44	0.06	0.18
284		15	59	0.06	0.25
293		16	75	0.07	0.31
301	F	25	100	0.10	0.42
309	F	28	128	0.12	0.53
315	F	35	163	0.15	0.68
321	F	44	207	0.18	0.86
328	FF	77	284	0.32	1.18
334	FF	100	384	0.42	1.60
340	FF	118	502	0.49	2.09
346	FFFF	186	688	0.78	2.87
351	FFFFF	261	949	1.09	3.96
357	FFFFFF	291	1240	1.21	5.17
363	FFFFFFF	374	1614	1.56	6.73
369	FFFFFFF	449	2063	1.87	8.60
375	FFFFFFF	586	2649	2.44	11.05
381	FFFFFFF	644	3293	2.69	13.73
387	FFFFFFF	841	4134	3.51	17.24
393	FFFFFFF	959	5093	4.00	21.24
400	PPPPPPPPPPPPPPPPPPPP	1177	6270	4.91	26.15
406	PPPPPPPPPPPPPPPPPPPP	1307	7577	5.45	31.60
413	PPPPPPPPPPPPPPPPPPPP	1462	9039	6.10	37.70
420	PPPPPPPPPPPPPPPPPPPP	1670	10709	6.97	44.66
428	PPPPPPPPPPPPPPPPPPPP	1709	12418	7.13	51.79
435	PPPPPPPPPPPPPPPPPPPP	1835	14253	7.65	59.44
444	PPPPPPPPPPPPPPPPPPPP	1872	16125	7.81	67.25
453	PPPPPPPPPPPPPPPPPPPP	1750	17875	7.30	74.55
463	PPPPPPPPPPPPPPPPPPPP	1610	19485	6.71	81.27
474	PPPPPPPPPPPPPPPPPPPP	1323	20808	5.52	86.78
487	PPPPPPPPPPPPPPPPPPPP	1073	21881	4.48	91.26
501	AAAAAAAAAAAA	758	22639	3.16	94.42
518	AAAAAAAAAAAA	570	23209	2.38	96.80
540	AAAAAA	368	23577	1.53	98.33
572	AAAAA	257	23834	1.07	99.40
600	AAA	143	23977	0.60	100.00

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 400 800 1200 1600  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade:8 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

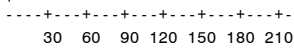
Multiple Choice Core 2 Writing Prompt 1

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.02	0.02
116	F	6	7	0.11	0.13
139	F	8	15	0.15	0.29
162	F	6	21	0.11	0.40
216		2	23	0.04	0.44
244	F	10	33	0.19	0.63
261	FFF	26	59	0.50	1.13
273	FFF	22	81	0.42	1.55
282	FFFFFF	55	136	1.05	2.60
291	FFFFFFF	42	178	0.80	3.40
298	FFFFFFF	65	243	1.24	4.65
305	FFFFFFF	64	307	1.22	5.87
312	FFFFFFF	81	388	1.55	7.42
318	FFFFFFF	84	472	1.61	9.03
324	FFFFFFF	119	591	2.28	11.30
329	FFFFFFF	105	696	2.01	13.31
335	FFFFFFF	136	832	2.60	15.91
341	FFFFFFF	173	1005	3.31	19.22
346	FFFFFFF	199	1204	3.81	23.03
352	FFFFFFF	241	1445	4.61	27.63
358	FFFFFFF	227	1672	4.34	31.98
363	FFFFFFF	252	1924	4.82	36.79
369	FFFFFFF	248	2172	4.74	41.54
375	FFFFFFF	281	2453	5.37	46.91
381	FFFFFFF	279	2732	5.34	52.25
387	FFFFFFF	259	2991	4.95	57.20
393	FFFFFFF	232	3223	4.44	61.64
399	FFFFFFF	240	3463	4.59	66.23
405	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	234	3697	4.48	70.70
412	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	229	3926	4.38	75.08
419	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	185	4111	3.54	78.62
427	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	171	4282	3.27	81.89
435	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	191	4473	3.65	85.54
444	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	176	4649	3.37	88.91
454	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	127	4776	2.43	91.34
465	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	134	4910	2.56	93.90
478	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	108	5018	2.07	95.96
492	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	82	5100	1.57	97.53
509	AAAAAA	51	5151	0.98	98.51
529	AAAAA	41	5192	0.78	99.29
560	AAAA	29	5221	0.55	99.85
600	A	8	5229	0.15	100.00

Scale Score Histogram for VASOL: Spring 2004  
 Grade:8 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 2 Writing Prompt 2

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		1	1	0.03	0.03
165		1	2	0.03	0.06
220		1	3	0.03	0.08
248		2	5	0.06	0.14
265	F	8	13	0.23	0.37
277	F	10	23	0.28	0.65
288	F	9	32	0.25	0.90
296	F	11	43	0.31	1.21
304	FFF	21	64	0.59	1.80
311	FF	15	79	0.42	2.23
317	FFFF	27	106	0.76	2.99
323	FFF	24	130	0.68	3.66
329	FFFF	28	158	0.79	4.45
335	FFFFFF	51	209	1.44	5.89
340	FFFFF	39	248	1.10	6.99
346	FFFFFFF	58	306	1.63	8.62
351	FFFFFFF	62	368	1.75	10.37
357	FFFFFFF	66	434	1.86	12.23
362	FFFFFFFF	102	536	2.87	15.10
368	FFFFFFFF	97	633	2.73	17.83
374	FFFFFFFF	111	744	3.13	20.96
379	FFFFFFFF	137	881	3.86	24.82
385	FFFFFFFF	130	1011	3.66	28.48
391	FFFFFFFF	160	1171	4.51	32.99
396	FFFFFFFF	180	1351	5.07	38.06
403	PPPPPPPPPPPPPPPPPPPPPPPP	180	1531	5.07	43.13
409	PPPPPPPPPPPPPPPPPPPPPPPP	180	1711	5.07	48.20
416	PPPPPPPPPPPPPPPPPPPPPPPP	186	1897	5.24	53.44
423	PPPPPPPPPPPPPPPPPPPPPPPP	195	2092	5.49	58.93
430	PPPPPPPPPPPPPPPPPPPPPPPP	186	2278	5.24	64.17
438	PPPPPPPPPPPPPPPPPPPPPPPP	185	2463	5.21	69.38
446	PPPPPPPPPPPPPPPPPPPPPPPP	218	2681	6.14	75.52
456	PPPPPPPPPPPPPPPPPPPPPPPP	187	2868	5.27	80.79
466	PPPPPPPPPPPPPPPPPPPPPPPP	166	3034	4.68	85.46
478	PPPPPPPPPPPPPPPPPPPPPPPP	137	3171	3.86	89.32
492	PPPPPPPPPPPPPPPPPPPPPPPP	137	3308	3.86	93.18
508	AAAAAAAAAAAA	95	3403	2.68	95.86
529	AAAAAAAAAAAA	75	3478	2.11	97.97
561	AAAAAA	43	3521	1.21	99.18
600	AAAA	29	3550	0.82	100.00

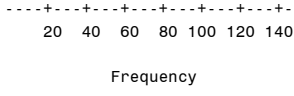




Scale Score Histogram for VASOL: Spring 2004  
 Grade:8 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 3 Writing Prompt 1

Scale Score		Cum.		Cum.	
		Freq	Freq	Percent	Percent
263		1	1	0.05	0.05
274		2	3	0.11	0.16
282	F	3	6	0.16	0.32
291		1	7	0.05	0.38
299	F	3	10	0.16	0.54
307	F	4	14	0.21	0.75
314		1	15	0.05	0.81
321	F	3	18	0.16	0.97
329	FF	11	29	0.59	1.56
336	FFF	15	44	0.81	2.36
343	FF	12	56	0.64	3.01
350	FFFF	19	75	1.02	4.03
356	FFFFFF	29	104	1.56	5.59
363	FFFFFFFF	39	143	2.09	7.68
369	FFFFFFFF	39	182	2.09	9.77
375	FFFFFFFFF	53	235	2.85	12.62
382	FFFFFFFFF	53	288	2.85	15.47
388	FFFFFFFFF	56	344	3.01	18.47
394	FFFFFFFFFFFFFF	85	429	4.56	23.04
401	PPPPPPPPPPPPPP	92	521	4.94	27.98
407	PPPPPPPPPPPPPP	89	610	4.78	32.76
414	PPPPPPPPPPPPPPPP	114	724	6.12	38.88
421	PPPPPPPPPPPPPPPP	116	840	6.23	45.11
429	PPPPPPPPPPPPPPPP	122	962	6.55	51.66
437	PPPPPPPPPPPPPPPP	122	1084	6.55	58.22
446	PPPPPPPPPPPPPPPPPP	145	1229	7.79	66.00
456	PPPPPPPPPPPPPPPPPP	140	1369	7.52	73.52
467	PPPPPPPPPPPPPPPPPP	130	1499	6.98	80.50
479	PPPPPPPPPPPPPPPPPP	108	1607	5.80	86.31
494	PPPPPPPPPPPPPP	82	1689	4.40	90.71
511	AAAAAAAAA	58	1747	3.11	93.82
530	AAAAAAAAA	49	1796	2.63	96.46
554	AAAAA	29	1825	1.56	98.01
589	AAAA	18	1843	0.97	98.98
600	AAAA	19	1862	1.02	100.00



Scale Score Histogram for VASOL: Spring 2004  
 Grade:8 English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 3 Writing Prompt 2

Scale Score	Cum.		Cum.		
	Freq	Freq	Percent	Percent	
274		3	3	0.09	0.09
284		1	4	0.03	0.12
293		2	6	0.06	0.17
300		1	7	0.03	0.20
308		2	9	0.06	0.26
314	F	5	14	0.14	0.41
321	F	7	21	0.20	0.61
328	FF	12	33	0.35	0.96
334	FF	17	50	0.49	1.45
340	FFF	23	73	0.67	2.11
346	FFFF	28	101	0.81	2.92
352	FFFFF	36	137	1.04	3.97
358	FFFFF	40	177	1.16	5.13
364	FFFFFF	52	229	1.51	6.63
370	FFFFFFF	65	294	1.88	8.51
376	FFFFFFF	91	385	2.64	11.15
382	FFFFFFF	105	490	3.04	14.19
388	FFFFFFF	119	609	3.45	17.64
394	FFFFFFF	131	740	3.79	21.43
400	PPPPPPPPPPPPPPPPPP	166	906	4.81	26.24
406	PPPPPPPPPPPPPPPPPP	176	1082	5.10	31.34
413	PPPPPPPPPPPPPPPPPP	221	1303	6.40	37.74
419	PPPPPPPPPPPPPPPPPP	214	1517	6.20	43.93
426	PPPPPPPPPPPPPPPPPP	239	1756	6.92	50.85
434	PPPPPPPPPPPPPPPPPP	238	1994	6.89	57.75
442	PPPPPPPPPPPPPPPPPP	226	2220	6.55	64.29
451	PPPPPPPPPPPPPPPPPP	243	2463	7.04	71.33
460	PPPPPPPPPPPPPPPPPP	223	2686	6.46	77.79
471	PPPPPPPPPPPPPPPPPP	213	2899	6.17	83.96
483	PPPPPPPPPPPPPPPPPP	177	3076	5.13	89.08
497	PPPPPPPPPPPPPPPP	132	3208	3.82	92.90
514	AAAAAAAAAAAA	98	3306	2.84	95.74
535	AAAAAAAAAA	71	3377	2.06	97.80
568	AAAAAA	44	3421	1.27	99.07
600	AAAA	32	3453	0.93	100.00

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 +---+---+---+---+---+---+---+  
 30 60 90 120 150 180 210 240  
 Frequency



Scale Score Histogram for VASOL: Spring 2004  
 High School End-of-Course English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

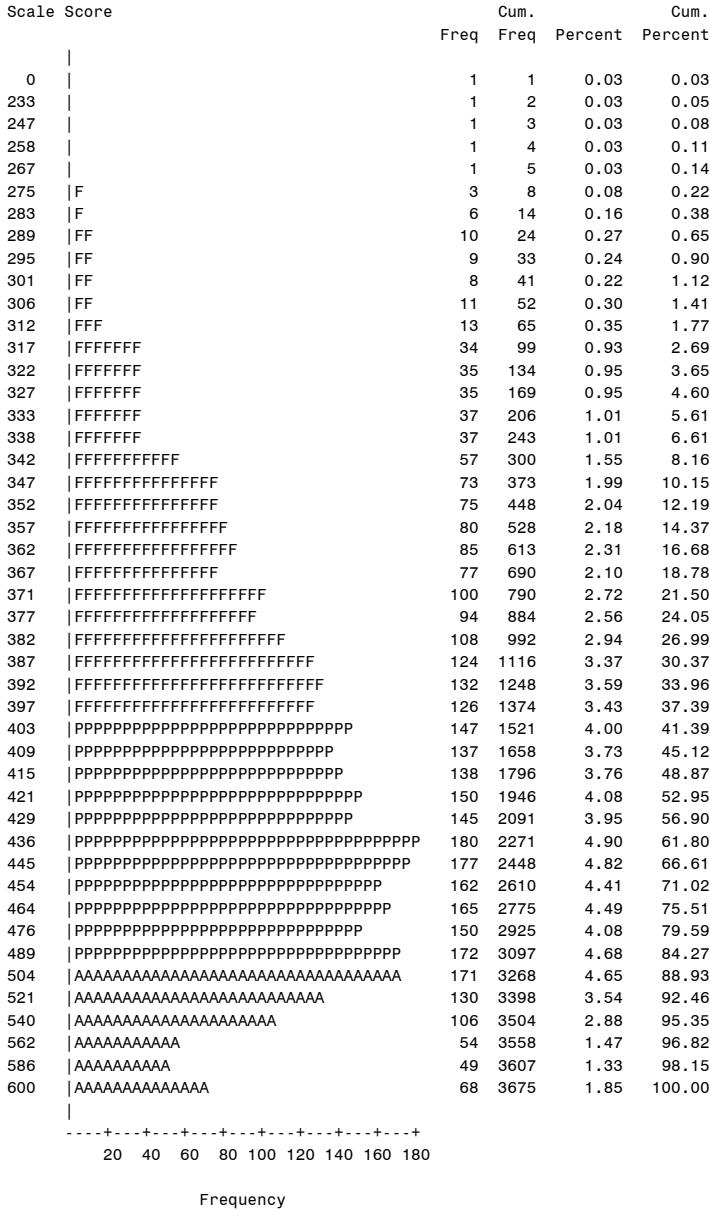
Multiple Choice Core 1 Writing Prompt 2

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		2	2	0.01	0.01
98		1	3	0.01	0.02
226		1	4	0.01	0.02
239		1	5	0.01	0.03
250		1	6	0.01	0.03
259		4	10	0.02	0.05
267		4	14	0.02	0.07
274		2	16	0.01	0.08
280		2	18	0.01	0.09
287		4	22	0.02	0.11
293		6	28	0.03	0.14
299		12	40	0.06	0.20
304		18	58	0.09	0.29
310		24	82	0.12	0.42
315		21	103	0.11	0.52
321		23	126	0.12	0.64
326	F	28	154	0.14	0.78
331	F	36	190	0.18	0.96
336	F	41	231	0.21	1.17
341	F	41	272	0.21	1.38
346	F	53	325	0.27	1.65
351	F	73	398	0.37	2.02
356	FF	102	500	0.52	2.53
361	FF	121	621	0.61	3.15
366	FFF	142	763	0.72	3.87
371	FFFF	184	947	0.93	4.80
376	FFFF	213	1160	1.08	5.88
381	FFFFF	236	1396	1.20	7.07
386	FFFFFF	368	1764	1.86	8.94
392	FFFFFFF	386	2150	1.96	10.89
397	FFFFFFF	434	2584	2.20	13.09
402	PPPPPPPPPP	587	3171	2.97	16.07
408	PPPPPPPPPP	660	3831	3.34	19.41
414	PPPPPPPPPP	779	4610	3.95	23.36
421	PPPPPPPPPP	909	5519	4.61	27.96
428	PPPPPPPPPP	1104	6623	5.59	33.56
436	PPPPPPPPPP	1227	7850	6.22	39.78
445	PPPPPPPPPP	1412	9262	7.15	46.93
454	PPPPPPPPPP	1578	10840	8.00	54.93
466	PPPPPPPPPP	1666	12506	8.44	63.37
479	PPPPPPPPPP	1785	14291	9.04	72.41
493	PPPPPPPPPP	1684	15975	8.53	80.94
512	AAAAAAAAAA	1475	17450	7.47	88.42
532	AAAAAAAAAA	1078	18528	5.46	93.88
554	AAAAAAAA	438	18966	2.22	96.10
579	AAAAAAA	342	19308	1.73	97.83
600	AAAAAAA	428	19736	2.17	100.00

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 400      800      1200      1600  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 High School End-of-Course English: Writing  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Multiple Choice Core 2 Writing Prompt 1





Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: US History to 1877 - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Cum. Freq	Cum. Freq	Percent	Cum. Percent
0		8	8	0.02	0.02
214		2	10	0.00	0.02
232		5	15	0.01	0.03
247		9	24	0.02	0.05
260		29	53	0.06	0.12
271	F	54	107	0.12	0.24
281	F	104	211	0.23	0.47
290	FF	166	377	0.37	0.84
299	FFFF	264	641	0.59	1.43
307	FFFFF	406	1047	0.91	2.34
315	FFFFFFF	500	1547	1.12	3.46
322	FFFFFFF	691	2238	1.55	5.01
329	FFFFFFF	788	3026	1.76	6.77
336	FFFFFFF	971	3997	2.17	8.95
343	FFFFFFF	1192	5189	2.67	11.61
349	FFFFFFF	1281	6470	2.87	14.48
356	FFFFFFF	1417	7887	3.17	17.65
362	FFFFFFF	1511	9398	3.38	21.04
368	FFFFFFF	1636	11034	3.66	24.70
375	FFFFFFF	1677	12711	3.75	28.45
381	FFFFFFF	1806	14517	4.04	32.49
387	FFFFFFF	1918	16435	4.29	36.79
394	FFFFFFF	1875	18310	4.20	40.98
400	PPPPPPPPPPPPPPPPPPPPPP	1953	20263	4.37	45.35
406	PPPPPPPPPPPPPPPPPPPPPP	1996	22259	4.47	49.82
414	PPPPPPPPPPPPPPPPPPPPPP	2028	24287	4.54	54.36
421	PPPPPPPPPPPPPPPPPPPPPP	2067	26354	4.63	58.99
428	PPPPPPPPPPPPPPPPPPPPPP	1966	28320	4.40	63.39
436	PPPPPPPPPPPPPPPPPPPPPP	2051	30371	4.59	67.98
444	PPPPPPPPPPPPPPPPPPPPPP	2064	32435	4.62	72.60
453	PPPPPPPPPPPPPPPPPPPPPP	1986	34421	4.45	77.04
463	PPPPPPPPPPPPPPPPPPPPPP	1984	36405	4.44	81.48
473	PPPPPPPPPPPPPPPPPPPPPP	1927	38332	4.31	85.80
485	PPPPPPPPPPPPPPPPPPPPPP	1717	40049	3.84	89.64
500	AAAAAAAAAAAAAAAAAAAA	1560	41609	3.49	93.13
518	AAAAAAAAAAAAAAAAAAAA	1298	42907	2.91	96.04
542	AAAAAAAAAAAA	937	43844	2.10	98.14
581	AAAAAAA	592	44436	1.33	99.46
600	AAA	241	44677	0.54	100.00

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 600      1200      1800  
 Frequency

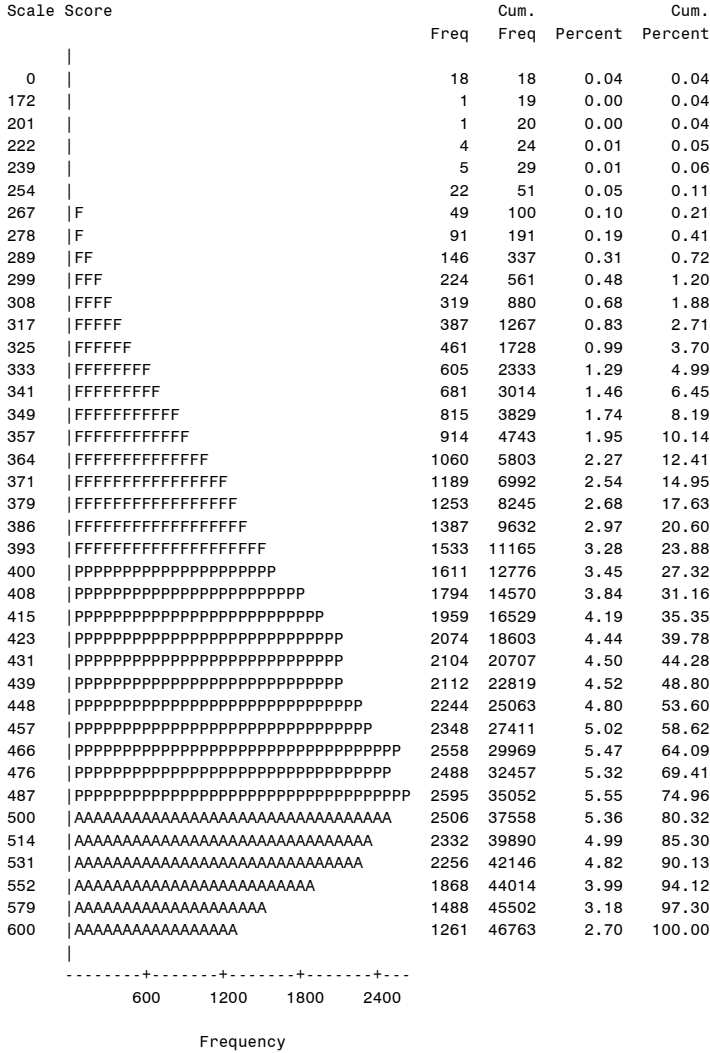
Scale Score Histogram for VASOL: Spring 2004  
 Grade 5: US History to 1877 - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		3	3	0.02	0.02
207		1	4	0.01	0.02
226		2	6	0.01	0.03
242		11	17	0.06	0.10
254		12	29	0.07	0.17
266	F	28	57	0.16	0.33
276	FF	45	102	0.26	0.59
286	FFF	86	188	0.50	1.10
294	FFFFFF	142	330	0.83	1.92
303	FFFFFFF	170	500	0.99	2.92
311	FFFFFFFFF	246	746	1.43	4.35
318	FFFFFFFFF	328	1074	1.91	6.26
325	FFFFFFFFF	349	1423	2.04	8.30
332	FFFFFFFFF	374	1797	2.18	10.48
339	FFFFFFFFF	437	2234	2.55	13.03
346	FFFFFFFFF	472	2706	2.75	15.78
352	FFFFFFFFF	494	3200	2.88	18.67
359	FFFFFFFFF	516	3716	3.01	21.68
365	FFFFFFFFF	505	4221	2.95	24.62
371	FFFFFFFFF	568	4789	3.31	27.93
378	FFFFFFFFF	571	5360	3.33	31.26
384	FFFFFFFFF	655	6015	3.82	35.09
391	FFFFFFFFF	633	6648	3.69	38.78
398	FFFFFFFFF	685	7333	4.00	42.77
404	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	696	8029	4.06	46.83
411	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	758	8787	4.42	51.25
418	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	754	9541	4.40	55.65
426	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	805	10346	4.70	60.35
434	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	853	11199	4.98	65.32
442	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	775	11974	4.52	69.84
451	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	811	12785	4.73	74.57
461	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	833	13618	4.86	79.43
472	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	754	14372	4.40	83.83
484	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	712	15084	4.15	87.98
499	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	658	15742	3.84	91.82
517	AAAAAAAAAAAAAAAAAAAA	583	16325	3.40	95.22
540	AAAAAAAAAAAAAAAAAAAA	459	16784	2.68	97.90
580	AAAAAAA	262	17046	1.53	99.43
600	AAAA	98	17144	0.57	100.00

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 100 200 300 400 500 600 700 800  
 Frequency



Scale Score Histogram for VASOL: Spring 2004  
 Grade 6: US History 1877 to Present - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced



Scale Score Histogram for VASOL: Spring 2004  
 Grade 6: US History 1877 to Present - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent
0	2	2	0.01	0.01
222	1	3	0.01	0.02
239	4	7	0.02	0.04
253	13	20	0.07	0.11
266	20	40	0.11	0.23
278	38	78	0.21	0.44
288	50	128	0.28	0.72
298	82	210	0.46	1.19
307	130	340	0.73	1.92
316	134	474	0.76	2.68
324	208	682	1.17	3.85
332	222	904	1.25	5.10
341	284	1188	1.60	6.71
348	302	1490	1.71	8.41
356	359	1849	2.03	10.44
363	370	2219	2.09	12.53
370	407	2626	2.30	14.83
378	451	3077	2.55	17.38
385	532	3609	3.00	20.38
392	578	4187	3.26	23.64
400	582	4769	3.29	26.93
407	667	5436	3.77	30.70
415	712	6148	4.02	34.72
422	712	6860	4.02	38.74
430	782	7642	4.42	43.15
439	810	8452	4.57	47.73
447	800	9252	4.52	52.24
456	894	10146	5.05	57.29
466	888	11034	5.01	62.31
476	962	11996	5.43	67.74
488	916	12912	5.17	72.91
500	954	13866	5.39	78.30
515	922	14788	5.21	83.51
531	858	15646	4.84	88.35
552	773	16419	4.37	92.72
580	647	17066	3.65	96.37
600	643	17709	3.63	100.00

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 100 200 300 400 500 600 700 800 900

Frequency

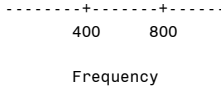
Scale Score Histogram for VASOL: Spring 2004  
 Grade 7: Civics & Economics - Core 1  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score		Freq	Cum. Freq	Percent	Cum. Percent
0		17	17	0.04	0.04
214		2	19	0.00	0.04
240		2	21	0.00	0.04
258		5	26	0.01	0.06
273		11	37	0.02	0.08
286		24	61	0.05	0.13
298	F	63	124	0.13	0.26
307	F	97	221	0.21	0.47
317	FF	162	383	0.35	0.82
325	FFF	232	615	0.50	1.31
333	FFFF	281	896	0.60	1.91
341	FFFFF	397	1293	0.85	2.76
348	FFFFFF	507	1800	1.08	3.84
355	FFFFFFF	600	2400	1.28	5.12
362	FFFFFFF	777	3177	1.66	6.78
368	FFFFFFF	890	4067	1.90	8.68
375	FFFFFFF	965	5032	2.06	10.74
381	FFFFFFF	1146	6178	2.45	13.19
388	FFFFFFF	1283	7461	2.74	15.93
394	FFFFFFF	1505	8966	3.21	19.14
400	PPPPPPPPPPPPPPPPPPPPPP	1622	10588	3.46	22.60
406	PPPPPPPPPPPPPPPPPPPPPP	1746	12334	3.73	26.33
412	PPPPPPPPPPPPPPPPPPPPPP	1907	14241	4.07	30.40
419	PPPPPPPPPPPPPPPPPPPPPP	1939	16180	4.14	34.54
425	PPPPPPPPPPPPPPPPPPPPPP	2074	18254	4.43	38.97
432	PPPPPPPPPPPPPPPPPPPPPP	2100	20354	4.48	43.45
439	PPPPPPPPPPPPPPPPPPPPPP	2120	22474	4.53	47.98
446	PPPPPPPPPPPPPPPPPPPPPP	2249	24723	4.80	52.78
454	PPPPPPPPPPPPPPPPPPPPPP	2280	27003	4.87	57.64
462	PPPPPPPPPPPPPPPPPPPPPP	2284	29287	4.88	62.52
470	PPPPPPPPPPPPPPPPPPPPPP	2393	31680	5.11	67.63
479	PPPPPPPPPPPPPPPPPPPPPP	2311	33991	4.93	72.56
489	PPPPPPPPPPPPPPPPPPPPPP	2273	36264	4.85	77.41
500	AAAAAAAAAAAAAAAAAAAAAAAA	2188	38452	4.67	82.08
512	AAAAAAAAAAAAAAAAAAAAAAAA	2184	40636	4.66	86.75
527	AAAAAAAAAAAAAAAAAAAAAAAA	1949	42585	4.16	90.91
546	AAAAAAAAAAAAAAAAAAAAAAAA	1721	44306	3.67	94.58
571	AAAAAAAAAAAAAAAAAAAA	1325	45631	2.83	97.41
600	AAAAAAAAAAAAAAAA	1214	46845	2.59	100.00

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 600 1200 1800 2400  
 Frequency

Scale Score Histogram for VASOL: Spring 2004  
 Grade 7: Civics & Economics - Core 2  
 Histogram Bars: F=Fail, P=Pass Proficient, A=Pass Advanced

Scale Score	Freq	Cum. Freq	Percent	Cum. Percent	
0	14	14	0.07	0.07	
248	4	18	0.02	0.10	
264	7	25	0.04	0.13	
277	9	34	0.05	0.18	
289	19	53	0.10	0.28	
300	F	31	84	0.17	0.45
309	F	59	143	0.32	0.76
318	F	74	217	0.40	1.16
326	FF	96	313	0.51	1.67
334	FFF	162	475	0.87	2.54
342	FFF	159	634	0.85	3.39
349	FFFF	223	857	1.19	4.58
356	FFFFF	254	1111	1.36	5.94
364	FFFFFF	310	1421	1.66	7.60
370	FFFFFFF	336	1757	1.80	9.39
377	FFFFFFF	368	2125	1.97	11.36
383	FFFFFFF	412	2537	2.20	13.56
390	FFFFFFF	494	3031	2.64	16.21
396	FFFFFFF	518	3549	2.77	18.97
403	PPPPPPPP	564	4113	3.02	21.99
410	PPPPPPPP	667	4780	3.57	25.56
417	PPPPPPPP	625	5405	3.34	28.90
424	PPPPPPPP	751	6156	4.02	32.91
430	PPPPPPPP	853	7009	4.56	37.47
438	PPPPPPPP	843	7852	4.51	41.98
445	PPPPPPPP	923	8775	4.93	46.92
453	PPPPPPPP	993	9768	5.31	52.22
461	PPPPPPPP	1033	10801	5.52	57.75
470	PPPPPPPP	1012	11813	5.41	63.16
480	PPPPPPPP	1080	12893	5.77	68.93
490	PPPPPPPP	1086	13979	5.81	74.74
501	AAAAAAAA	1039	15018	5.55	80.29
514	AAAAAAAA	1006	16024	5.38	85.67
530	AAAAAAAA	873	16897	4.67	90.34
549	AAAAAAAA	777	17674	4.15	94.49
575	AAAAAAAA	544	18218	2.91	97.40
600	AAAAAAAA	486	18704	2.60	100.00





# **APPENDIX C**

Fall 2003 & Spring 2004 Item Analysis



Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course English: Literature & Research Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.23	-1.34	0.10
2	0.91	0.23	-1.30	0.10
3	0.97	0.25	-2.16	0.14
4	0.57	0.36	1.21	0.05
5	0.91	0.28	-1.12	0.09
6	0.90	0.18	-0.67	0.08
7	0.82	0.34	-0.21	0.07
8	0.95	0.29	-1.88	0.12
9	0.70	0.29	0.63	0.06
10	0.86	0.35	-0.59	0.08
11	0.84	0.38	-0.34	0.07
12	0.56	0.46	1.21	0.05
13	0.63	0.34	1.03	0.05
14	0.77	0.28	0.07	0.06
15	0.74	0.40	0.13	0.06
26	0.86	0.44	-0.69	0.08
27	0.93	0.27	-1.19	0.09
28	0.87	0.25	-0.65	0.08
29	0.67	0.35	0.78	0.06
30	0.62	0.35	1.01	0.06
31	0.89	0.48	-0.88	0.08
32	0.67	0.37	0.59	0.06
33	0.51	0.44	1.39	0.05
34	0.56	0.33	1.23	0.05
35	0.75	0.29	0.27	0.06
36	0.78	0.33	-0.02	0.06
37	0.93	0.28	-1.36	0.10
38	0.78	0.41	-0.11	0.07
39	0.68	0.30	0.65	0.06
40	0.74	0.49	0.38	0.06
41	0.71	0.41	0.37	0.06
42	0.61	0.37	0.81	0.06
43	0.64	0.27	0.86	0.06
44	0.82	0.27	-0.33	0.07
45	0.91	0.35	-0.91	0.08
46	0.91	0.38	-0.88	0.08
47	0.62	0.50	0.90	0.06
48	0.85	0.50	-0.54	0.07
49	0.64	0.45	0.81	0.06
50	0.68	0.46	0.60	0.06
51	0.97	0.29	-1.86	0.12
52	0.86	0.38	-0.55	0.07
Mean	0.77	0.35	-0.11	0.07



Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Algebra I Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.85	0.34	-1.33	0.08
2	0.87	0.42	-1.47	0.08
3	0.66	0.28	0.07	0.05
4	0.60	0.28	0.34	0.05
5	0.53	0.38	0.59	0.05
6	0.76	0.40	-0.43	0.06
7	0.81	0.26	-0.78	0.06
8	0.67	0.50	0.01	0.06
9	0.58	0.41	0.38	0.05
10	0.68	0.46	-0.12	0.06
11	0.84	0.33	-1.04	0.07
12	0.74	0.38	-0.34	0.06
13	0.81	0.42	-0.84	0.07
14	0.73	0.44	-0.33	0.06
15	0.77	0.36	-0.46	0.06
16	0.55	0.42	0.60	0.05
17	0.78	0.39	-0.71	0.06
18	0.48	0.39	0.88	0.05
22	0.76	0.34	-0.67	0.06
23	0.62	0.46	0.21	0.05
24	0.47	0.37	0.73	0.05
25	0.44	0.38	0.93	0.05
26	0.63	0.41	0.15	0.05
27	0.71	0.40	-0.32	0.06
28	0.57	0.44	0.44	0.05
29	0.85	0.43	-1.13	0.07
30	0.53	0.47	0.61	0.05
31	0.74	0.34	-0.36	0.06
32	0.62	0.33	0.39	0.05
33	0.66	0.35	0.15	0.05
38	0.62	0.44	0.38	0.05
39	0.74	0.44	-0.35	0.06
40	0.57	0.41	0.45	0.05
41	0.43	0.36	1.14	0.05
42	0.53	0.44	0.75	0.05
43	0.59	0.40	0.42	0.05
44	0.80	0.23	-0.85	0.07
45	0.73	0.46	-0.41	0.06
46	0.68	0.44	-0.04	0.06
47	0.53	0.39	0.70	0.05
48	0.73	0.32	-0.29	0.06
49	0.38	0.32	1.42	0.05
53	0.90	0.37	-1.43	0.08
54	0.91	0.36	-1.75	0.09
55	0.37	0.34	1.37	0.05
56	0.95	0.32	-2.26	0.11
57	0.66	0.39	0.38	0.05
58	0.62	0.40	0.48	0.05
59	0.60	0.34	0.54	0.05
60	0.60	0.43	0.27	0.05
Mean	0.67	0.38	-0.06	0.06

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Geometry Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.34	-1.48	0.10
2	0.93	0.37	-1.39	0.10
3	0.91	0.35	-0.98	0.08
4	0.87	0.42	-0.57	0.07
5	0.89	0.43	-1.01	0.09
6	0.86	0.38	-0.33	0.07
7	0.81	0.41	-0.15	0.07
8	0.76	0.49	0.35	0.06
9	0.96	0.27	-1.88	0.12
10	0.86	0.35	-0.51	0.07
11	0.78	0.35	-0.06	0.07
15	0.80	0.31	0.18	0.06
16	0.79	0.50	0.28	0.06
17	0.75	0.41	0.25	0.06
18	0.66	0.44	0.74	0.06
19	0.83	0.34	-0.20	0.07
20	0.48	0.16	1.53	0.05
21	0.90	0.51	-0.96	0.08
22	0.76	0.55	0.27	0.06
23	0.49	0.41	1.69	0.05
24	0.66	0.41	0.98	0.06
25	0.89	0.41	-0.86	0.08
26	0.63	0.43	0.95	0.06
30	0.86	0.46	-0.51	0.07
31	0.83	0.44	-0.30	0.07
32	0.67	0.57	0.87	0.06
33	0.78	0.49	0.07	0.06
34	0.67	0.44	0.80	0.06
35	0.76	0.45	0.32	0.06
36	0.70	0.57	0.53	0.06
37	0.66	0.45	0.86	0.06
38	0.72	0.51	0.56	0.06
39	0.60	0.33	1.15	0.05
42	0.85	0.35	-0.50	0.07
43	0.70	0.47	0.67	0.06
44	0.74	0.49	0.24	0.06
45	0.83	0.43	-0.23	0.07
46	0.65	0.53	0.95	0.06
47	0.58	0.33	1.19	0.05
50	0.80	0.46	-0.12	0.07
51	0.55	0.31	1.45	0.05
52	0.84	0.38	-0.30	0.07
53	0.57	0.45	1.30	0.05
54	0.64	0.30	0.96	0.06
55	0.56	0.39	1.14	0.05
Mean	0.75	0.41	0.18	0.07

Virginia SOL - Fall 20032 Administration - Item Analysis  
 High School End-of-Course Algebra II Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.94	0.33	-1.41	0.12
2	0.73	0.38	0.54	0.07
3	0.92	0.23	-1.46	0.12
4	0.71	0.36	0.57	0.07
5	0.80	0.41	0.09	0.08
6	0.88	0.30	-0.73	0.10
7	0.77	0.43	0.27	0.07
8	0.77	0.36	0.10	0.08
9	0.79	0.43	-0.16	0.08
10	0.78	0.42	0.22	0.08
13	0.92	0.37	-0.98	0.10
14	0.89	0.37	-0.71	0.10
15	0.87	0.35	-0.82	0.10
16	0.81	0.44	0.00	0.08
17	0.59	0.39	1.26	0.07
18	0.67	0.42	0.62	0.07
19	0.81	0.48	-0.05	0.08
20	0.71	0.34	0.55	0.07
21	0.77	0.35	0.30	0.07
22	0.66	0.33	0.94	0.07
23	0.97	0.20	-2.01	0.16
26	0.70	0.40	0.53	0.07
27	0.78	0.46	0.27	0.07
28	0.78	0.39	0.14	0.08
29	0.91	0.37	-1.11	0.11
30	0.72	0.35	0.64	0.07
31	0.84	0.51	-0.30	0.08
32	0.77	0.49	0.28	0.07
33	0.85	0.38	-0.38	0.09
34	0.87	0.41	-0.38	0.09
35	0.84	0.43	-0.40	0.09
38	0.93	0.34	-1.28	0.12
39	0.91	0.45	-1.05	0.11
40	0.87	0.40	-0.57	0.09
41	0.48	0.38	1.76	0.07
42	0.84	0.33	-0.33	0.09
43	0.63	0.40	0.99	0.07
46	0.92	0.36	-1.02	0.11
47	0.61	0.43	1.24	0.07
48	0.72	0.36	0.48	0.07
49	0.79	0.39	-0.09	0.08
50	0.67	0.37	0.66	0.07
51	0.61	0.39	1.11	0.07
52	0.76	0.48	0.28	0.07
53	0.51	0.49	1.68	0.07
56	0.75	0.43	0.32	0.07
57	0.68	0.29	0.61	0.07
58	0.67	0.35	0.61	0.07
59	0.71	0.47	0.53	0.07
60	0.70	0.37	0.70	0.07
Mean	0.77	0.39	0.06	0.08

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Virginia and United States History Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.27	-1.87	0.10
2	0.68	0.48	0.28	0.06
3	0.67	0.50	0.43	0.05
4	0.67	0.28	0.53	0.05
5	0.73	0.40	-0.01	0.06
6	0.92	0.30	-1.76	0.09
9	0.78	0.29	-0.29	0.06
10	0.91	0.42	-1.44	0.08
11	0.69	0.38	0.25	0.06
12	0.85	0.36	-1.01	0.07
13	0.77	0.29	-0.32	0.06
14	0.65	0.40	0.62	0.05
15	0.33	0.28	1.87	0.06
16	0.88	0.35	-1.12	0.07
17	0.67	0.49	0.32	0.06
21	0.57	0.42	0.68	0.05
22	0.56	0.22	0.81	0.05
23	0.79	0.46	-0.51	0.06
24	0.84	0.48	-0.67	0.07
25	0.55	0.46	0.89	0.05
26	0.76	0.30	-0.23	0.06
27	0.56	0.36	0.91	0.05
28	0.80	0.48	-0.49	0.06
29	0.75	0.42	-0.23	0.06
30	0.75	0.44	-0.16	0.06
31	0.63	0.54	0.52	0.05
32	0.58	0.28	0.76	0.05
33	0.43	0.27	1.52	0.05
34	0.53	0.40	1.01	0.05
35	0.97	0.27	-2.69	0.14
39	0.82	0.40	-0.51	0.06
40	0.39	0.35	1.58	0.05
41	0.68	0.48	0.24	0.06
42	0.55	0.45	1.03	0.05
43	0.73	0.56	0.09	0.06
44	0.74	0.51	-0.05	0.06
45	0.78	0.50	-0.28	0.06
46	0.61	0.52	0.75	0.05
47	0.75	0.42	-0.10	0.06
48	0.62	0.43	0.65	0.05
49	0.68	0.53	0.32	0.06
50	0.88	0.32	-1.23	0.08
51	0.62	0.44	0.52	0.05
52	0.76	0.36	-0.02	0.06
53	0.88	0.38	-1.15	0.08
56	0.73	0.44	0.17	0.06
57	0.57	0.26	0.77	0.05
58	0.72	0.51	0.06	0.06
59	0.91	0.21	-1.49	0.08
60	0.71	0.45	0.16	0.06
61	0.79	0.47	-0.36	0.06
62	0.78	0.38	-0.12	0.06
63	0.83	0.48	-0.58	0.06
64	0.58	0.35	0.88	0.05
65	0.46	0.48	1.36	0.05
66	0.69	0.37	0.18	0.06
67	0.74	0.39	-0.12	0.06
68	0.64	0.43	0.41	0.06
69	0.82	0.23	-0.66	0.07
70	0.86	0.35	-1.11	0.07
Mean	0.71	0.39	0.00	0.06

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Virginia and United States History Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.72	0.29	-1.37	0.07
2	0.27	0.35	0.62	0.05
3	0.36	0.40	0.43	0.05
4	0.45	0.37	0.11	0.05
5	0.51	0.17	0.21	0.05
6	0.80	0.29	-1.35	0.06
9	0.65	0.24	-0.29	0.06
10	0.76	0.36	-1.44	0.08
11	0.44	0.15	0.09	0.05
12	0.31	0.18	0.81	0.06
13	0.73	0.38	-1.13	0.08
14	0.36	0.31	0.62	0.05
15	0.45	0.39	0.91	0.07
16	0.40	0.28	0.96	0.04
17	0.43	0.26	0.32	0.06
21	0.36	0.40	0.68	0.05
22	0.38	0.37	0.92	0.05
23	0.51	0.47	-0.51	0.06
24	0.66	0.36	-0.86	0.09
25	0.29	0.34	0.89	0.05
26	0.51	0.25	0.05	0.06
27	0.47	0.35	-0.37	0.05
28	0.70	0.30	-0.94	0.08
29	0.19	0.30	2.12	0.06
30	0.47	0.38	-0.16	0.06
31	0.50	0.37	0.05	0.01
32	0.42	0.48	0.51	0.05
33	0.16	0.29	1.22	0.06
34	0.39	0.29	1.01	0.05
35	0.41	0.45	0.31	0.06
39	0.52	0.36	0.10	0.03
40	0.45	0.49	-0.23	0.06
41	0.54	0.47	-0.52	0.02
42	0.56	0.32	-0.89	0.04
43	0.32	0.47	0.09	0.06
44	0.48	0.19	-0.61	0.06
45	0.65	0.22	-1.11	0.09
46	0.54	0.26	0.08	0.03
47	0.47	0.37	-0.10	0.06
48	0.38	0.15	0.65	0.05
49	0.39	0.37	0.32	0.06
50	0.31	0.17	1.00	0.05
51	0.47	0.21	-0.40	0.05
52	0.38	0.51	-0.06	0.05
53	0.42	0.26	0.18	0.07
56	0.46	0.20	0.11	0.05
57	0.42	0.42	0.77	0.05
58	0.30	0.33	1.43	0.03
59	0.32	0.09	1.44	0.06
60	0.73	0.22	-0.81	0.02
61	0.59	0.25	-0.57	0.05
62	0.53	0.39	-0.12	0.06
63	0.43	0.51	-0.13	0.06
64	0.59	0.35	-0.61	0.02
65	0.39	0.25	0.38	0.07
66	0.38	0.37	0.18	0.06
67	0.47	0.47	-0.12	0.06
68	0.41	0.27	0.41	0.06
69	0.36	0.24	0.85	0.06
70	0.72	0.30	-1.11	0.07
Mean	0.47	0.32	0.08	0.05

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World History I Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.96	0.22	-2.56	0.14
2	0.78	0.50	-0.65	0.07
3	0.65	0.36	0.31	0.06
4	0.64	0.34	0.00	0.06
5	0.68	0.36	0.05	0.06
6	0.73	0.41	-0.14	0.07
9	0.81	0.37	-0.84	0.08
10	0.46	0.45	1.20	0.06
11	0.60	0.48	0.42	0.06
12	0.94	0.21	-2.01	0.11
13	0.45	0.44	1.12	0.06
14	0.87	0.24	-1.42	0.09
15	0.52	0.29	0.82	0.06
16	0.77	0.29	-0.52	0.07
17	0.57	0.30	0.60	0.06
18	0.81	0.37	-0.58	0.07
19	0.50	0.22	0.85	0.06
20	0.66	0.45	-0.13	0.07
21	0.56	0.27	0.68	0.06
22	0.83	0.43	-0.83	0.08
25	0.65	0.24	0.17	0.06
26	0.92	0.26	-1.71	0.10
27	0.64	0.25	-0.03	0.06
28	0.51	0.37	0.77	0.06
29	0.77	0.40	-0.48	0.07
30	0.76	0.47	-0.32	0.07
31	0.79	0.39	-0.73	0.07
32	0.49	0.43	0.72	0.06
33	0.78	0.40	-0.38	0.07
34	0.61	0.39	0.45	0.06
35	0.70	0.39	-0.12	0.07
36	0.97	0.24	-2.84	0.16
37	0.38	0.28	1.29	0.06
40	0.46	0.39	0.84	0.06
41	0.83	0.32	-0.85	0.08
42	0.60	0.34	0.28	0.06
43	0.52	0.34	0.88	0.06
44	0.78	0.37	-0.57	0.07
45	0.47	0.35	1.16	0.06
46	0.71	0.44	-0.32	0.07
47	0.56	0.37	0.67	0.06
48	0.79	0.45	-0.50	0.07
49	0.34	0.40	1.70	0.06
50	0.61	0.46	0.60	0.06
51	0.66	0.38	0.28	0.06
52	0.69	0.31	-0.05	0.07
55	0.72	0.41	-0.37	0.07
56	0.53	0.43	0.80	0.06
57	0.58	0.44	0.59	0.06
58	0.71	0.48	-0.09	0.07
59	0.55	0.43	0.62	0.06
60	0.55	0.33	0.87	0.06
61	0.61	0.39	0.41	0.06
64	0.66	0.37	-0.06	0.07
65	0.53	0.28	0.93	0.06
66	0.80	0.49	-0.86	0.08
67	0.65	0.39	0.05	0.06
68	0.75	0.46	-0.26	0.07
69	0.71	0.32	-0.22	0.07
70	0.61	0.29	0.30	0.06
Mean	0.66	0.37	0.00	0.07

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World History I Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff)
1	0.81	0.19	-1.09	0.05
2	0.41	0.31	-0.65	0.07
3	0.84	0.30	-1.31	0.06
4	0.36	0.22	0.00	0.06
5	0.77	0.29	-1.32	0.02
6	0.39	0.23	0.41	0.07
9	0.66	0.26	-0.84	0.08
10	0.36	0.28	0.36	0.05
11	0.29	0.38	0.42	0.06
12	0.64	0.31	-0.40	0.09
13	0.75	0.22	-1.14	0.05
14	0.72	0.31	-0.67	0.08
15	0.35	0.19	0.82	0.06
16	0.26	0.25	0.40	0.07
17	0.57	0.27	-0.35	0.07
18	0.64	0.30	-0.58	0.07
19	0.51	0.30	0.16	0.07
20	0.61	0.28	-0.56	0.08
21	0.43	0.35	0.74	0.01
22	0.67	0.36	-0.49	0.07
25	0.61	0.24	0.17	0.06
26	0.87	0.25	-1.71	0.10
27	0.20	0.22	1.24	0.06
28	0.52	0.33	0.40	0.07
29	0.66	0.14	-0.85	0.07
30	0.25	0.27	0.68	0.06
31	0.40	0.16	0.94	0.06
32	0.25	0.23	1.47	0.02
33	0.41	0.27	-0.38	0.07
34	0.31	0.39	0.45	0.06
35	0.64	0.29	-0.55	0.08
36	0.43	0.28	0.07	0.07
37	0.49	0.24	0.56	0.01
40	0.29	0.23	0.84	0.06
41	0.16	0.20	1.68	0.03
42	0.18	0.18	1.45	0.05
43	0.50	0.28	0.38	0.06
44	0.55	0.25	-0.57	0.07
45	0.33	0.25	0.29	0.05
46	0.37	0.29	0.34	0.07
47	0.37	0.22	1.98	0.05
48	0.20	0.39	0.71	0.05
49	0.21	0.16	1.70	0.06
50	0.27	0.26	1.20	0.05
51	0.44	0.30	0.28	0.06
52	0.51	0.10	0.52	0.05
55	0.60	0.27	-0.83	0.05
56	0.37	0.27	0.44	0.01
57	0.31	0.12	0.30	0.08
58	0.73	0.30	-1.73	0.12
59	0.26	0.22	0.62	0.06
60	0.36	0.27	0.87	0.06
61	0.38	0.40	0.24	0.07
64	0.46	0.21	-0.06	0.07
65	0.28	0.26	0.71	0.07
66	0.18	0.25	2.19	0.02
67	0.36	0.19	0.63	0.03
68	0.43	0.46	-0.26	0.07
69	0.35	0.29	0.96	0.05
70	0.45	-0.03	1.30	0.04
Mean	0.45	0.26	0.21	0.06

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World History II Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.81	0.33	-0.59	0.07
2	0.74	0.53	-0.38	0.06
3	0.82	0.43	-0.78	0.07
4	0.58	0.29	0.60	0.06
5	0.74	0.32	-0.19	0.06
6	0.70	0.32	-0.04	0.06
7	0.68	0.46	0.10	0.06
8	0.81	0.38	-0.63	0.07
11	0.77	0.30	-0.58	0.07
12	0.72	0.34	-0.28	0.06
13	0.80	0.43	-0.68	0.07
14	0.70	0.38	-0.11	0.06
15	0.86	0.17	-1.16	0.08
16	0.74	0.42	-0.14	0.06
17	0.70	0.32	0.14	0.06
18	0.40	0.47	1.44	0.06
19	0.63	0.42	0.34	0.06
20	0.79	0.34	-0.59	0.07
23	0.78	0.50	-0.59	0.07
24	0.85	0.45	-1.01	0.07
25	0.85	0.40	-1.06	0.08
26	0.51	0.22	0.97	0.06
27	0.77	0.33	-0.49	0.07
28	0.48	0.43	0.95	0.06
29	0.63	0.46	0.36	0.06
30	0.67	0.47	0.11	0.06
31	0.53	0.46	0.96	0.06
32	0.74	0.46	-0.23	0.06
33	0.75	0.43	-0.35	0.06
34	0.52	0.38	1.00	0.06
35	0.46	0.32	1.07	0.06
38	0.67	0.29	0.09	0.06
39	0.76	0.50	-0.39	0.06
40	0.70	0.41	0.07	0.06
41	0.81	0.34	-0.44	0.06
42	0.54	0.42	0.83	0.06
43	0.41	0.25	1.53	0.06
44	0.66	0.43	0.27	0.06
45	0.87	0.45	-1.16	0.08
46	0.29	0.30	1.93	0.06
47	0.63	0.53	0.37	0.06
48	0.66	0.30	-0.03	0.06
49	0.84	0.41	-0.99	0.07
50	0.69	0.47	0.11	0.06
53	0.49	0.39	0.89	0.06
54	0.58	0.45	0.47	0.06
55	0.47	0.37	1.07	0.06
56	0.50	0.38	1.07	0.06
57	0.71	0.44	-0.05	0.06
58	0.79	0.42	-0.61	0.07
61	0.81	0.31	-0.56	0.07
62	0.74	0.32	-0.17	0.06
63	0.72	0.37	-0.24	0.06
64	0.64	0.35	0.15	0.06
65	0.56	0.43	0.76	0.06
66	0.65	0.45	0.14	0.06
67	0.44	0.34	1.26	0.06
68	0.90	0.32	-1.48	0.09
69	0.68	0.45	0.06	0.06
70	0.98	0.22	-3.14	0.17
Mean	0.68	0.38	0.00	0.06



Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World History II Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.65	0.31	-0.41	0.05
2	0.67	0.27	-0.33	0.06
3	0.62	0.39	-0.78	0.07
4	0.60	0.32	-0.22	0.06
5	0.58	0.34	0.38	0.04
6	0.73	0.10	-0.27	0.03
7	0.25	0.23	1.22	0.05
8	0.62	0.34	-0.63	0.07
11	0.60	0.40	-0.58	0.07
12	0.60	0.35	-0.28	0.06
13	0.65	0.32	-0.68	0.07
14	0.77	0.28	-1.40	0.08
15	0.62	0.28	-0.48	0.08
16	0.52	0.21	0.52	0.04
17	0.18	0.28	1.90	0.05
18	0.45	0.21	0.18	0.06
19	0.37	0.25	0.18	0.05
20	0.60	0.26	-0.16	0.07
23	0.62	0.36	-1.08	0.09
24	0.30	0.24	0.52	0.06
25	0.27	0.18	1.31	0.06
26	0.52	0.33	-0.33	0.08
27	0.61	0.41	-0.49	0.07
28	0.44	0.43	0.43	0.05
29	0.31	0.26	0.36	0.06
30	0.38	0.46	0.11	0.06
31	0.35	0.13	0.75	0.06
32	0.52	0.44	-0.23	0.06
33	0.26	0.09	1.62	0.04
34	0.48	0.26	-0.02	0.07
35	0.45	0.34	0.68	0.06
38	0.60	0.27	-0.27	0.03
39	0.66	0.37	-0.38	0.05
40	0.59	0.28	0.67	0.04
41	0.26	0.14	1.72	0.06
42	0.26	0.26	0.83	0.06
43	0.57	0.26	0.17	0.05
44	0.38	0.32	0.27	0.06
45	0.70	0.34	-1.16	0.08
46	0.29	0.20	1.37	0.06
47	0.30	0.48	1.13	0.05
48	0.44	0.31	0.29	0.07
49	0.54	0.35	-0.99	0.07
50	0.73	0.28	-0.42	0.06
53	0.38	0.14	0.79	0.06
54	0.21	0.23	1.04	0.03
55	0.84	0.29	-1.56	0.07
56	0.41	0.34	1.07	0.06
57	0.54	0.29	-0.05	0.06
58	0.26	0.20	1.12	0.05
61	0.41	0.30	0.49	0.05
62	0.58	0.31	-0.17	0.06
63	0.41	0.35	0.54	0.05
64	0.53	0.32	-0.39	0.04
65	0.44	0.21	-0.14	0.01
66	0.43	0.38	0.14	0.06
67	0.47	0.33	0.64	0.03
68	0.72	0.30	-1.28	0.10
69	0.33	0.31	1.07	0.05
70	0.95	0.23	-3.14	0.17
Mean	0.50	0.29	0.09	0.06

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Earth Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.61	0.29	0.65	0.05
2	0.88	0.35	-1.24	0.07
3	0.74	0.54	-0.21	0.05
4	0.56	0.40	0.67	0.05
5	0.65	0.30	0.04	0.05
6	0.73	0.48	-0.21	0.05
7	0.66	0.45	0.15	0.05
11	0.69	0.41	0.01	0.05
12	0.51	0.39	0.95	0.05
17	0.69	0.31	-0.03	0.05
18	0.66	0.28	-0.23	0.05
19	0.54	0.19	0.73	0.05
20	0.72	0.28	-0.09	0.05
21	0.63	0.25	0.32	0.05
22	0.53	0.26	0.92	0.05
23	0.89	0.39	-1.34	0.07
24	0.72	0.36	0.06	0.05
25	0.84	0.52	-0.87	0.06
26	0.87	0.37	-1.14	0.06
27	0.39	0.45	1.59	0.05
28	0.78	0.44	-0.16	0.05
29	0.77	0.25	-0.57	0.06
33	0.82	0.50	-0.39	0.05
34	0.88	0.38	-1.52	0.07
35	0.77	0.40	-0.26	0.05
36	0.76	0.44	-0.24	0.05
37	0.82	0.49	-0.77	0.06
38	0.65	0.29	0.35	0.05
39	0.52	0.43	0.92	0.05
40	0.80	0.41	-0.39	0.05
41	0.85	0.44	-0.88	0.06
42	0.73	0.49	-0.25	0.05
43	0.74	0.42	-0.32	0.05
44	0.69	0.44	0.28	0.05
45	0.73	0.42	-0.13	0.05
46	0.77	0.47	-0.30	0.05
47	1.00	.	.	.
48	0.75	0.50	-0.09	0.05
49	0.69	0.55	0.18	0.05
50	0.69	0.41	0.16	0.05
51	0.91	0.33	-1.66	0.08
52	0.66	0.44	-0.04	0.05
53	0.72	0.36	0.03	0.05
54	0.74	0.44	-0.24	0.05
55	0.68	0.49	0.06	0.05
56	0.59	0.46	0.60	0.05
57	0.60	0.54	0.49	0.05
58	0.76	0.38	-0.44	0.05
59	0.77	0.47	-0.54	0.06
60	0.65	0.39	0.18	0.05
Mean	0.72	0.40	-0.11	0.05

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Biology Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.28	-1.94	0.09
2	0.82	0.36	-0.66	0.06
3	0.91	0.33	-1.58	0.07
4	0.85	0.25	-1.00	0.06
5	0.74	0.40	-0.29	0.05
6	0.53	0.42	1.00	0.05
7	0.60	0.49	0.67	0.05
8	0.45	0.30	1.45	0.05
9	0.73	0.41	-0.07	0.05
10	0.70	0.41	0.11	0.05
11	0.57	0.40	0.67	0.05
12	0.69	0.38	0.13	0.05
17	0.66	0.42	0.29	0.05
18	0.74	0.45	-0.03	0.05
19	0.71	0.39	-0.02	0.05
20	0.62	0.36	0.52	0.05
21	0.82	0.37	-0.55	0.06
22	0.83	0.40	-0.64	0.06
23	0.76	0.47	-0.30	0.05
24	0.42	0.45	1.70	0.05
25	0.89	0.24	-1.26	0.07
26	0.77	0.39	-0.30	0.05
27	0.66	0.36	0.30	0.05
28	0.68	0.42	0.16	0.05
29	0.67	0.48	0.37	0.05
30	0.80	0.37	-0.56	0.06
31	0.55	0.48	0.77	0.05
32	0.94	0.26	-2.04	0.09
33	0.63	0.49	0.35	0.05
34	0.83	0.48	-0.68	0.06
38	0.65	0.42	0.39	0.05
39	0.79	0.38	-0.56	0.06
40	0.73	0.34	-0.07	0.05
41	0.82	0.48	-0.73	0.06
42	0.60	0.25	0.44	0.05
43	0.85	0.39	-0.92	0.06
44	0.64	0.47	0.31	0.05
45	0.79	0.47	-0.50	0.05
46	0.78	0.43	-0.32	0.05
47	0.74	0.52	-0.10	0.05
48	0.92	0.36	-1.56	0.07
49	0.78	0.46	-0.35	0.05
50	0.71	0.49	0.11	0.05
51	0.67	0.33	0.09	0.05
55	0.44	0.39	1.34	0.05
56	0.68	0.48	0.22	0.05
57	0.50	0.39	0.94	0.05
58	0.53	0.36	1.00	0.05
59	0.79	0.44	-0.46	0.05
60	0.68	0.31	0.21	0.05
Mean	0.71	0.40	-0.08	0.05

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course Chemistry Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.63	0.36	0.65	0.07
2	0.84	0.48	-0.62	0.09
3	0.77	0.40	-0.06	0.08
4	0.71	0.04	0.30	0.07
5	0.81	0.45	-0.24	0.08
6	0.38	0.35	1.87	0.07
7	0.61	0.33	0.54	0.07
8	0.46	0.41	1.43	0.07
12	0.79	0.17	-0.34	0.08
13	0.81	0.40	-0.48	0.09
14	0.77	0.29	-0.46	0.09
15	0.76	0.46	0.18	0.08
16	0.47	0.40	1.50	0.07
17	0.61	0.40	0.80	0.07
18	0.76	0.39	-0.03	0.08
19	0.63	0.44	0.61	0.07
20	0.73	0.34	0.06	0.08
21	0.63	0.46	0.64	0.07
25	0.87	0.42	-0.74	0.09
26	0.81	0.33	-0.64	0.09
27	0.83	0.34	-0.78	0.09
28	0.87	0.41	-0.97	0.10
29	0.75	0.41	-0.02	0.08
30	0.81	0.26	-0.46	0.09
31	0.48	0.37	1.16	0.07
32	0.81	0.40	-0.65	0.09
33	0.62	0.37	0.80	0.07
34	0.68	0.36	0.39	0.07
35	0.74	0.40	0.01	0.08
36	0.82	0.37	-0.62	0.09
37	0.51	0.32	1.50	0.07
38	0.67	0.37	0.34	0.07
41	0.54	0.33	1.21	0.07
42	0.44	0.41	1.69	0.07
43	0.79	0.38	-0.34	0.08
44	0.75	0.21	-0.02	0.08
45	0.74	0.38	0.09	0.08
46	0.73	0.43	-0.04	0.08
47	0.71	0.31	0.18	0.08
48	0.67	0.31	0.40	0.07
49	0.92	0.41	-1.27	0.11
50	0.74	0.39	-0.03	0.08
51	0.67	0.33	0.40	0.07
52	0.79	0.49	-0.38	0.08
53	0.88	0.41	-0.85	0.10
56	0.88	0.30	-0.96	0.10
57	0.66	0.44	0.47	0.07
58	0.97	0.19	-3.16	0.25
59	0.70	0.39	-0.06	0.08
60	0.60	0.35	0.76	0.07
Mean	0.71	0.36	0.08	0.08

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World Geography Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.90	0.28	-1.79	0.07
2	0.70	0.31	-0.24	0.05
3	0.68	0.51	-0.26	0.05
4	0.78	0.37	-0.77	0.05
5	0.52	0.39	0.60	0.05
6	0.68	0.28	-0.17	0.05
7	0.47	0.43	0.80	0.05
8	0.70	0.51	-0.20	0.05
9	0.50	0.29	0.74	0.05
10	0.74	0.36	-0.56	0.05
11	0.47	0.37	0.84	0.05
12	0.51	0.54	0.63	0.05
13	0.86	0.07	-1.30	0.06
14	0.71	0.43	-0.35	0.05
15	0.90	0.33	-1.64	0.07
16	0.55	0.38	0.56	0.05
17	0.68	0.20	-0.20	0.05
18	0.92	0.35	-2.03	0.08
19	0.62	0.38	0.16	0.05
20	0.74	0.42	-0.51	0.05
21	0.56	0.34	0.48	0.05
25	0.69	0.41	-0.26	0.05
26	0.63	0.33	0.11	0.05
27	0.56	0.26	0.35	0.05
28	0.82	0.43	-1.05	0.06
29	0.66	0.46	-0.09	0.05
32	0.63	0.28	0.20	0.05
33	0.73	0.40	-0.48	0.05
34	0.47	0.51	0.73	0.05
35	0.72	0.42	-0.37	0.05
36	0.39	0.45	1.13	0.05
39	0.59	0.47	0.33	0.05
40	0.58	0.40	0.21	0.05
41	0.36	0.42	1.45	0.05
42	0.55	0.48	0.47	0.05
43	0.64	0.37	0.12	0.05
47	0.57	0.42	0.48	0.05
48	0.73	0.48	-0.38	0.05
49	0.63	0.16	0.10	0.05
50	0.55	0.38	0.37	0.05
51	0.47	0.27	0.82	0.05
52	0.58	0.38	0.22	0.05
53	0.51	0.44	0.68	0.05
54	0.71	0.40	-0.31	0.05
55	0.66	0.49	-0.15	0.05
56	0.53	0.40	0.63	0.05
57	0.51	0.25	0.84	0.05
58	0.67	0.43	-0.12	0.05
59	0.46	0.49	0.79	0.05
60	0.84	0.40	-1.22	0.06
61	0.52	0.27	0.74	0.05
62	0.80	0.47	-0.87	0.06
63	0.65	0.41	-0.10	0.05
64	0.74	0.44	-0.50	0.05
65	0.73	0.47	-0.41	0.05
66	0.64	0.38	0.04	0.05
67	0.57	0.44	0.38	0.05
68	0.57	0.48	0.41	0.05
69	0.46	0.46	0.78	0.05
70	0.80	0.44	-0.85	0.06
Mean	0.64	0.39	0.00	0.05

Virginia SOL - Fall 2003 Administration - Item Analysis  
 High School End-of-Course World Geography Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.70	0.24	-0.38	0.07
2	0.65	0.31	-0.59	0.10
3	0.57	0.33	-0.15	0.06
4	0.71	0.26	-0.77	0.05
5	0.45	0.45	0.32	0.08
6	0.66	0.23	-0.57	0.04
7	0.44	0.38	0.80	0.05
8	0.63	0.26	-0.48	0.08
9	0.44	0.23	0.63	0.03
10	0.48	0.35	0.14	0.09
11	0.36	0.30	0.84	0.05
12	0.54	0.27	0.00	0.06
13	0.41	0.44	0.68	0.02
14	0.68	0.20	-0.35	0.05
15	0.20	0.40	1.04	0.08
16	0.57	0.11	-0.15	0.04
17	0.72	0.00	-0.20	0.05
18	0.40	0.12	0.59	0.07
19	0.45	0.10	0.29	0.05
20	0.60	0.33	0.63	0.06
21	0.46	0.20	0.48	0.05
25	0.67	0.27	-0.26	0.05
26	0.54	0.17	0.33	0.07
27	0.73	0.26	-0.59	0.07
28	0.48	0.39	0.01	0.08
29	0.49	0.28	-0.09	0.05
32	0.60	0.24	0.20	0.05
33	0.46	0.20	0.05	0.06
34	0.64	0.38	-0.85	0.12
35	0.40	0.34	0.23	0.11
36	0.34	0.44	1.13	0.05
39	0.58	0.27	0.33	0.05
40	0.48	0.16	0.35	0.02
41	0.41	0.17	0.37	0.08
42	0.58	0.29	-0.47	0.09
43	0.54	0.04	0.12	0.05
47	0.51	0.25	0.48	0.05
48	0.79	0.32	-0.68	0.06
49	0.70	0.22	-1.03	0.08
50	0.41	0.35	0.37	0.05
51	0.62	0.32	-0.33	0.02
52	0.58	0.18	0.14	0.06
53	0.46	0.15	0.43	0.02
54	0.60	0.28	-0.31	0.05
55	0.69	0.28	-1.13	0.10
56	0.30	0.33	0.73	0.07
57	0.46	0.11	0.84	0.05
58	0.68	0.36	-0.50	0.09
59	0.35	0.30	0.23	0.11
60	0.67	0.39	-0.50	0.09
61	0.44	0.25	0.74	0.05
62	0.56	0.28	-0.01	0.07
63	0.68	0.26	-1.05	0.09
64	0.36	0.25	0.78	0.08
65	0.60	0.39	-0.41	0.05
66	0.34	0.42	0.74	0.07
67	0.61	0.29	-0.70	0.07
68	0.45	0.36	0.64	0.09
69	0.31	0.14	0.49	0.03
70	0.62	0.38	-0.81	0.07
Mean	0.53	0.27	0.05	0.06

## Virginia SOL Assessments - Fall 2003

## Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.96	0.25	-2.25	0.07
2	Multiple Choice	0.95	0.28	-1.60	0.05
3	Multiple Choice	0.89	0.37	-0.95	0.04
4	Multiple Choice	0.92	0.22	-0.91	0.04
5	Multiple Choice	0.80	0.37	0.11	0.03
6	Multiple Choice	0.68	0.42	0.86	0.03
7	Multiple Choice	0.69	0.40	0.88	0.03
8	Multiple Choice	0.89	0.33	-0.65	0.04
9	Multiple Choice	0.88	0.41	-0.89	0.04
10	Multiple Choice	0.84	0.39	-0.39	0.03
25	Multiple Choice	0.96	0.33	-1.88	0.06
26	Multiple Choice	0.92	0.39	-1.14	0.04
27	Multiple Choice	0.80	0.42	0.05	0.03
28	Multiple Choice	0.48	0.49	1.93	0.03
29	Multiple Choice	0.91	0.43	-1.08	0.04
30	Multiple Choice	0.55	0.27	1.52	0.03
31	Multiple Choice	0.72	0.36	0.61	0.03
32	Multiple Choice	0.51	0.31	1.72	0.03
33	Multiple Choice	0.67	0.48	0.89	0.03
34	Multiple Choice	0.87	0.37	-0.57	0.04
35	Multiple Choice	0.96	0.27	-1.89	0.06
36	Multiple Choice	0.62	0.38	1.15	0.03
37	Multiple Choice	0.83	0.41	-0.17	0.03
38	Multiple Choice	0.66	0.32	0.92	0.03
39	Multiple Choice	0.82	0.45	-0.16	0.03
40	Multiple Choice	0.76	0.41	0.36	0.03
41	Multiple Choice	0.76	0.38	0.34	0.03
42	Multiple Choice	0.89	0.39	-0.79	0.04
43	Multiple Choice	0.75	0.43	0.44	0.03
44	Multiple Choice	0.50	0.33	1.82	0.03
51	Composing	0.57	0.73	1.50	0.02
52	Written Expression	0.58	0.76	1.22	0.02
53	Usage & Mechanics	0.59	0.81	1.30	0.01
Mean		0.76	0.41	0.07	0.03

## Virginia SOL Assessments - Fall 2003

## Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.96	0.26	-2.25	0.10
2	Multiple Choice	0.93	0.34	-1.60	0.07
3	Multiple Choice	0.87	0.38	-0.95	0.06
4	Multiple Choice	0.91	0.20	-0.91	0.06
5	Multiple Choice	0.77	0.37	0.11	0.05
6	Multiple Choice	0.66	0.43	0.86	0.04
7	Multiple Choice	0.64	0.39	0.88	0.04
8	Multiple Choice	0.88	0.30	-0.65	0.05
9	Multiple Choice	0.87	0.42	-0.89	0.06
10	Multiple Choice	0.83	0.37	-0.39	0.05
25	Multiple Choice	0.94	0.38	-1.58	0.07
26	Multiple Choice	0.89	0.44	-0.93	0.06
27	Multiple Choice	0.78	0.46	0.04	0.05
28	Multiple Choice	0.46	0.48	1.80	0.04
29	Multiple Choice	0.89	0.47	-0.93	0.06
30	Multiple Choice	0.52	0.28	1.52	0.04
31	Multiple Choice	0.70	0.35	0.52	0.04
32	Multiple Choice	0.48	0.30	1.71	0.04
33	Multiple Choice	0.67	0.44	0.74	0.04
34	Multiple Choice	0.85	0.38	-0.53	0.05
35	Multiple Choice	0.95	0.35	-1.81	0.08
36	Multiple Choice	0.58	0.38	1.21	0.04
37	Multiple Choice	0.80	0.43	-0.14	0.05
38	Multiple Choice	0.64	0.36	0.87	0.04
39	Multiple Choice	0.78	0.47	0.02	0.05
40	Multiple Choice	0.72	0.41	0.40	0.04
41	Multiple Choice	0.73	0.38	0.34	0.04
42	Multiple Choice	0.87	0.42	-0.75	0.06
43	Multiple Choice	0.73	0.42	0.36	0.04
44	Multiple Choice	0.47	0.30	1.76	0.04
51	Composing	0.58	0.70	1.20	0.02
52	Written Expression	0.60	0.74	1.01	0.02
53	Usage & Mechanics	0.56	0.78	1.24	0.02
Mean		0.74	0.41	0.07	0.05



## Virginia SOL Assessments - Fall 2003

## Item Analysis for Writing High School EOC: Multiple Choice Core 2, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.95	0.26	-1.79	0.10
2	Multiple Choice	0.91	0.33	-1.27	0.08
3	Multiple Choice	0.84	0.39	-0.51	0.06
4	Multiple Choice	0.89	0.22	-0.91	0.07
5	Multiple Choice	0.73	0.36	0.30	0.05
6	Multiple Choice	0.60	0.38	1.00	0.05
7	Multiple Choice	0.63	0.39	0.86	0.05
8	Multiple Choice	0.83	0.33	-0.39	0.06
9	Multiple Choice	0.84	0.41	-0.46	0.06
10	Multiple Choice	0.80	0.36	-0.21	0.06
25	Multiple Choice	0.85	0.33	-0.47	0.06
26	Multiple Choice	0.71	0.30	0.61	0.05
27	Multiple Choice	0.71	0.35	0.14	0.05
28	Multiple Choice	0.45	0.32	1.74	0.05
29	Multiple Choice	0.69	0.28	0.75	0.05
30	Multiple Choice	0.70	0.45	0.49	0.05
31	Multiple Choice	0.55	0.39	1.02	0.05
32	Multiple Choice	0.69	0.44	0.16	0.05
33	Multiple Choice	0.63	0.23	1.09	0.05
34	Multiple Choice	0.55	0.39	1.30	0.05
35	Multiple Choice	0.63	0.37	0.86	0.05
36	Multiple Choice	0.77	0.39	0.01	0.05
37	Multiple Choice	0.77	0.46	0.02	0.05
38	Multiple Choice	0.88	0.43	-0.87	0.07
39	Multiple Choice	0.75	0.41	0.14	0.05
40	Multiple Choice	0.64	0.46	0.80	0.05
41	Multiple Choice	0.69	0.42	0.52	0.05
42	Multiple Choice	0.80	0.30	-0.14	0.06
43	Multiple Choice	0.87	0.32	-0.81	0.07
44	Multiple Choice	0.63	0.35	0.85	0.05
51	Composing	0.53	0.75	1.72	0.03
52	Written Expression	0.53	0.78	1.42	0.03
53	Usage & Mechanics	0.49	0.78	1.60	0.02
Mean		0.71	0.40	0.29	0.05

## Virginia SOL Assessments - Fall 2003

## Item Analysis for Writing High School EOC: Multiple Choice Core 2, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.96	0.26	-2.27	0.10
2	Multiple Choice	0.93	0.28	-1.50	0.07
3	Multiple Choice	0.88	0.37	-0.81	0.06
4	Multiple Choice	0.91	0.24	-1.18	0.07
5	Multiple Choice	0.75	0.37	0.16	0.05
6	Multiple Choice	0.62	0.40	0.91	0.04
7	Multiple Choice	0.63	0.36	0.89	0.04
8	Multiple Choice	0.87	0.33	-0.76	0.06
9	Multiple Choice	0.84	0.42	-0.51	0.05
10	Multiple Choice	0.80	0.38	-0.12	0.05
25	Multiple Choice	0.83	0.34	-0.47	0.05
26	Multiple Choice	0.69	0.31	0.61	0.04
27	Multiple Choice	0.72	0.36	0.14	0.05
28	Multiple Choice	0.44	0.32	1.74	0.04
29	Multiple Choice	0.71	0.31	0.75	0.04
30	Multiple Choice	0.74	0.43	0.28	0.04
31	Multiple Choice	0.58	0.42	1.02	0.04
32	Multiple Choice	0.74	0.46	0.16	0.05
33	Multiple Choice	0.62	0.29	1.09	0.04
34	Multiple Choice	0.60	0.42	1.30	0.04
35	Multiple Choice	0.60	0.37	1.01	0.04
36	Multiple Choice	0.76	0.44	0.13	0.05
37	Multiple Choice	0.74	0.44	0.27	0.04
38	Multiple Choice	0.86	0.48	-0.61	0.05
39	Multiple Choice	0.75	0.44	0.18	0.04
40	Multiple Choice	0.63	0.48	0.89	0.04
41	Multiple Choice	0.73	0.39	0.29	0.04
42	Multiple Choice	0.83	0.35	-0.32	0.05
43	Multiple Choice	0.89	0.35	-0.90	0.06
44	Multiple Choice	0.69	0.32	0.59	0.04
51	Composing	0.54	0.71	1.42	0.02
52	Written Expression	0.55	0.74	1.22	0.02
53	Usage & Mechanics	0.51	0.77	1.47	0.02
Mean		0.73	0.40	0.21	0.05

VASOL Assessments - Fall 2003

Item Analysis for Writing Grade 8: Multiple Choice Core 1, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.72	0.52	-0.04	0.06
2	Multiple Choice	0.77	0.38	-0.36	0.06
3	Multiple Choice	0.55	0.41	1.39	0.06
4	Multiple Choice	0.76	0.29	-0.27	0.06
5	Multiple Choice	0.78	0.46	-0.36	0.06
6	Multiple Choice	0.91	0.31	-1.27	0.08
7	Multiple Choice	0.82	0.40	-0.47	0.06
8	Multiple Choice	0.80	0.39	-0.32	0.06
9	Multiple Choice	0.66	0.23	0.43	0.06
10	Multiple Choice	0.71	0.41	0.54	0.06
25	Multiple Choice	0.79	0.32	-0.87	0.07
26	Multiple Choice	0.80	0.38	-0.62	0.07
27	Multiple Choice	0.70	0.45	0.25	0.06
28	Multiple Choice	0.78	0.41	-0.42	0.06
29	Multiple Choice	0.44	0.47	1.73	0.06
30	Multiple Choice	0.74	0.47	0.34	0.06
31	Multiple Choice	0.80	0.43	-0.20	0.06
32	Multiple Choice	0.23	0.24	3.07	0.07
33	Multiple Choice	0.71	0.42	-0.05	0.06
34	Multiple Choice	0.88	0.45	-1.16	0.07
51	Composing	0.61	0.78	0.43	0.03
52	Written Expression	0.59	0.80	0.17	0.03
53	Usage & Mechanics	0.62	0.83	0.66	0.03
Mean		0.70	0.45	0.11	0.06

VASOL Assessments - Fall 2003

Item Analysis for Writing Grade 8: Multiple Choice Core 1, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.52	0.44	-0.04	0.06
2	Multiple Choice	0.78	0.34	-0.36	0.06
3	Multiple Choice	0.61	0.61	1.39	0.06
4	Multiple Choice	0.57	0.29	-0.27	0.06
5	Multiple Choice	0.78	0.43	-0.36	0.06
6	Multiple Choice	0.83	0.33	-1.27	0.07
7	Multiple Choice	0.78	0.40	-0.47	0.06
8	Multiple Choice	0.65	0.55	-0.32	0.06
9	Multiple Choice	0.43	0.20	0.43	0.06
10	Multiple Choice	0.52	0.48	0.54	0.06
25	Multiple Choice	0.74	0.49	-0.87	0.07
26	Multiple Choice	0.78	0.24	-0.62	0.07
27	Multiple Choice	0.61	0.39	0.25	0.06
28	Multiple Choice	0.70	0.52	-0.42	0.06
29	Multiple Choice	0.30	0.44	1.73	0.06
30	Multiple Choice	0.78	0.45	0.34	0.06
31	Multiple Choice	0.65	0.36	-0.20	0.06
32	Multiple Choice	0.43	0.46	3.07	0.08
33	Multiple Choice	0.65	0.43	-0.05	0.06
34	Multiple Choice	0.87	0.19	-1.16	0.07
51	Composing	0.57	0.81	0.57	0.03
52	Written Expression	0.59	0.90	0.26	0.03
53	Usage & Mechanics	0.56	0.81	0.76	0.03
Mean		0.64	0.46	0.13	0.06

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 English: Reading + Writing Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.33	-1.30	0.03
2	0.84	0.12	-0.37	0.02
3	0.66	0.31	0.84	0.02
4	0.89	0.34	-0.74	0.02
5	0.90	0.38	-0.86	0.02
6	0.86	0.35	-0.52	0.02
7	0.70	0.43	0.65	0.02
8	0.90	0.38	-0.96	0.02
9	0.92	0.26	-1.12	0.02
10	0.48	0.47	1.82	0.02
11	0.90	0.48	-0.83	0.02
12	0.73	0.50	0.52	0.02
13	0.73	0.34	0.48	0.02
14	0.67	0.42	0.86	0.02
15	0.86	0.27	-0.47	0.02
16	0.88	0.29	-0.68	0.02
17	0.93	0.34	-1.28	0.03
18	0.95	0.29	-1.59	0.03
29	0.83	0.57	-0.18	0.02
30	0.90	0.48	-0.80	0.02
31	0.77	0.47	0.27	0.02
32	0.86	0.45	-0.38	0.02
33	0.92	0.46	-1.02	0.02
34	0.95	0.36	-1.72	0.03
35	0.95	0.40	-1.63	0.03
36	0.86	0.34	-0.45	0.02
37	0.75	0.42	0.39	0.02
38	0.65	0.41	1.00	0.02
39	0.56	0.44	1.43	0.02
40	0.90	0.46	-0.86	0.02
41	0.90	0.35	-0.83	0.02
42	0.90	0.42	-0.79	0.02
43	0.87	0.34	-0.60	0.02
44	0.92	0.40	-1.13	0.02
45	0.91	0.35	-0.97	0.02
46	0.87	0.40	-0.51	0.02
47	0.92	0.41	-1.11	0.02
48	0.84	0.33	-0.20	0.02
61	0.73	0.48	0.53	0.02
62	0.72	0.46	0.57	0.02
63	0.79	0.44	0.12	0.02
64	0.55	0.26	1.42	0.02
65	0.74	0.43	0.43	0.02
66	0.70	0.46	0.77	0.02
67	0.72	0.40	0.61	0.02
Mean	0.82	0.39	-0.25	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 English: Reading + Writing Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.85	0.44	-0.22	0.05
2	0.85	0.39	-0.28	0.05
3	0.75	0.34	0.47	0.05
4	0.94	0.37	-1.35	0.08
5	0.95	0.33	-1.58	0.08
6	0.89	0.35	-0.56	0.06
7	0.89	0.28	-0.58	0.06
8	0.83	0.32	-0.09	0.05
9	0.90	0.23	-0.77	0.06
10	0.95	0.30	-1.60	0.09
11	0.93	0.35	-1.09	0.07
12	0.82	0.42	0.07	0.05
13	0.93	0.30	-1.12	0.07
14	0.93	0.39	-1.27	0.07
15	0.91	0.23	-0.88	0.06
16	0.92	0.25	-0.93	0.07
17	0.63	0.47	1.17	0.04
18	0.84	0.40	-0.23	0.05
29	0.84	0.29	-0.07	0.05
30	0.78	0.44	0.32	0.05
31	0.70	0.50	0.75	0.04
32	0.94	0.30	-1.24	0.07
33	0.89	0.27	-0.67	0.06
34	0.73	0.48	0.64	0.04
35	0.85	0.26	-0.24	0.05
36	0.58	0.30	1.42	0.04
37	0.74	0.38	0.57	0.04
38	0.83	0.40	-0.06	0.05
39	0.81	0.46	0.12	0.05
40	0.78	0.37	0.34	0.05
41	0.84	0.40	-0.08	0.05
42	0.81	0.44	0.09	0.05
43	0.75	0.38	0.62	0.04
44	0.85	0.38	-0.25	0.05
45	0.86	0.37	-0.13	0.05
46	0.95	0.36	-1.34	0.08
47	0.83	0.38	-0.06	0.05
60	0.66	0.40	0.90	0.04
61	0.83	0.47	-0.03	0.05
62	0.85	0.47	-0.24	0.05
63	0.83	0.47	-0.04	0.05
64	0.65	0.36	1.07	0.04
65	0.78	0.44	0.35	0.05
66	0.64	0.42	1.18	0.04
67	0.86	0.32	-0.23	0.05
Mean	0.83	0.37	-0.16	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 Mathematics Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.96	0.29	-1.32	0.03
2	0.82	0.48	0.66	0.02
3	0.97	0.23	-1.54	0.04
4	0.97	0.26	-1.43	0.04
5	0.82	0.40	0.61	0.02
6	0.84	0.17	0.36	0.02
7	0.83	0.45	0.56	0.02
8	0.90	0.45	-0.10	0.02
9	0.72	0.52	1.39	0.02
10	0.85	0.46	0.33	0.02
11	0.93	0.29	-0.62	0.03
12	0.76	0.34	1.13	0.02
13	0.93	0.39	-0.60	0.03
18	0.91	0.34	-0.39	0.02
19	0.70	0.41	1.49	0.02
20	0.88	0.44	0.06	0.02
21	0.76	0.53	1.17	0.02
22	0.87	0.50	0.20	0.02
23	0.88	0.37	-0.03	0.02
24	0.94	0.42	-0.78	0.03
25	0.73	0.47	1.24	0.02
26	0.88	0.45	0.12	0.02
27	0.80	0.49	0.84	0.02
28	0.86	0.55	0.33	0.02
29	0.96	0.32	-1.30	0.03
30	0.89	0.34	-0.05	0.02
31	0.92	0.33	-0.48	0.02
32	0.92	0.32	-0.47	0.02
33	0.93	0.26	-0.60	0.03
34	0.99	0.26	-2.40	0.05
35	0.89	0.41	0.01	0.02
36	0.58	0.41	2.22	0.02
37	0.71	0.32	1.31	0.02
38	0.86	0.43	0.29	0.02
39	0.81	0.34	0.68	0.02
40	0.77	0.45	0.93	0.02
43	0.94	0.46	-0.88	0.03
44	0.73	0.45	1.32	0.02
45	0.91	0.47	-0.26	0.02
46	0.95	0.39	-0.97	0.03
47	0.91	0.51	-0.35	0.02
48	0.78	0.49	1.04	0.02
49	0.95	0.45	-1.10	0.03
52	0.97	0.34	-1.44	0.04
53	0.86	0.35	0.23	0.02
54	0.86	0.51	0.34	0.02
55	0.75	0.50	1.15	0.02
56	0.92	0.40	-0.41	0.02
57	0.93	0.36	-0.60	0.03
58	0.78	0.56	0.96	0.02
Mean	0.86	0.40	0.06	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 3 Mathematics Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.83	0.41	0.54	0.05
2	0.98	0.31	-1.95	0.12
3	0.91	0.33	-0.31	0.07
4	0.78	0.34	0.86	0.05
5	0.87	0.32	0.10	0.06
6	0.95	0.19	-0.96	0.08
7	0.89	0.43	-0.10	0.06
8	0.79	0.39	0.80	0.05
9	0.89	0.38	-0.11	0.06
10	0.89	0.43	-0.02	0.06
11	0.82	0.43	0.57	0.05
12	0.85	0.34	0.31	0.05
13	0.78	0.15	0.86	0.05
18	0.94	0.33	-0.75	0.08
19	0.84	0.40	0.42	0.05
20	0.94	0.37	-0.76	0.08
21	0.91	0.40	-0.33	0.07
22	0.93	0.41	-0.64	0.07
23	0.66	0.34	1.71	0.04
24	0.90	0.42	-0.23	0.06
25	0.86	0.42	0.21	0.06
26	0.75	0.52	1.13	0.05
27	0.86	0.51	0.06	0.06
28	0.78	0.49	0.86	0.05
29	0.90	0.46	-0.15	0.06
30	0.94	0.34	-0.74	0.08
31	0.92	0.49	-0.52	0.07
32	0.85	0.48	0.34	0.05
33	0.92	0.31	-0.51	0.07
34	0.88	0.23	-0.17	0.06
35	0.94	0.22	-0.72	0.08
36	0.68	0.42	1.54	0.04
37	0.90	0.36	-0.29	0.06
38	0.94	0.38	-0.90	0.08
39	0.78	0.40	0.92	0.05
40	0.67	0.38	1.62	0.04
43	0.96	0.35	-1.36	0.10
44	0.87	0.27	0.22	0.06
45	0.93	0.43	-0.60	0.07
46	0.86	0.25	0.29	0.05
47	0.79	0.46	0.79	0.05
48	0.93	0.49	-0.61	0.07
49	0.74	0.51	1.16	0.05
52	0.85	0.54	0.36	0.05
53	0.93	0.38	-0.56	0.07
54	0.87	0.38	0.12	0.06
55	0.92	0.31	-0.53	0.07
56	0.83	0.50	0.58	0.05
57	0.96	0.32	-1.15	0.09
58	0.77	0.47	0.95	0.05
Mean	0.86	0.38	0.05	0.06



Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 History/Social Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.92	0.40	-0.72	0.02
2	0.91	0.47	-0.49	0.02
3	0.93	0.39	-0.89	0.02
4	0.92	0.42	-0.59	0.02
5	0.80	0.48	0.47	0.02
6	0.57	0.46	2.07	0.02
7	0.93	0.36	-0.89	0.02
8	0.80	0.45	0.49	0.02
9	0.93	0.33	-0.87	0.02
10	0.84	0.43	0.02	0.02
14	0.89	0.35	-0.46	0.02
15	0.94	0.28	-1.13	0.03
16	0.79	0.41	0.57	0.02
17	0.86	0.42	-0.03	0.02
18	0.77	0.45	0.66	0.02
19	0.82	0.50	0.38	0.02
20	0.96	0.30	-1.65	0.03
21	0.78	0.49	0.67	0.02
22	0.80	0.47	0.46	0.02
23	0.82	0.43	0.34	0.02
28	0.81	0.35	0.27	0.02
29	0.87	0.47	-0.06	0.02
30	0.94	0.25	-1.19	0.03
31	0.84	0.33	0.16	0.02
32	0.89	0.45	-0.27	0.02
33	0.74	0.47	0.87	0.02
34	0.70	0.53	1.13	0.02
35	0.72	0.47	0.95	0.02
36	0.79	0.53	0.59	0.02
37	0.71	0.45	1.08	0.02
41	0.83	0.44	0.21	0.02
42	0.99	0.17	-2.70	0.05
43	0.85	0.28	0.04	0.02
44	0.77	0.43	0.70	0.02
45	0.85	0.43	0.14	0.02
46	0.89	0.44	-0.22	0.02
47	0.86	0.43	-0.02	0.02
48	0.72	0.42	1.04	0.02
49	0.91	0.35	-0.66	0.02
50	0.89	0.43	-0.45	0.02
Mean	0.84	0.41	0.00	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 History/Social Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.84	0.34	0.19	0.05
2	0.76	0.45	0.98	0.04
3	0.73	0.33	1.01	0.04
4	0.91	0.42	-0.47	0.06
5	0.77	0.28	0.87	0.04
6	0.82	0.33	0.26	0.05
7	0.94	0.33	-0.99	0.07
8	0.80	0.46	0.80	0.04
9	0.97	0.30	-1.76	0.10
10	0.73	0.37	0.87	0.04
14	0.90	0.34	-0.49	0.06
15	0.95	0.35	-1.37	0.08
16	0.97	0.28	-1.65	0.10
17	0.87	0.42	0.01	0.05
18	0.87	0.42	-0.18	0.05
19	0.93	0.35	-0.71	0.07
20	0.86	0.39	-0.06	0.05
21	0.56	0.34	1.97	0.04
22	0.82	0.46	0.29	0.05
23	0.89	0.42	-0.36	0.06
28	0.86	0.34	-0.01	0.05
29	0.96	0.36	-1.49	0.09
30	0.96	0.23	-1.31	0.08
31	0.93	0.36	-0.79	0.07
32	0.60	0.50	1.69	0.04
33	0.61	0.43	1.51	0.04
34	0.97	0.28	-1.78	0.10
35	0.60	0.47	1.75	0.04
36	0.75	0.42	0.99	0.04
37	0.72	0.43	1.16	0.04
41	0.86	0.38	-0.03	0.05
42	0.95	0.37	-1.05	0.07
43	0.69	0.43	1.37	0.04
44	0.78	0.40	0.86	0.04
45	0.87	0.31	-0.07	0.05
46	0.95	0.38	-1.06	0.07
47	0.84	0.46	0.37	0.05
48	0.84	0.33	0.22	0.05
49	0.91	0.36	-0.59	0.06
50	0.91	0.40	-0.53	0.06
Mean	0.84	0.38	0.01	0.06

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 3 Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.94	0.32	-1.17	0.03
2	0.71	0.41	0.96	0.02
3	0.79	0.39	0.47	0.02
4	0.94	0.37	-1.15	0.03
5	0.56	0.35	1.72	0.01
6	0.95	0.28	-1.45	0.03
7	0.96	0.24	-1.66	0.03
8	0.75	0.46	0.68	0.02
9	0.82	0.37	0.26	0.02
10	0.93	0.35	-0.87	0.02
14	0.76	0.42	0.65	0.02
15	0.90	0.39	-0.49	0.02
16	0.90	0.42	-0.48	0.02
17	0.67	0.45	1.41	0.02
18	0.82	0.51	0.22	0.02
19	0.65	0.47	1.41	0.02
20	0.96	0.32	-1.50	0.03
21	0.65	0.55	1.35	0.02
24	0.81	0.49	0.43	0.02
25	0.89	0.47	-0.33	0.02
26	0.85	0.51	0.14	0.02
27	0.88	0.41	-0.32	0.02
28	0.69	0.36	1.07	0.02
29	0.81	0.44	0.38	0.02
30	0.89	0.46	-0.37	0.02
34	0.91	0.45	-0.59	0.02
35	0.73	0.51	0.92	0.02
36	0.84	0.39	0.12	0.02
37	0.66	0.34	1.31	0.02
38	0.74	0.46	0.88	0.02
39	0.85	0.39	0.00	0.02
42	0.67	0.49	1.25	0.02
43	0.84	0.33	0.10	0.02
44	0.87	0.45	-0.11	0.02
45	0.77	0.44	0.70	0.02
46	0.92	0.32	-0.72	0.02
47	0.95	0.36	-1.37	0.03
48	0.93	0.42	-0.90	0.03
49	0.79	0.43	0.54	0.02
50	0.93	0.39	-0.98	0.03
Mean	0.82	0.41	0.06	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 3 Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.89	0.24	-0.29	0.06
2	0.96	0.29	-1.41	0.09
3	0.88	0.32	-0.17	0.05
4	0.98	0.27	-2.26	0.12
5	0.96	0.27	-1.51	0.09
6	0.93	0.34	-0.71	0.07
7	0.69	0.52	1.19	0.04
8	0.76	0.49	0.77	0.04
9	0.84	0.37	0.30	0.05
10	0.88	0.34	-0.20	0.06
13	0.71	0.38	1.18	0.04
14	0.65	0.45	1.58	0.04
15	0.90	0.39	-0.30	0.06
16	0.70	0.37	1.06	0.04
17	0.84	0.34	0.18	0.05
21	0.91	0.51	-0.51	0.06
22	0.87	0.34	0.04	0.05
23	0.85	0.20	0.12	0.05
24	0.97	0.30	-1.90	0.11
25	0.98	0.28	-2.07	0.11
26	0.76	0.40	0.81	0.04
27	0.57	0.42	1.87	0.04
28	0.88	0.47	-0.17	0.05
32	0.95	0.31	-1.12	0.08
33	0.72	0.46	1.11	0.04
34	0.63	0.37	1.46	0.04
35	0.86	0.33	0.04	0.05
36	0.78	0.50	0.59	0.05
39	0.70	0.44	1.22	0.04
40	0.86	0.48	-0.05	0.05
41	0.50	0.30	2.20	0.04
42	0.88	0.45	-0.01	0.05
43	0.82	0.48	0.32	0.05
44	0.84	0.40	0.20	0.05
45	0.91	0.37	-0.58	0.06
46	0.70	0.30	1.09	0.04
47	0.87	0.44	-0.03	0.05
48	0.95	0.35	-1.28	0.08
49	0.71	0.37	1.16	0.04
50	0.97	0.35	-1.79	0.10
Mean	0.83	0.37	0.05	0.06

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 5 English: Literature & Research Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.77	0.49	0.79	0.02
2	0.85	0.35	0.06	0.02
3	0.92	0.39	-0.72	0.02
4	0.76	0.43	0.78	0.02
5	0.88	0.48	-0.22	0.02
6	0.91	0.45	-0.59	0.02
7	0.82	0.40	0.28	0.02
8	0.94	0.37	-1.13	0.03
9	0.97	0.24	-1.76	0.04
10	0.97	0.29	-1.69	0.04
11	0.76	0.21	0.64	0.02
12	0.96	0.25	-1.47	0.03
13	0.79	0.37	0.64	0.02
14	0.83	0.41	0.27	0.02
15	0.77	0.41	0.82	0.02
16	0.77	0.29	0.61	0.02
17	0.87	0.36	-0.23	0.02
18	0.87	0.47	-0.07	0.02
19	0.89	0.38	-0.39	0.02
20	0.84	0.44	0.27	0.02
21	0.90	0.51	-0.46	0.02
22	0.78	0.48	0.69	0.02
23	0.80	0.53	0.54	0.02
24	0.78	0.49	0.67	0.02
25	0.78	0.39	0.69	0.02
26	0.73	0.44	0.97	0.02
37	0.82	0.47	0.38	0.02
38	0.90	0.47	-0.35	0.02
39	0.78	0.57	0.66	0.02
40	0.85	0.49	0.07	0.02
41	0.80	0.49	0.51	0.02
42	0.67	0.52	1.37	0.02
43	0.89	0.55	-0.32	0.02
44	0.72	0.47	1.05	0.02
45	0.69	0.32	1.23	0.02
46	0.71	0.43	1.07	0.02
47	0.80	0.47	0.58	0.02
48	0.90	0.43	-0.47	0.02
49	0.81	0.57	0.39	0.02
50	0.87	0.47	-0.03	0.02
51	0.87	0.51	-0.03	0.02
52	0.84	0.49	0.16	0.02
Mean	0.83	0.43	0.15	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 5 English: Literature & Research Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.34	-1.02	0.08
2	0.60	0.38	1.53	0.04
3	0.92	0.37	-0.78	0.07
4	0.88	0.32	-0.26	0.06
5	0.90	0.42	-0.51	0.06
6	0.95	0.40	-1.43	0.09
7	0.71	0.35	1.08	0.04
8	0.95	0.36	-1.20	0.08
9	0.86	0.44	-0.01	0.05
10	0.55	0.44	1.78	0.04
11	0.95	0.36	-1.44	0.09
12	0.82	0.45	0.26	0.05
13	0.77	0.49	0.69	0.05
14	0.82	0.40	0.33	0.05
15	0.82	0.39	0.20	0.05
16	0.85	0.27	0.04	0.05
17	0.87	0.34	-0.11	0.06
18	0.78	0.46	0.59	0.05
19	0.69	0.35	1.14	0.04
20	0.97	0.26	-2.07	0.12
21	0.84	0.30	0.23	0.05
22	0.91	0.40	-0.53	0.06
23	0.91	0.40	-0.59	0.07
24	0.78	0.21	0.62	0.05
35	0.84	0.44	0.11	0.05
36	0.91	0.45	-0.66	0.07
37	0.80	0.53	0.47	0.05
38	0.95	0.39	-1.51	0.09
39	0.93	0.40	-0.88	0.07
40	0.89	0.52	-0.40	0.06
41	0.85	0.46	0.02	0.05
42	0.85	0.50	0.11	0.05
43	0.81	0.28	0.50	0.05
44	0.75	0.37	0.91	0.04
45	0.64	0.29	1.50	0.04
46	0.76	0.52	0.66	0.05
47	0.92	0.48	-0.91	0.07
48	0.84	0.58	0.11	0.05
49	0.75	0.59	0.81	0.05
50	0.88	0.24	-0.25	0.06
51	0.82	0.28	0.43	0.05
52	0.83	0.29	0.05	0.05
Mean	0.83	0.39	-0.01	0.06

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 5 Mathematics Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.96	0.20	-1.70	0.03
2	0.81	0.48	0.15	0.02
3	0.75	0.33	0.44	0.02
4	0.91	0.28	-0.90	0.02
5	0.93	0.25	-1.23	0.03
6	0.87	0.46	-0.38	0.02
7	0.90	0.39	-0.67	0.02
8	0.92	0.38	-1.01	0.02
9	0.83	0.42	0.02	0.02
10	0.83	0.51	0.06	0.02
11	0.93	0.37	-1.17	0.03
12	0.67	0.49	1.08	0.02
15	0.91	0.30	-0.89	0.02
16	0.70	0.42	0.84	0.02
17	0.72	0.44	0.73	0.02
18	0.78	0.46	0.43	0.02
19	0.96	0.31	-1.72	0.03
20	0.89	0.54	-0.46	0.02
21	0.76	0.29	0.42	0.02
22	0.68	0.41	0.99	0.02
25	0.87	0.30	-0.41	0.02
26	0.72	0.41	0.82	0.02
27	0.80	0.35	0.26	0.02
28	0.76	0.38	0.51	0.02
29	0.97	0.29	-1.87	0.03
30	0.51	0.34	2.01	0.01
31	0.87	0.37	-0.34	0.02
32	0.74	0.31	0.54	0.02
33	0.85	0.33	-0.19	0.02
34	0.77	0.43	0.44	0.02
35	0.89	0.33	-0.60	0.02
36	0.73	0.49	0.70	0.02
39	0.66	0.47	1.06	0.02
40	0.79	0.44	0.38	0.02
41	0.58	0.36	1.35	0.02
42	0.88	0.35	-0.50	0.02
43	0.72	0.32	0.73	0.02
44	0.84	0.42	-0.12	0.02
45	0.85	0.38	-0.11	0.02
46	0.93	0.30	-1.09	0.03
49	0.78	0.50	0.41	0.02
50	0.88	0.39	-0.49	0.02
51	0.81	0.49	0.25	0.02
52	0.73	0.40	0.74	0.02
53	0.72	0.45	0.74	0.02
54	0.80	0.49	0.27	0.02
55	0.91	0.33	-0.77	0.02
56	0.86	0.47	-0.23	0.02
57	0.72	0.51	0.81	0.02
58	0.59	0.45	1.52	0.01
Mean	0.80	0.39	0.04	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 5 Mathematics Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.96	0.38	-1.96	0.10
2	0.87	0.38	-0.23	0.05
3	0.95	0.31	-1.63	0.09
4	0.86	0.45	-0.22	0.05
5	0.89	0.41	-0.46	0.06
6	0.92	0.34	-0.96	0.07
7	0.76	0.34	0.66	0.04
8	0.95	0.23	-1.49	0.08
9	0.80	0.53	0.24	0.05
10	0.72	0.55	0.77	0.04
11	0.88	0.46	-0.43	0.06
12	0.94	0.38	-1.13	0.07
15	0.93	0.27	-1.03	0.07
16	0.94	0.33	-1.33	0.08
17	0.73	0.33	0.83	0.04
18	0.78	0.49	0.47	0.05
19	0.47	0.39	2.20	0.04
20	0.89	0.35	-0.44	0.06
21	0.81	0.41	0.27	0.05
22	0.86	0.50	-0.08	0.05
25	0.93	0.30	-1.00	0.07
26	0.88	0.39	-0.49	0.06
27	0.81	0.38	0.17	0.05
28	0.80	0.37	0.17	0.05
29	0.81	0.39	0.15	0.05
30	0.77	0.43	0.59	0.04
31	0.88	0.31	-0.57	0.06
32	0.80	0.44	0.12	0.05
33	0.65	0.37	1.19	0.04
34	0.72	0.43	0.89	0.04
35	0.79	0.32	0.34	0.05
36	0.64	0.37	1.23	0.04
39	0.79	0.39	0.39	0.05
40	0.87	0.45	-0.34	0.06
41	0.80	0.37	0.29	0.05
42	0.91	0.40	-0.76	0.06
43	0.81	0.43	0.22	0.05
44	0.77	0.48	0.57	0.04
45	0.82	0.36	0.32	0.05
46	0.92	0.40	-0.94	0.07
49	0.60	0.41	1.42	0.04
50	0.72	0.48	0.89	0.04
51	0.92	0.42	-0.95	0.07
52	0.94	0.39	-1.26	0.08
53	0.88	0.43	-0.37	0.06
54	0.69	0.45	1.03	0.04
55	0.78	0.47	0.39	0.05
56	0.64	0.37	1.55	0.04
57	0.94	0.35	-1.26	0.08
58	0.60	0.42	1.49	0.04
Mean	0.82	0.40	-0.01	0.05



Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 5 History/Social Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.91	0.38	-0.99	0.03
2	0.83	0.33	-0.19	0.03
3	0.73	0.52	0.58	0.02
4	0.91	0.43	-0.92	0.03
5	0.87	0.39	-0.53	0.03
6	0.89	0.41	-0.72	0.03
7	0.85	0.37	-0.36	0.03
10	0.80	0.48	0.06	0.03
11	0.81	0.40	-0.01	0.03
12	0.98	0.27	-2.38	0.06
13	0.80	0.41	0.02	0.03
14	0.85	0.42	-0.50	0.03
15	0.56	0.38	1.41	0.02
16	0.73	0.42	0.51	0.02
17	0.96	0.32	-1.75	0.05
22	0.85	0.38	-0.34	0.03
23	0.94	0.30	-1.57	0.04
24	0.73	0.44	0.61	0.02
25	0.88	0.39	-0.64	0.03
26	0.65	0.37	0.96	0.02
27	0.64	0.43	0.92	0.02
28	0.55	0.31	1.24	0.02
29	0.93	0.33	-1.35	0.04
30	0.75	0.42	0.45	0.02
31	0.81	0.35	-0.01	0.03
34	0.90	0.34	-0.92	0.03
35	0.68	0.43	0.79	0.02
36	0.64	0.44	1.03	0.02
37	0.77	0.34	0.20	0.03
38	0.51	0.44	1.62	0.02
39	0.68	0.26	0.73	0.02
40	0.92	0.34	-1.21	0.04
41	0.76	0.41	0.35	0.02
44	0.66	0.38	0.86	0.02
45	0.86	0.45	-0.43	0.03
46	0.74	0.39	0.48	0.02
47	0.72	0.45	0.47	0.02
48	0.66	0.42	0.89	0.02
49	0.89	0.41	-0.68	0.03
50	0.57	0.49	1.32	0.02
Mean	0.78	0.39	0.00	0.03

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 5 History/Social Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.87	0.31	-0.28	0.07
2	0.94	0.39	-1.26	0.09
3	0.90	0.43	-0.74	0.08
4	0.94	0.40	-1.08	0.09
5	0.92	0.33	-1.07	0.09
6	0.76	0.38	0.69	0.06
7	0.67	0.48	0.97	0.06
10	0.83	0.48	0.06	0.07
11	0.81	0.38	0.42	0.06
12	0.98	0.28	-2.37	0.15
13	0.84	0.39	-0.14	0.07
14	0.86	0.39	-0.53	0.07
15	0.91	0.41	-0.80	0.08
16	0.90	0.43	-0.75	0.08
17	0.97	0.29	-2.16	0.13
22	0.96	0.31	-1.95	0.12
23	0.83	0.46	-0.09	0.07
24	0.81	0.32	-0.01	0.07
25	0.90	0.40	-0.74	0.08
26	0.62	0.34	1.35	0.06
27	0.75	0.40	0.74	0.06
28	0.78	0.53	0.35	0.06
29	0.96	0.31	-1.41	0.10
30	0.66	0.36	1.18	0.06
31	0.82	0.42	0.19	0.06
34	0.75	0.57	0.71	0.06
35	0.72	0.42	0.98	0.06
36	0.66	0.43	1.05	0.06
37	0.79	0.38	0.33	0.06
38	0.50	0.45	1.84	0.06
39	0.93	0.38	-0.93	0.08
40	0.62	0.38	1.51	0.06
41	0.74	0.46	0.54	0.06
44	0.93	0.24	-1.28	0.10
45	0.79	0.47	0.23	0.06
46	0.80	0.38	0.31	0.06
47	0.89	0.44	-0.33	0.07
48	0.80	0.50	0.05	0.07
49	0.79	0.43	0.34	0.06
50	0.56	0.49	1.35	0.06
Mean	0.81	0.40	-0.07	0.07

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 5 Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.89	0.38	-0.58	0.02
2	0.85	0.32	-0.19	0.02
3	0.87	0.34	-0.28	0.02
4	0.95	0.30	-1.39	0.03
5	0.83	0.45	-0.03	0.02
6	0.95	0.36	-1.44	0.03
7	0.85	0.43	-0.16	0.02
8	0.91	0.40	-0.79	0.02
9	0.52	0.40	1.84	0.01
10	0.76	0.41	0.48	0.02
11	0.57	0.44	1.70	0.01
15	0.85	0.43	-0.16	0.02
16	0.80	0.52	0.17	0.02
17	0.87	0.47	-0.24	0.02
18	0.86	0.38	-0.29	0.02
19	0.90	0.27	-0.54	0.02
20	0.78	0.48	0.28	0.02
21	0.82	0.38	0.14	0.02
22	0.74	0.49	0.64	0.02
26	0.89	0.42	-0.57	0.02
27	0.75	0.45	0.58	0.02
28	0.80	0.26	0.17	0.02
29	0.86	0.49	-0.24	0.02
30	0.97	0.30	-1.94	0.03
31	0.59	0.46	1.45	0.01
32	0.74	0.39	0.68	0.02
33	0.56	0.47	1.58	0.01
36	0.91	0.40	-0.73	0.02
37	0.66	0.33	1.00	0.01
38	0.86	0.48	-0.16	0.02
39	0.74	0.39	0.56	0.02
40	0.54	0.38	1.73	0.01
43	0.79	0.31	0.38	0.02
44	0.75	0.37	0.52	0.02
45	0.85	0.38	-0.18	0.02
46	0.91	0.40	-0.76	0.02
47	0.91	0.41	-0.81	0.02
48	0.89	0.46	-0.50	0.02
49	0.58	0.41	1.48	0.01
50	0.88	0.40	-0.39	0.02
Mean	0.80	0.40	0.07	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 5 Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.94	0.31	-1.31	0.07
2	0.86	0.33	-0.49	0.05
3	0.85	0.37	-0.19	0.05
4	0.94	0.39	-1.50	0.07
5	0.91	0.35	-0.93	0.06
6	0.76	0.44	0.53	0.04
7	0.99	0.26	-2.84	0.13
11	0.86	0.37	-0.48	0.05
12	0.91	0.36	-1.04	0.06
13	0.88	0.34	-0.47	0.05
14	0.83	0.34	-0.07	0.05
15	0.88	0.45	-0.65	0.05
16	0.74	0.40	0.40	0.04
17	0.86	0.37	-0.40	0.05
18	0.56	0.38	1.52	0.04
19	0.81	0.51	0.00	0.05
20	0.76	0.52	0.32	0.04
21	0.88	0.44	-0.48	0.05
22	0.97	0.31	-2.25	0.10
26	0.73	0.36	0.44	0.04
27	0.64	0.35	1.09	0.04
28	0.83	0.38	-0.21	0.05
29	0.79	0.41	0.20	0.04
30	0.66	0.36	0.64	0.04
33	0.70	0.34	0.66	0.04
34	0.92	0.27	-0.89	0.06
35	0.75	0.40	0.60	0.04
36	0.77	0.34	0.26	0.04
37	0.95	0.37	-1.65	0.08
38	0.93	0.34	-1.25	0.07
39	0.60	0.42	1.20	0.04
40	0.87	0.45	-0.48	0.05
43	0.60	0.42	1.36	0.04
44	0.67	0.38	1.08	0.04
45	0.94	0.31	-1.51	0.07
46	0.68	0.47	0.72	0.04
47	0.83	0.52	-0.06	0.05
48	0.70	0.37	0.81	0.04
49	0.86	0.46	-0.43	0.05
50	0.78	0.46	0.29	0.04
Mean	0.81	0.38	-0.19	0.05

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 1, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.91	0.25	0.03	0.03
2	Multiple Choice	0.85	0.26	0.68	0.03
3	Multiple Choice	0.97	0.25	-1.31	0.06
4	Multiple Choice	0.93	0.32	-0.58	0.04
5	Multiple Choice	0.88	0.28	0.26	0.03
6	Multiple Choice	0.87	0.16	0.45	0.03
7	Multiple Choice	0.99	0.21	-2.50	0.10
8	Multiple Choice	0.92	0.36	-0.40	0.04
9	Multiple Choice	0.84	0.27	0.60	0.03
22	Multiple Choice	0.91	0.34	-0.21	0.04
23	Multiple Choice	0.89	0.36	0.18	0.03
24	Multiple Choice	0.96	0.28	-0.70	0.04
25	Multiple Choice	0.88	0.41	0.38	0.03
26	Multiple Choice	0.85	0.30	0.59	0.03
27	Multiple Choice	0.93	0.33	-0.25	0.04
28	Multiple Choice	0.65	0.39	1.77	0.02
29	Multiple Choice	0.95	0.22	-0.90	0.05
30	Multiple Choice	0.84	0.27	0.35	0.03
31	Multiple Choice	0.98	0.23	-1.65	0.06
32	Multiple Choice	0.73	0.36	1.38	0.02
51	Composing	0.69	0.77	2.12	0.01
52	Written Expression	0.70	0.78	1.93	0.01
53	Usage & Mechanics	0.84	0.75	0.88	0.01
Mean		0.87	0.36	0.13	0.03

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 1, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.91	0.25	-0.29	0.06
2	Multiple Choice	0.83	0.28	0.63	0.05
3	Multiple Choice	0.97	0.25	-1.56	0.10
4	Multiple Choice	0.92	0.34	-0.26	0.06
5	Multiple Choice	0.87	0.28	0.23	0.05
6	Multiple Choice	0.87	0.19	0.19	0.05
7	Multiple Choice	0.98	0.22	-2.19	0.13
8	Multiple Choice	0.88	0.38	-0.01	0.06
9	Multiple Choice	0.83	0.27	0.61	0.05
22	Multiple Choice	0.89	0.37	-0.06	0.06
23	Multiple Choice	0.88	0.38	0.18	0.05
24	Multiple Choice	0.95	0.28	-0.70	0.07
25	Multiple Choice	0.85	0.43	0.38	0.05
26	Multiple Choice	0.85	0.32	0.59	0.05
27	Multiple Choice	0.91	0.35	-0.25	0.06
28	Multiple Choice	0.61	0.42	1.77	0.04
29	Multiple Choice	0.95	0.25	-0.90	0.08
30	Multiple Choice	0.83	0.29	0.35	0.05
31	Multiple Choice	0.97	0.25	-1.65	0.10
32	Multiple Choice	0.73	0.39	1.38	0.04
51	Composing	0.60	0.75	3.02	0.02
52	Written Expression	0.61	0.77	2.84	0.02
53	Usage & Mechanics	0.83	0.74	1.20	0.02
Mean		0.85	0.37	0.24	0.06

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 2, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.74	0.45	0.27	0.05
2	Multiple Choice	0.85	0.42	-0.63	0.06
3	Multiple Choice	0.67	0.38	0.70	0.04
4	Multiple Choice	0.66	0.41	0.84	0.04
5	Multiple Choice	0.71	0.42	0.54	0.04
6	Multiple Choice	0.81	0.38	-0.15	0.05
7	Multiple Choice	0.88	0.38	-0.93	0.07
8	Multiple Choice	0.88	0.39	-0.96	0.07
9	Multiple Choice	0.81	0.41	-0.31	0.05
22	Multiple Choice	0.76	0.36	0.32	0.05
23	Multiple Choice	0.91	0.36	-1.19	0.07
24	Multiple Choice	0.74	0.32	0.49	0.04
25	Multiple Choice	0.80	0.42	-0.18	0.05
26	Multiple Choice	0.85	0.40	-0.90	0.07
27	Multiple Choice	0.57	0.35	1.65	0.04
28	Multiple Choice	0.69	0.44	0.65	0.04
29	Multiple Choice	0.69	0.41	0.53	0.04
30	Multiple Choice	0.84	0.46	-0.45	0.06
31	Multiple Choice	0.67	0.33	0.77	0.04
32	Multiple Choice	0.73	0.34	0.68	0.04
51	Composing	0.56	0.78	2.71	0.02
52	Written Expression	0.57	0.80	2.56	0.02
53	Usage & Mechanics	0.66	0.78	1.48	0.02
Mean		0.74	0.44	0.37	0.05

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 2, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.86	0.43	-0.21	0.08
2	Multiple Choice	0.93	0.35	-1.25	0.11
3	Multiple Choice	0.80	0.37	0.49	0.06
4	Multiple Choice	0.82	0.42	0.38	0.06
5	Multiple Choice	0.82	0.42	0.36	0.06
6	Multiple Choice	0.87	0.32	-0.19	0.08
7	Multiple Choice	0.94	0.31	-1.66	0.13
8	Multiple Choice	0.95	0.35	-1.51	0.12
9	Multiple Choice	0.89	0.41	-0.65	0.09
22	Multiple Choice	0.82	0.39	0.32	0.07
23	Multiple Choice	0.94	0.31	-1.19	0.11
24	Multiple Choice	0.80	0.38	0.49	0.06
25	Multiple Choice	0.88	0.41	-0.18	0.08
26	Multiple Choice	0.92	0.38	-0.90	0.10
27	Multiple Choice	0.62	0.35	1.65	0.05
28	Multiple Choice	0.79	0.44	0.65	0.06
29	Multiple Choice	0.83	0.41	0.53	0.06
30	Multiple Choice	0.91	0.41	-0.84	0.09
31	Multiple Choice	0.76	0.36	0.74	0.06
32	Multiple Choice	0.79	0.31	0.68	0.06
51	Composing	0.57	0.80	2.91	0.03
52	Written Expression	0.58	0.81	2.78	0.03
53	Usage & Mechanics	0.75	0.79	1.33	0.02
Mean		0.82	0.43	0.21	0.07



VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 3, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.90	0.26	-0.01	0.09
2	Multiple Choice	0.91	0.35	-0.13	0.10
3	Multiple Choice	0.94	0.27	-0.79	0.12
4	Multiple Choice	0.83	0.37	0.62	0.08
5	Multiple Choice	0.89	0.37	0.05	0.09
6	Multiple Choice	0.81	0.28	0.87	0.07
7	Multiple Choice	0.80	0.36	0.92	0.07
8	Multiple Choice	0.89	0.26	0.13	0.09
9	Multiple Choice	0.98	0.21	-1.74	0.18
22	Multiple Choice	0.90	0.37	0.32	0.08
23	Multiple Choice	0.95	0.28	-1.19	0.14
24	Multiple Choice	0.85	0.39	0.49	0.08
25	Multiple Choice	0.91	0.33	-0.18	0.10
26	Multiple Choice	0.95	0.37	-0.90	0.13
27	Multiple Choice	0.70	0.36	1.65	0.06
28	Multiple Choice	0.82	0.35	0.65	0.08
29	Multiple Choice	0.82	0.38	0.53	0.08
30	Multiple Choice	0.95	0.33	-1.01	0.13
31	Multiple Choice	0.83	0.32	0.77	0.07
32	Multiple Choice	0.83	0.28	0.68	0.08
51	Composing	0.65	0.79	2.47	0.03
52	Written Expression	0.66	0.80	2.44	0.03
53	Usage & Mechanics	0.80	0.78	1.33	0.03
Mean		0.85	0.38	0.35	0.09

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 5: Multiple Choice Core 3, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.88	0.26	0.10	0.07
2	Multiple Choice	0.91	0.31	-0.16	0.07
3	Multiple Choice	0.94	0.28	-0.78	0.09
4	Multiple Choice	0.84	0.35	0.57	0.06
5	Multiple Choice	0.87	0.36	0.24	0.07
6	Multiple Choice	0.80	0.29	0.88	0.06
7	Multiple Choice	0.79	0.36	0.89	0.06
8	Multiple Choice	0.92	0.29	-0.39	0.08
9	Multiple Choice	0.97	0.24	-1.65	0.13
22	Multiple Choice	0.90	0.35	0.32	0.06
23	Multiple Choice	0.95	0.26	-1.19	0.11
24	Multiple Choice	0.85	0.33	0.49	0.06
25	Multiple Choice	0.91	0.30	-0.18	0.07
26	Multiple Choice	0.96	0.31	-0.90	0.10
27	Multiple Choice	0.65	0.36	1.65	0.05
28	Multiple Choice	0.80	0.38	0.65	0.06
29	Multiple Choice	0.83	0.36	0.53	0.06
30	Multiple Choice	0.94	0.32	-0.76	0.09
31	Multiple Choice	0.79	0.30	0.93	0.05
32	Multiple Choice	0.84	0.30	0.68	0.06
51	Composing	0.60	0.78	2.87	0.03
52	Written Expression	0.61	0.78	2.72	0.03
53	Usage & Mechanics	0.81	0.76	1.12	0.02
Mean		0.84	0.37	0.38	0.07

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 8 English: Literature & Research Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.95	0.34	-1.97	0.03
2	0.88	0.28	-0.96	0.02
3	0.42	0.32	1.78	0.02
4	0.88	0.39	-0.91	0.02
5	0.90	0.43	-1.17	0.02
6	0.88	0.39	-0.98	0.02
7	0.73	0.51	0.21	0.02
8	0.82	0.45	-0.36	0.02
9	0.88	0.40	-1.00	0.02
10	0.83	0.26	-0.51	0.02
11	0.87	0.40	-0.83	0.02
12	0.92	0.39	-1.31	0.02
13	0.85	0.41	-0.69	0.02
14	0.75	0.36	0.09	0.02
15	0.50	0.41	1.48	0.01
16	0.86	0.29	-0.76	0.02
17	0.64	0.37	0.73	0.02
18	0.74	0.48	0.20	0.02
19	0.78	0.37	-0.18	0.02
20	0.82	0.44	-0.39	0.02
21	0.66	0.53	0.65	0.02
22	0.82	0.41	-0.33	0.02
23	0.61	0.42	0.91	0.02
24	0.72	0.37	0.26	0.02
25	0.92	0.47	-1.38	0.02
36	0.75	0.51	0.10	0.02
37	0.78	0.42	0.12	0.02
38	0.81	0.40	-0.31	0.02
39	0.67	0.39	0.56	0.02
40	0.90	0.38	-1.26	0.02
41	0.92	0.42	-1.39	0.02
42	0.84	0.44	-0.51	0.02
43	0.72	0.50	0.33	0.02
44	0.83	0.55	-0.50	0.02
45	0.62	0.35	0.93	0.02
46	0.67	0.35	0.53	0.02
47	0.62	0.55	0.91	0.02
48	0.91	0.44	-1.31	0.02
49	0.78	0.51	-0.11	0.02
50	0.83	0.42	-0.52	0.02
51	0.87	0.47	-0.86	0.02
52	0.47	0.33	1.56	0.01
Mean	0.78	0.41	-0.22	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 8 English: Literature & Research Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.80	0.32	-0.09	0.05
2	0.74	0.55	0.18	0.04
3	0.95	0.33	-2.15	0.09
4	0.65	0.40	0.68	0.04
5	0.76	0.42	0.10	0.04
6	0.58	0.41	1.07	0.04
7	0.82	0.37	-0.37	0.05
8	0.84	0.33	-0.54	0.05
9	0.73	0.35	0.33	0.04
10	0.90	0.43	-1.13	0.06
11	0.90	0.46	-1.20	0.06
12	0.84	0.30	-0.50	0.05
13	0.80	0.30	-0.15	0.05
14	0.84	0.46	-0.53	0.05
15	0.62	0.35	0.89	0.04
16	0.89	0.34	-1.03	0.06
17	0.90	0.47	-1.17	0.06
18	0.69	0.45	0.59	0.04
19	0.87	0.51	-0.87	0.06
20	0.73	0.36	0.25	0.04
21	0.78	0.42	-0.09	0.05
22	0.92	0.32	-1.51	0.07
23	0.75	0.36	0.11	0.04
24	0.93	0.31	-1.69	0.07
25	0.82	0.47	-0.29	0.05
26	0.93	0.48	-1.69	0.07
37	0.80	0.31	-0.28	0.05
38	0.80	0.48	-0.24	0.05
39	0.71	0.35	0.41	0.04
40	0.91	0.44	-1.33	0.07
41	0.51	0.20	1.54	0.04
42	0.92	0.53	-1.47	0.07
43	0.68	0.43	0.70	0.04
44	0.39	0.43	2.00	0.04
45	0.65	0.35	0.66	0.04
46	0.84	0.45	-0.57	0.05
47	0.74	0.48	0.17	0.04
48	0.86	0.50	-0.77	0.05
49	0.84	0.48	-0.53	0.05
50	0.63	0.48	0.80	0.04
51	0.74	0.51	0.10	0.04
52	0.74	0.46	0.21	0.04
Mean	0.78	0.41	-0.22	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 8 Mathematics Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.79	0.41	-0.01	0.02
2	0.98	0.23	-2.69	0.04
3	0.79	0.38	-0.05	0.02
4	0.38	0.32	2.17	0.01
5	0.17	0.35	3.59	0.02
6	0.85	0.36	-0.52	0.02
7	0.79	0.36	0.01	0.02
8	0.96	0.30	-2.06	0.03
11	0.84	0.40	-0.44	0.02
12	0.90	0.48	-0.98	0.02
13	0.83	0.41	-0.40	0.02
14	0.57	0.41	1.21	0.01
15	0.83	0.45	-0.27	0.02
16	0.73	0.60	0.38	0.02
17	0.95	0.37	-1.79	0.03
21	0.78	0.37	0.04	0.02
22	0.80	0.45	-0.09	0.02
23	0.80	0.49	-0.04	0.02
24	0.57	0.30	1.20	0.01
25	0.92	0.35	-1.31	0.02
26	0.70	0.35	0.55	0.01
27	0.66	0.40	0.81	0.01
28	0.72	0.48	0.42	0.01
29	0.80	0.45	-0.14	0.02
30	0.69	0.45	0.61	0.01
31	0.59	0.39	1.15	0.01
32	0.70	0.40	0.60	0.01
33	0.76	0.52	0.19	0.02
34	0.82	0.46	-0.21	0.02
37	0.56	0.44	1.30	0.01
38	0.94	0.35	-1.69	0.03
39	0.84	0.51	-0.41	0.02
40	0.88	0.43	-0.78	0.02
41	0.91	0.43	-1.20	0.02
42	0.61	0.41	1.05	0.01
43	0.75	0.39	0.24	0.02
44	0.57	0.37	1.24	0.01
45	0.59	0.42	1.11	0.01
46	0.75	0.32	0.26	0.02
47	0.78	0.35	0.02	0.02
48	0.92	0.32	-1.38	0.02
53	0.67	0.56	0.72	0.01
54	0.81	0.52	-0.14	0.02
55	0.87	0.36	-0.69	0.02
56	0.85	0.56	-0.43	0.02
57	0.66	0.33	0.71	0.01
58	0.77	0.48	0.15	0.02
59	0.60	0.33	1.09	0.01
60	0.79	0.46	-0.04	0.02
61	0.56	0.49	1.31	0.01
62	0.61	0.39	1.05	0.01
63	0.76	0.52	0.20	0.02
64	0.48	0.38	1.68	0.01
65	0.66	0.47	0.85	0.01
66	0.47	0.47	1.75	0.01
67	0.73	0.56	0.36	0.02
68	0.72	0.47	0.44	0.01
69	0.67	0.47	0.70	0.01
70	0.77	0.47	0.09	0.02
Mean	0.73	0.42	0.20	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 8 Mathematics Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.38	-1.66	0.08
2	0.51	0.38	1.30	0.04
3	0.87	0.45	-0.76	0.06
4	0.34	0.35	2.42	0.04
5	0.82	0.45	-0.52	0.05
6	0.91	0.44	-1.41	0.07
7	0.41	0.25	1.89	0.04
8	0.95	0.42	-2.08	0.09
11	0.83	0.46	-0.63	0.06
12	0.83	0.49	-0.57	0.05
13	0.83	0.40	-0.53	0.05
14	0.89	0.41	-1.23	0.07
15	0.81	0.52	-0.42	0.05
16	0.78	0.48	-0.09	0.05
17	0.91	0.34	-1.25	0.07
20	0.92	0.42	-1.68	0.08
21	0.74	0.39	0.23	0.05
22	0.71	0.45	0.33	0.04
23	0.72	0.54	-0.07	0.05
24	0.62	0.50	0.79	0.04
25	0.60	0.49	0.71	0.04
26	0.89	0.33	-0.93	0.06
27	0.70	0.41	0.45	0.04
28	0.75	0.43	0.09	0.05
29	0.68	0.26	0.52	0.04
30	0.80	0.50	-0.41	0.05
31	0.82	0.43	-0.25	0.05
32	0.83	0.40	-0.44	0.05
33	0.85	0.42	-0.67	0.06
34	0.64	0.52	0.69	0.04
37	0.82	0.41	-0.30	0.05
38	0.80	0.44	-0.20	0.05
39	0.73	0.36	0.13	0.05
40	0.77	0.50	-0.09	0.05
41	0.81	0.57	-0.34	0.05
42	0.80	0.45	-0.29	0.05
43	0.53	0.46	1.36	0.04
44	0.68	0.49	0.59	0.04
45	0.77	0.50	0.04	0.05
46	0.90	0.50	-1.22	0.07
47	0.86	0.47	-0.78	0.06
48	0.88	0.40	-0.97	0.06
53	0.84	0.30	-0.54	0.05
54	0.83	0.46	-0.57	0.05
55	0.65	0.44	0.65	0.04
56	0.72	0.52	0.21	0.05
57	0.78	0.38	-0.25	0.05
58	0.60	0.51	0.98	0.04
59	0.52	0.37	1.45	0.04
60	0.76	0.59	0.00	0.05
61	0.64	0.16	0.78	0.04
62	0.57	0.50	1.13	0.04
63	0.36	0.20	2.24	0.04
64	0.77	0.50	-0.12	0.05
65	0.58	0.53	1.04	0.04
66	0.81	0.48	-0.43	0.05
67	0.58	0.38	0.97	0.04
68	0.71	0.55	0.30	0.05
69	0.77	0.31	0.04	0.05
70	0.89	0.48	-1.16	0.06
Mean	0.74	0.43	-0.03	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 8 History/Social Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.79	0.32	-0.32	0.03
2	0.78	0.39	-0.20	0.03
3	0.48	0.47	1.50	0.03
4	0.77	0.43	-0.13	0.03
5	0.82	0.38	-0.40	0.03
6	0.74	0.35	0.02	0.03
7	0.47	0.38	1.47	0.03
8	0.91	0.37	-1.29	0.04
9	0.83	0.41	-0.55	0.03
10	0.75	0.49	-0.01	0.03
11	0.72	0.39	0.25	0.03
12	0.51	0.42	1.64	0.03
16	0.71	0.38	0.33	0.03
17	0.75	0.44	0.06	0.03
18	0.86	0.45	-0.83	0.04
19	0.72	0.39	0.25	0.03
20	0.77	0.51	-0.11	0.03
21	0.63	0.53	0.72	0.03
22	0.70	0.50	0.22	0.03
23	0.88	0.39	-1.04	0.04
24	0.76	0.47	0.03	0.03
25	0.69	0.41	0.34	0.03
26	0.68	0.49	0.41	0.03
27	0.78	0.53	-0.17	0.03
30	0.87	0.45	-0.90	0.04
31	0.70	0.51	0.37	0.03
32	0.79	0.44	-0.26	0.03
33	0.63	0.41	0.69	0.03
34	0.60	0.50	0.91	0.03
37	0.64	0.38	0.57	0.03
38	0.92	0.43	-1.44	0.04
39	0.82	0.41	-0.52	0.03
40	0.77	0.50	-0.03	0.03
41	0.75	0.40	-0.02	0.03
42	0.54	0.36	1.08	0.03
43	0.83	0.43	-0.54	0.03
44	0.88	0.38	-1.05	0.04
45	0.68	0.45	0.52	0.03
49	0.76	0.53	-0.01	0.03
50	0.91	0.33	-1.34	0.04
51	0.83	0.46	-0.54	0.03
52	0.68	0.46	0.30	0.03
53	0.75	0.49	0.00	0.03
54	0.68	0.33	0.38	0.03
55	0.62	0.48	0.80	0.03
56	0.67	0.41	0.34	0.03
57	0.78	0.43	-0.23	0.03
58	0.89	0.43	-1.16	0.04
59	0.70	0.45	0.17	0.03
60	0.78	0.36	-0.29	0.03
Mean	0.74	0.43	0.00	0.03

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 8 History/Social Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.72	0.40	-0.07	0.08
2	0.70	0.41	-0.09	0.09
3	0.38	0.06	1.86	0.08
4	0.73	0.48	-0.44	0.09
5	0.68	0.53	0.14	0.08
6	0.70	0.40	-0.13	0.09
7	0.87	0.53	-1.50	0.13
8	0.58	0.41	0.76	0.08
9	0.70	0.44	0.08	0.08
10	0.85	0.49	-1.21	0.11
11	0.68	0.37	0.28	0.08
12	0.83	0.46	-0.83	0.10
16	0.68	0.41	0.14	0.08
17	0.66	0.49	0.34	0.08
18	0.71	0.47	-0.13	0.09
19	0.69	0.41	0.22	0.08
20	0.62	0.31	0.74	0.08
21	0.78	0.51	-0.58	0.09
22	0.61	0.38	0.70	0.08
23	0.75	0.44	-0.59	0.09
24	0.70	0.47	-0.06	0.08
25	0.75	0.50	-0.41	0.09
26	0.71	0.44	-0.14	0.09
27	0.70	0.53	0.10	0.08
30	0.77	0.40	-0.14	0.09
31	0.62	0.50	0.38	0.08
32	0.86	0.36	-0.85	0.10
33	0.70	0.35	0.00	0.08
34	0.73	0.39	-0.38	0.09
37	0.71	0.32	0.04	0.08
38	0.91	0.38	-1.99	0.15
39	0.80	0.40	-0.67	0.10
40	0.63	0.42	0.42	0.08
41	0.65	0.36	0.33	0.08
42	0.67	0.33	0.06	0.08
43	0.76	0.49	-0.36	0.09
44	0.67	0.45	0.15	0.08
45	0.63	0.44	0.58	0.08
49	0.77	0.38	-0.56	0.09
50	0.58	0.47	0.34	0.08
51	0.80	0.52	-0.89	0.10
52	0.81	0.31	-0.62	0.10
53	0.69	0.56	0.04	0.08
54	0.75	0.43	-0.57	0.09
55	0.60	0.43	0.51	0.08
56	0.40	0.39	1.65	0.08
57	0.47	0.38	1.20	0.08
58	0.80	0.50	-0.87	0.10
59	0.64	0.49	0.44	0.08
60	0.72	0.40	-0.04	0.08
Mean	0.70	0.42	-0.05	0.09



Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 8 Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.87	0.30	-0.61	0.02
2	0.94	0.29	-1.41	0.03
3	0.92	0.40	-1.19	0.02
4	0.83	0.24	-0.23	0.02
5	0.86	0.38	-0.49	0.02
6	0.94	0.29	-1.53	0.03
7	0.80	0.43	0.10	0.02
8	0.65	0.36	0.99	0.02
9	0.81	0.53	-0.04	0.02
10	0.93	0.41	-1.18	0.02
11	0.81	0.33	0.06	0.02
12	0.67	0.37	0.80	0.02
13	0.81	0.41	-0.05	0.02
14	0.68	0.37	0.74	0.02
15	0.76	0.50	0.29	0.02
19	0.79	0.38	0.08	0.02
20	0.84	0.38	-0.31	0.02
21	0.77	0.41	0.33	0.02
22	0.87	0.49	-0.56	0.02
23	0.67	0.43	0.87	0.02
24	0.59	0.40	1.25	0.01
25	0.80	0.42	0.07	0.02
26	0.49	0.39	1.69	0.01
27	0.64	0.48	1.07	0.02
30	0.79	0.46	0.09	0.02
31	0.87	0.39	-0.60	0.02
32	0.60	0.35	1.15	0.02
33	0.86	0.51	-0.42	0.02
34	0.66	0.46	0.80	0.02
35	0.64	0.34	1.04	0.02
36	0.92	0.45	-1.06	0.02
37	0.77	0.46	0.33	0.02
38	0.62	0.39	1.15	0.02
39	0.76	0.46	0.25	0.02
43	0.69	0.46	0.73	0.02
44	0.86	0.43	-0.50	0.02
45	0.80	0.40	0.13	0.02
46	0.76	0.49	0.29	0.02
47	0.76	0.54	0.35	0.02
48	0.85	0.44	-0.39	0.02
51	0.66	0.53	0.97	0.02
52	0.80	0.37	0.01	0.02
53	0.69	0.40	0.77	0.02
54	0.88	0.39	-0.70	0.02
55	0.89	0.30	-0.78	0.02
56	0.73	0.32	0.52	0.02
57	0.78	0.49	0.29	0.02
58	0.62	0.43	1.08	0.02
59	0.92	0.39	-1.22	0.02
60	0.90	0.45	-0.88	0.02
Mean	0.78	0.41	0.08	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 8 Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.88	0.33	-0.71	0.06
2	0.83	0.44	-0.27	0.05
3	0.93	0.33	-1.33	0.07
4	0.93	0.37	-1.48	0.07
5	0.61	0.31	1.28	0.04
6	0.55	0.28	1.56	0.04
7	0.83	0.41	-0.23	0.05
8	0.76	0.49	0.24	0.04
9	0.83	0.43	-0.15	0.05
12	0.94	0.39	-1.58	0.08
13	0.71	0.55	0.69	0.04
14	0.78	0.42	0.10	0.05
15	0.72	0.43	0.70	0.04
16	0.78	0.43	0.14	0.04
17	0.92	0.30	-1.29	0.07
21	0.76	0.46	0.30	0.04
22	0.56	0.33	1.49	0.04
23	0.91	0.46	-1.18	0.07
24	0.74	0.46	0.41	0.04
25	0.57	0.54	1.44	0.04
26	0.89	0.39	-0.79	0.06
27	0.82	0.41	0.01	0.05
28	0.66	0.43	0.93	0.04
29	0.93	0.42	-1.42	0.07
30	0.92	0.48	-1.27	0.07
31	0.67	0.46	0.84	0.04
32	0.61	0.53	1.06	0.04
35	0.72	0.39	0.53	0.04
36	0.72	0.50	0.48	0.04
37	0.93	0.31	-1.39	0.07
38	0.62	0.42	1.02	0.04
39	0.66	0.36	0.91	0.04
40	0.90	0.53	-0.88	0.06
44	0.72	0.51	0.50	0.04
45	0.69	0.30	0.78	0.04
46	0.77	0.55	0.37	0.04
47	0.87	0.31	-0.69	0.06
48	0.87	0.52	-0.74	0.06
49	0.90	0.39	-1.04	0.06
50	0.91	0.45	-1.13	0.06
51	0.82	0.32	-0.13	0.05
52	0.73	0.53	0.54	0.04
53	0.72	0.47	0.53	0.04
54	0.76	0.47	0.29	0.04
55	0.64	0.40	0.91	0.04
56	0.75	0.41	0.51	0.04
57	0.76	0.47	0.39	0.04
58	0.65	0.46	0.88	0.04
59	0.94	0.44	-1.60	0.08
60	0.82	0.55	-0.21	0.05
Mean	0.78	0.43	0.01	0.05

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 1, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.88	0.37	-0.70	0.03
2	Multiple Choice	0.96	0.26	-2.09	0.05
3	Multiple Choice	0.88	0.40	-0.74	0.03
4	Multiple Choice	0.59	0.43	1.32	0.02
5	Multiple Choice	0.90	0.35	-0.94	0.03
6	Multiple Choice	0.93	0.35	-1.42	0.04
7	Multiple Choice	0.86	0.18	-0.31	0.02
8	Multiple Choice	0.73	0.34	0.53	0.02
9	Multiple Choice	0.93	0.24	-1.26	0.03
10	Multiple Choice	0.60	0.31	1.42	0.02
25	Multiple Choice	0.87	0.31	-0.87	0.03
26	Multiple Choice	0.86	0.33	-0.62	0.03
27	Multiple Choice	0.76	0.47	0.25	0.02
28	Multiple Choice	0.83	0.34	-0.42	0.03
29	Multiple Choice	0.56	0.47	1.73	0.02
30	Multiple Choice	0.80	0.44	0.34	0.02
31	Multiple Choice	0.84	0.32	-0.20	0.02
32	Multiple Choice	0.27	0.27	3.07	0.02
33	Multiple Choice	0.82	0.39	-0.05	0.02
34	Multiple Choice	0.92	0.44	-1.16	0.03
51	Composing	0.72	0.78	0.87	0.01
52	Written Expression	0.73	0.81	0.73	0.01
53	Usage & Mechanics	0.80	0.81	0.25	0.01
Mean		0.78	0.41	-0.01	0.02

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 1, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.85	0.39	-0.64	0.05
2	Multiple Choice	0.95	0.29	-2.03	0.08
3	Multiple Choice	0.85	0.40	-0.64	0.05
4	Multiple Choice	0.54	0.43	1.35	0.04
5	Multiple Choice	0.88	0.37	-1.09	0.06
6	Multiple Choice	0.92	0.36	-1.51	0.06
7	Multiple Choice	0.86	0.19	-0.89	0.05
8	Multiple Choice	0.71	0.36	0.51	0.04
9	Multiple Choice	0.92	0.25	-1.49	0.06
10	Multiple Choice	0.61	0.31	0.98	0.04
25	Multiple Choice	0.83	0.32	-0.87	0.05
26	Multiple Choice	0.83	0.35	-0.62	0.05
27	Multiple Choice	0.72	0.48	0.25	0.04
28	Multiple Choice	0.81	0.35	-0.42	0.05
29	Multiple Choice	0.51	0.47	1.73	0.04
30	Multiple Choice	0.76	0.45	0.34	0.04
31	Multiple Choice	0.83	0.34	-0.20	0.04
32	Multiple Choice	0.24	0.24	3.07	0.04
33	Multiple Choice	0.79	0.41	-0.05	0.04
34	Multiple Choice	0.89	0.46	-1.16	0.06
51	Composing	0.69	0.78	1.18	0.02
52	Written Expression	0.70	0.81	1.01	0.02
53	Usage & Mechanics	0.77	0.82	0.54	0.02
Mean		0.76	0.42	-0.03	0.04

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 2, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.73	0.34	-0.83	0.05
2	Multiple Choice	0.72	0.34	-0.75	0.05
3	Multiple Choice	0.67	0.45	-0.59	0.05
4	Multiple Choice	0.69	0.36	-0.55	0.05
5	Multiple Choice	0.53	0.39	0.40	0.05
6	Multiple Choice	0.78	0.48	-1.34	0.06
7	Multiple Choice	0.72	0.44	-0.85	0.05
8	Multiple Choice	0.41	0.31	1.04	0.05
9	Multiple Choice	0.47	0.20	0.92	0.05
10	Multiple Choice	0.43	0.40	0.83	0.05
25	Multiple Choice	0.77	0.44	-0.83	0.05
26	Multiple Choice	0.77	0.46	-1.24	0.06
27	Multiple Choice	0.80	0.41	-1.58	0.06
28	Multiple Choice	0.61	0.44	-0.06	0.05
29	Multiple Choice	0.54	0.47	0.13	0.05
30	Multiple Choice	0.83	0.42	-1.93	0.07
31	Multiple Choice	0.56	0.46	-0.11	0.05
32	Multiple Choice	0.48	0.41	1.11	0.05
33	Multiple Choice	0.63	0.55	-0.66	0.05
34	Multiple Choice	0.41	0.42	0.69	0.05
51	Composing	0.59	0.85	0.98	0.02
52	Written Expression	0.59	0.86	0.87	0.02
53	Usage & Mechanics	0.63	0.85	0.39	0.02
Mean		0.62	0.47	-0.17	0.05

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 2, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.81	0.32	-0.55	0.06
2	Multiple Choice	0.79	0.32	-0.41	0.06
3	Multiple Choice	0.80	0.38	-0.45	0.06
4	Multiple Choice	0.78	0.40	-0.43	0.06
5	Multiple Choice	0.67	0.41	0.34	0.05
6	Multiple Choice	0.87	0.42	-1.25	0.07
7	Multiple Choice	0.82	0.40	-0.70	0.06
8	Multiple Choice	0.53	0.35	1.11	0.05
9	Multiple Choice	0.47	0.24	1.63	0.05
10	Multiple Choice	0.55	0.39	1.00	0.05
25	Multiple Choice	0.87	0.43	-0.83	0.06
26	Multiple Choice	0.87	0.45	-1.24	0.07
27	Multiple Choice	0.89	0.39	-1.58	0.08
28	Multiple Choice	0.71	0.45	-0.06	0.05
29	Multiple Choice	0.70	0.48	0.10	0.05
30	Multiple Choice	0.91	0.36	-1.93	0.09
31	Multiple Choice	0.72	0.52	-0.11	0.05
32	Multiple Choice	0.63	0.44	1.11	0.05
33	Multiple Choice	0.78	0.53	-0.66	0.06
34	Multiple Choice	0.57	0.48	0.69	0.05
51	Composing	0.65	0.84	1.07	0.02
52	Written Expression	0.66	0.85	0.96	0.02
53	Usage & Mechanics	0.72	0.85	0.47	0.02
Mean		0.73	0.47	-0.08	0.05

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 3, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.65	0.37	0.89	0.06
2	Multiple Choice	0.79	0.30	-0.02	0.07
3	Multiple Choice	0.58	0.38	1.27	0.06
4	Multiple Choice	0.93	0.21	-1.48	0.10
5	Multiple Choice	0.73	0.26	0.37	0.06
6	Multiple Choice	0.65	0.40	0.85	0.06
7	Multiple Choice	0.74	0.36	0.37	0.06
8	Multiple Choice	0.51	0.53	1.60	0.05
9	Multiple Choice	0.64	0.39	0.94	0.06
10	Multiple Choice	0.87	0.35	-0.77	0.08
25	Multiple Choice	0.88	0.37	-0.83	0.08
26	Multiple Choice	0.90	0.34	-1.24	0.09
27	Multiple Choice	0.93	0.29	-1.58	0.10
28	Multiple Choice	0.79	0.42	-0.06	0.07
29	Multiple Choice	0.81	0.48	-0.15	0.07
30	Multiple Choice	0.96	0.21	-1.93	0.12
31	Multiple Choice	0.80	0.40	-0.11	0.07
32	Multiple Choice	0.65	0.42	1.11	0.06
33	Multiple Choice	0.86	0.41	-0.66	0.08
34	Multiple Choice	0.64	0.50	0.69	0.06
51	Composing	0.69	0.77	0.99	0.03
52	Written Expression	0.69	0.79	0.91	0.03
53	Usage & Mechanics	0.77	0.79	0.27	0.03
Mean		0.76	0.42	0.06	0.07

VASOL Assessments - Spring 2004

Item Analysis for Writing Grade 8: Multiple Choice Core 3, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.66	0.40	0.79	0.05
2	Multiple Choice	0.78	0.31	0.10	0.05
3	Multiple Choice	0.59	0.39	1.21	0.05
4	Multiple Choice	0.94	0.21	-1.58	0.09
5	Multiple Choice	0.73	0.25	0.41	0.05
6	Multiple Choice	0.67	0.40	0.75	0.05
7	Multiple Choice	0.74	0.31	0.30	0.05
8	Multiple Choice	0.52	0.52	1.63	0.05
9	Multiple Choice	0.66	0.38	0.80	0.05
10	Multiple Choice	0.90	0.27	-1.11	0.07
25	Multiple Choice	0.90	0.33	-0.83	0.07
26	Multiple Choice	0.92	0.34	-1.24	0.08
27	Multiple Choice	0.93	0.28	-1.58	0.09
28	Multiple Choice	0.78	0.39	-0.06	0.05
29	Multiple Choice	0.83	0.45	-0.37	0.06
30	Multiple Choice	0.95	0.25	-1.93	0.10
31	Multiple Choice	0.80	0.40	-0.11	0.05
32	Multiple Choice	0.67	0.38	1.11	0.05
33	Multiple Choice	0.87	0.39	-0.66	0.06
34	Multiple Choice	0.64	0.44	0.69	0.05
51	Composing	0.69	0.76	1.09	0.02
52	Written Expression	0.71	0.79	0.81	0.02
53	Usage & Mechanics	0.77	0.80	0.44	0.02
Mean		0.77	0.41	0.03	0.05



Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course English: Literature & Research Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.85	0.33	-0.07	0.04
2	0.97	0.29	-2.16	0.10
3	0.96	0.30	-1.84	0.08
4	0.96	0.17	-1.67	0.08
5	0.76	0.38	0.57	0.04
6	0.93	0.30	-1.10	0.06
7	0.80	0.34	0.28	0.04
8	0.88	0.37	-0.29	0.05
9	0.55	0.29	1.76	0.03
10	0.78	0.26	0.57	0.04
11	0.87	0.30	-0.32	0.05
12	0.69	0.40	0.99	0.03
13	0.56	0.18	1.71	0.03
14	0.89	0.38	-0.51	0.05
15	0.96	0.36	-1.71	0.08
16	0.95	0.31	-1.43	0.07
17	0.91	0.39	-0.93	0.06
18	0.89	0.36	-0.47	0.05
19	0.92	0.43	-0.83	0.05
20	0.84	0.42	-0.03	0.04
21	0.62	0.38	1.39	0.03
22	0.95	0.32	-1.39	0.07
23	0.77	0.38	0.67	0.04
24	0.91	0.42	-0.70	0.05
35	0.71	0.40	0.88	0.03
36	0.91	0.46	-0.85	0.05
37	0.74	0.40	0.70	0.04
38	0.80	0.28	0.26	0.04
39	0.82	0.45	0.21	0.04
40	0.96	0.45	-1.61	0.07
41	0.68	0.29	0.97	0.03
42	0.81	0.42	0.16	0.04
43	0.85	0.35	-0.03	0.04
44	0.68	0.32	0.93	0.03
45	0.90	0.44	-0.73	0.05
46	0.80	0.39	0.18	0.04
47	0.86	0.51	-0.15	0.04
48	0.73	0.42	0.77	0.03
49	0.70	0.38	0.74	0.04
50	0.68	0.49	1.13	0.03
51	0.78	0.40	0.38	0.04
52	0.53	0.37	1.86	0.03
Mean	0.81	0.36	-0.04	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course English: Literature & Research Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.98	0.16	-2.42	0.10
2	0.96	0.26	-1.57	0.07
3	0.94	0.37	-1.19	0.06
4	0.94	0.29	-1.34	0.06
5	0.76	0.27	0.50	0.04
6	0.86	0.31	-0.23	0.04
7	0.71	0.33	0.89	0.03
8	0.81	0.42	0.19	0.04
9	0.94	0.38	-1.24	0.06
10	0.74	0.27	0.69	0.03
11	0.66	0.34	1.12	0.03
12	0.94	0.41	-1.33	0.06
13	0.93	0.38	-1.01	0.06
14	0.73	0.52	0.73	0.03
15	0.94	0.47	-1.14	0.06
16	0.95	0.41	-1.43	0.07
27	0.90	0.45	-0.56	0.05
28	0.93	0.31	-1.03	0.06
29	0.90	0.29	-0.68	0.05
30	0.66	0.33	1.09	0.03
31	0.92	0.53	-0.96	0.05
32	0.73	0.40	0.76	0.03
33	0.63	0.43	1.29	0.03
34	0.76	0.38	0.56	0.03
35	0.78	0.30	0.40	0.04
36	0.82	0.35	0.19	0.04
37	0.85	0.23	-0.14	0.04
38	0.79	0.38	0.35	0.04
39	0.89	0.41	-0.54	0.05
40	0.87	0.43	-0.31	0.04
41	0.95	0.35	-1.40	0.06
42	0.71	0.33	0.84	0.03
43	0.85	0.37	-0.12	0.04
44	0.65	0.42	1.19	0.03
45	0.82	0.38	0.08	0.04
46	0.83	0.39	0.04	0.04
47	0.47	0.21	2.08	0.03
48	0.90	0.44	-0.66	0.05
49	0.90	0.43	-0.63	0.05
50	0.89	0.43	-0.49	0.05
51	0.82	0.37	0.13	0.04
52	0.97	0.34	-1.94	0.08
Mean	0.83	0.36	-0.22	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Algebra I Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.88	0.33	-1.10	0.05
2	0.68	0.44	0.44	0.03
3	0.86	0.46	-0.79	0.04
4	0.82	0.37	-0.44	0.04
5	0.87	0.42	-0.90	0.04
6	0.77	0.40	-0.06	0.04
7	0.79	0.51	-0.12	0.04
8	0.66	0.54	0.85	0.03
9	0.87	0.47	-0.80	0.04
10	0.76	0.49	0.15	0.04
11	0.80	0.56	-0.03	0.04
12	0.51	0.54	1.70	0.03
13	0.87	0.49	-0.86	0.04
14	0.72	0.45	0.19	0.03
15	0.90	0.46	-1.24	0.05
16	0.73	0.44	0.21	0.03
17	0.78	0.43	-0.19	0.04
18	0.79	0.39	-0.26	0.04
22	0.65	0.47	0.61	0.03
23	0.86	0.50	-0.71	0.04
24	0.84	0.41	-0.78	0.04
25	0.75	0.43	0.00	0.04
26	0.93	0.38	-1.61	0.05
27	0.62	0.52	1.02	0.03
28	0.49	0.31	1.32	0.03
29	0.84	0.45	-0.66	0.04
30	0.79	0.47	-0.06	0.04
31	0.66	0.50	0.70	0.03
32	0.92	0.40	-1.45	0.05
33	0.58	0.44	1.15	0.03
38	0.81	0.40	-0.48	0.04
39	0.87	0.53	-0.79	0.04
40	0.74	0.44	0.07	0.04
41	0.76	0.43	-0.06	0.04
42	0.82	0.49	-0.37	0.04
43	0.75	0.50	-0.01	0.04
44	0.72	0.49	0.21	0.03
45	0.61	0.39	0.88	0.03
46	0.81	0.43	-0.47	0.04
47	0.46	0.30	1.41	0.03
48	0.69	0.33	0.32	0.03
49	0.76	0.51	0.07	0.04
53	0.88	0.42	-0.91	0.04
54	0.97	0.30	-2.63	0.08
55	0.60	0.52	1.01	0.03
56	0.96	0.35	-2.40	0.07
57	0.97	0.35	-2.45	0.07
58	0.69	0.44	0.41	0.03
59	0.76	0.42	-0.03	0.04
60	0.57	0.36	1.03	0.03
Mean	0.76	0.44	-0.18	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Algebra I Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.88	0.42	-0.96	0.05
2	0.88	0.43	-0.82	0.05
3	0.67	0.44	0.71	0.03
4	0.66	0.34	0.80	0.03
5	0.81	0.44	-0.19	0.04
6	0.90	0.36	-1.07	0.05
7	0.62	0.48	1.01	0.03
8	0.86	0.47	-0.76	0.05
9	0.67	0.51	0.69	0.03
10	0.63	0.55	0.93	0.03
11	0.90	0.36	-1.16	0.05
12	0.71	0.56	0.39	0.04
13	0.86	0.47	-0.70	0.05
14	0.84	0.47	-0.40	0.04
15	0.85	0.39	-0.63	0.05
16	0.68	0.52	0.59	0.03
17	0.86	0.40	-0.76	0.05
18	0.61	0.44	1.02	0.03
22	0.85	0.43	-0.45	0.04
23	0.69	0.49	0.64	0.03
24	0.62	0.42	1.07	0.03
25	0.79	0.43	-0.16	0.04
26	0.72	0.34	0.42	0.04
27	0.79	0.48	-0.08	0.04
28	0.70	0.53	0.59	0.03
29	0.79	0.54	-0.03	0.04
30	0.81	0.32	-0.08	0.04
31	0.58	0.34	1.03	0.03
32	0.68	0.35	0.58	0.03
33	0.51	0.36	1.52	0.03
38	0.82	0.49	-0.43	0.04
39	0.86	0.53	-0.81	0.05
40	0.70	0.47	0.50	0.04
41	0.88	0.51	-1.10	0.05
42	0.69	0.49	0.47	0.04
43	0.77	0.52	0.02	0.04
44	0.87	0.48	-0.85	0.05
45	0.80	0.53	-0.22	0.04
46	0.79	0.42	-0.11	0.04
47	0.58	0.40	1.18	0.03
48	0.81	0.35	-0.25	0.04
49	0.58	0.42	1.16	0.03
53	0.91	0.41	-1.34	0.06
54	0.59	0.37	1.07	0.03
55	0.77	0.45	0.00	0.04
56	0.97	0.30	-2.77	0.10
57	0.84	0.50	-0.57	0.04
58	0.93	0.36	-1.62	0.06
59	0.65	0.27	0.77	0.03
60	0.75	0.46	0.22	0.04
Mean	0.76	0.43	-0.02	0.04

Virginia SOL - Spring 2003 Administration - Item Analysis  
 High School End-of-Course Geometry Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.98	0.29	-2.43	0.08
2	0.82	0.48	-0.14	0.04
3	0.90	0.43	-0.93	0.05
4	0.93	0.32	-1.08	0.05
5	0.95	0.34	-1.50	0.06
6	0.83	0.35	-0.25	0.04
7	0.94	0.34	-1.45	0.05
8	0.81	0.49	-0.06	0.04
9	0.88	0.44	-0.78	0.04
10	0.81	0.41	-0.10	0.04
11	0.62	0.46	1.30	0.03
15	0.79	0.46	0.06	0.03
16	0.92	0.37	-1.38	0.05
17	0.78	0.41	-0.12	0.04
18	0.63	0.35	1.01	0.03
19	0.77	0.36	0.29	0.03
20	0.50	0.40	1.80	0.03
21	0.84	0.54	-0.51	0.04
22	0.72	0.47	0.40	0.03
23	0.82	0.27	-0.13	0.04
24	0.74	0.61	0.41	0.03
25	0.62	0.37	1.08	0.03
26	0.73	0.45	0.44	0.03
30	0.93	0.34	-1.26	0.05
31	0.93	0.41	-1.35	0.05
32	0.84	0.48	-0.31	0.04
33	0.64	0.35	1.00	0.03
34	0.89	0.47	-0.66	0.04
35	0.63	0.44	0.99	0.03
36	0.70	0.56	0.77	0.03
37	0.85	0.48	-0.37	0.04
38	0.59	0.27	1.17	0.03
39	0.56	0.61	1.46	0.03
42	0.86	0.35	-0.53	0.04
43	0.67	0.42	0.80	0.03
44	0.68	0.52	0.91	0.03
45	0.61	0.51	1.30	0.03
46	0.76	0.44	0.31	0.03
47	0.59	0.36	1.28	0.03
50	0.89	0.32	-0.83	0.04
51	0.69	0.42	0.91	0.03
52	0.76	0.38	0.45	0.03
53	0.84	0.37	-0.24	0.04
54	0.68	0.52	0.90	0.03
55	0.63	0.37	1.11	0.03
Mean	0.77	0.42	0.08	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Geometry Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.37	-1.36	0.06
2	0.94	0.39	-1.48	0.06
3	0.94	0.38	-1.47	0.06
4	0.90	0.46	-0.95	0.05
5	0.87	0.37	-0.57	0.04
6	0.83	0.50	-0.19	0.04
7	0.82	0.42	-0.15	0.04
8	0.73	0.37	0.58	0.03
9	0.89	0.40	-0.75	0.04
10	0.90	0.35	-0.94	0.05
11	0.90	0.37	-0.90	0.05
15	0.82	0.36	-0.22	0.04
16	0.75	0.28	0.37	0.03
17	0.85	0.37	-0.41	0.04
18	0.69	0.44	0.68	0.03
19	0.81	0.33	0.01	0.04
20	0.93	0.32	-1.39	0.06
21	0.80	0.49	-0.05	0.04
22	0.78	0.63	0.09	0.04
23	0.53	0.44	1.62	0.03
24	0.68	0.43	0.78	0.03
25	0.75	0.54	0.33	0.03
26	0.69	0.44	0.75	0.03
30	0.86	0.46	-0.47	0.04
31	0.85	0.48	-0.39	0.04
32	0.69	0.51	0.76	0.03
33	0.84	0.46	-0.34	0.04
34	0.69	0.42	0.80	0.03
35	0.60	0.39	1.25	0.03
36	0.72	0.57	0.55	0.03
37	0.69	0.45	0.83	0.03
38	0.74	0.32	0.45	0.03
39	0.73	0.59	0.50	0.03
42	0.82	0.38	-0.14	0.04
43	0.80	0.43	-0.07	0.04
44	0.75	0.50	0.34	0.03
45	0.54	0.43	1.58	0.03
46	0.83	0.45	-0.27	0.04
47	0.77	0.45	0.20	0.04
50	0.85	0.42	-0.39	0.04
51	0.69	0.39	0.75	0.03
52	0.85	0.39	-0.32	0.04
53	0.60	0.44	1.27	0.03
54	0.70	0.32	0.75	0.03
55	0.45	0.33	2.13	0.03
Mean	0.77	0.42	0.09	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Algebra II Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.96	0.30	-1.86	0.09
2	0.85	0.32	-0.29	0.05
3	0.81	0.45	0.19	0.05
4	0.74	0.44	0.47	0.05
5	0.90	0.48	-0.42	0.06
6	0.78	0.37	0.07	0.05
7	0.86	0.46	-0.23	0.05
8	0.80	0.50	0.53	0.05
9	0.90	0.42	-0.39	0.06
10	0.88	0.33	-0.76	0.06
13	0.92	0.30	-1.08	0.07
14	0.87	0.47	-0.37	0.06
15	0.80	0.37	-0.02	0.05
16	0.94	0.43	-1.18	0.07
17	0.75	0.34	0.47	0.05
18	0.78	0.41	0.25	0.05
19	0.92	0.36	-0.89	0.07
20	0.88	0.38	-0.70	0.06
21	0.46	0.43	2.03	0.04
22	0.78	0.31	0.42	0.05
23	0.81	0.40	0.05	0.05
26	0.74	0.42	0.48	0.05
27	0.74	0.44	0.58	0.05
28	0.81	0.50	-0.08	0.05
29	0.81	0.42	0.15	0.05
30	0.76	0.49	0.61	0.05
31	0.88	0.42	-0.54	0.06
32	0.91	0.42	-0.80	0.06
33	0.81	0.30	0.09	0.05
34	0.89	0.42	-0.56	0.06
35	0.85	0.31	-0.29	0.05
38	0.89	0.44	-0.66	0.06
39	0.72	0.55	0.76	0.04
40	0.85	0.48	-0.09	0.05
41	0.88	0.41	-0.35	0.06
42	0.92	0.35	-1.14	0.07
43	0.55	0.38	1.60	0.04
46	0.79	0.49	0.10	0.05
47	0.73	0.41	0.38	0.05
48	0.80	0.27	-0.07	0.05
49	0.67	0.43	1.00	0.04
50	0.77	0.45	0.28	0.05
51	0.63	0.42	1.11	0.04
52	0.79	0.44	0.30	0.05
53	0.70	0.54	0.91	0.04
56	0.82	0.40	0.03	0.05
57	0.70	0.47	0.68	0.04
58	0.71	0.36	0.57	0.05
59	0.72	0.39	0.67	0.05
60	0.71	0.45	0.89	0.04
Mean	0.80	0.41	0.06	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Algebra II Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.94	0.29	-1.40	0.07
2	0.61	0.39	1.19	0.04
3	0.77	0.41	0.37	0.04
4	0.71	0.36	0.70	0.04
5	0.84	0.42	-0.19	0.04
6	0.85	0.47	-0.26	0.05
7	0.91	0.27	-0.90	0.06
8	0.80	0.38	0.14	0.04
9	0.92	0.35	-1.05	0.06
10	0.79	0.38	0.24	0.04
13	0.92	0.35	-1.06	0.06
14	0.72	0.39	0.73	0.04
15	0.88	0.32	-0.47	0.05
16	0.77	0.50	0.42	0.04
17	0.54	0.36	1.61	0.03
18	0.94	0.34	-1.44	0.07
19	0.77	0.32	0.39	0.04
20	0.74	0.34	0.54	0.04
21	0.72	0.45	0.57	0.04
22	0.94	0.26	-1.33	0.06
23	0.71	0.34	0.69	0.04
26	0.76	0.43	0.38	0.04
27	0.74	0.43	0.53	0.04
28	0.79	0.46	0.17	0.04
29	0.92	0.41	-1.05	0.06
30	0.56	0.39	1.56	0.03
31	0.81	0.53	0.09	0.04
32	0.76	0.47	0.43	0.04
33	0.95	0.28	-1.60	0.07
34	0.86	0.40	-0.30	0.05
35	0.85	0.46	-0.20	0.04
38	0.90	0.40	-0.78	0.05
39	0.82	0.51	-0.05	0.04
40	0.82	0.49	-0.07	0.04
41	0.85	0.40	-0.22	0.04
42	0.60	0.49	1.30	0.03
43	0.75	0.38	0.41	0.04
46	0.94	0.34	-1.50	0.07
47	0.56	0.41	1.49	0.03
48	0.72	0.42	0.63	0.04
49	0.82	0.39	-0.04	0.04
50	0.71	0.42	0.80	0.04
51	0.69	0.42	0.76	0.04
52	0.80	0.47	0.16	0.04
53	0.88	0.46	-0.56	0.05
56	0.77	0.32	0.31	0.04
57	0.77	0.39	0.30	0.04
58	0.72	0.37	0.70	0.04
59	0.76	0.37	0.40	0.04
60	0.77	0.48	0.24	0.04
Mean	0.79	0.40	0.08	0.04



Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Virginia and United States History Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.88	0.35	-1.03	0.05
2	0.87	0.48	-0.74	0.05
3	0.71	0.49	0.35	0.04
4	0.56	0.27	1.19	0.03
5	0.92	0.44	-1.55	0.06
6	0.66	0.39	0.76	0.03
9	0.79	0.31	-0.10	0.04
10	0.92	0.48	-1.41	0.06
11	0.64	0.53	0.80	0.03
12	0.57	0.30	1.11	0.03
13	0.54	0.39	1.40	0.03
14	0.73	0.45	0.30	0.04
15	0.86	0.38	-0.95	0.05
16	0.64	0.32	0.74	0.03
17	0.72	0.53	0.34	0.04
20	0.69	0.51	0.57	0.04
21	0.64	0.42	0.78	0.03
22	0.58	0.48	1.13	0.03
23	0.81	0.49	-0.22	0.04
24	0.88	0.45	-1.05	0.05
25	0.58	0.44	1.25	0.03
26	0.56	0.44	1.26	0.03
27	0.64	0.54	0.80	0.03
28	0.35	0.41	2.30	0.04
29	0.78	0.41	-0.21	0.04
30	0.77	0.50	-0.09	0.04
31	0.76	0.53	-0.07	0.04
32	0.70	0.48	0.40	0.04
33	0.78	0.58	-0.22	0.04
34	0.63	0.47	0.82	0.03
37	0.84	0.35	-0.72	0.05
38	0.85	0.29	-0.68	0.04
41	0.81	0.47	-0.59	0.04
42	0.71	0.52	0.30	0.04
43	0.79	0.61	-0.22	0.04
44	0.89	0.52	-1.23	0.05
45	0.48	0.30	1.48	0.03
46	0.82	0.54	-0.54	0.04
47	0.78	0.46	-0.33	0.04
48	0.69	0.47	0.51	0.04
49	0.77	0.53	0.02	0.04
50	0.81	0.42	-0.49	0.04
51	0.90	0.18	-1.57	0.06
52	0.95	0.38	-2.13	0.07
53	0.85	0.53	-0.66	0.04
54	0.77	0.48	0.02	0.04
55	0.75	0.28	-0.09	0.04
56	0.84	0.54	-0.59	0.04
57	0.55	0.23	1.06	0.03
58	0.57	0.38	1.02	0.03
59	0.94	0.33	-1.83	0.06
60	0.95	0.38	-2.26	0.08
61	0.89	0.38	-1.24	0.05
62	0.76	0.38	0.15	0.04
65	0.77	0.43	0.01	0.04
66	0.61	0.46	0.94	0.03
67	0.79	0.45	-0.21	0.04
68	0.73	0.51	0.14	0.04
69	0.86	0.42	-0.69	0.04
70	0.89	0.38	-1.06	0.05
Mean	0.75	0.43	-0.05	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Virginia and United States History Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.92	0.34	-1.42	0.05
2	0.63	0.48	0.79	0.03
3	0.70	0.48	0.55	0.03
4	0.63	0.40	0.84	0.03
5	0.72	0.34	0.40	0.03
6	0.94	0.32	-1.84	0.06
9	0.80	0.33	-0.18	0.04
10	0.93	0.43	-1.62	0.06
11	0.74	0.41	0.24	0.03
12	0.53	0.32	1.48	0.03
13	0.91	0.37	-1.20	0.05
14	0.74	0.44	0.23	0.03
15	0.61	0.37	1.05	0.03
16	0.58	0.39	1.18	0.03
17	0.73	0.52	0.32	0.03
21	0.61	0.39	1.02	0.03
22	0.58	0.31	1.17	0.03
23	0.82	0.47	-0.27	0.04
24	0.87	0.34	-0.74	0.04
25	0.62	0.43	0.90	0.03
26	0.70	0.42	0.50	0.03
27	0.75	0.43	0.21	0.03
28	0.89	0.42	-1.02	0.05
29	0.42	0.42	1.97	0.03
30	0.79	0.48	-0.08	0.04
31	0.78	0.46	-0.05	0.04
32	0.68	0.40	0.67	0.03
33	0.50	0.48	1.59	0.03
34	0.63	0.46	0.88	0.03
35	0.76	0.54	0.11	0.03
39	0.79	0.44	-0.02	0.04
40	0.81	0.49	-0.33	0.04
41	0.82	0.51	-0.27	0.04
42	0.86	0.42	-0.61	0.04
43	0.75	0.59	0.20	0.03
44	0.77	0.39	0.05	0.03
45	0.88	0.40	-0.93	0.05
46	0.71	0.32	0.42	0.03
47	0.80	0.43	-0.18	0.04
48	0.69	0.49	0.59	0.03
49	0.76	0.52	0.16	0.03
50	0.58	0.31	1.20	0.03
51	0.81	0.45	-0.21	0.04
52	0.75	0.47	0.18	0.03
53	0.71	0.46	0.42	0.03
56	0.75	0.48	0.19	0.03
57	0.54	0.23	1.37	0.03
58	0.49	0.45	1.57	0.03
59	0.46	0.32	1.76	0.03
60	0.86	0.29	-0.58	0.04
61	0.83	0.44	-0.42	0.04
62	0.79	0.38	-0.20	0.04
63	0.76	0.49	0.11	0.03
64	0.83	0.41	-0.41	0.04
65	0.77	0.39	0.01	0.03
66	0.71	0.41	0.44	0.03
67	0.80	0.42	-0.23	0.04
68	0.72	0.47	0.35	0.03
69	0.58	0.38	1.13	0.03
70	0.90	0.36	-1.12	0.05
Mean	0.73	0.42	0.21	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World History I Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.91	0.42	-1.75	0.08
2	0.82	0.53	-0.59	0.05
3	0.86	0.47	-1.11	0.06
4	0.69	0.39	0.19	0.05
5	0.76	0.56	-0.07	0.05
6	0.60	0.46	0.72	0.04
9	0.85	0.39	-0.71	0.05
10	0.64	0.45	0.56	0.04
11	0.70	0.51	0.26	0.04
12	0.62	0.50	0.90	0.04
13	0.83	0.43	-0.49	0.05
14	0.95	0.38	-2.17	0.09
15	0.55	0.28	0.94	0.04
16	0.90	0.47	-1.23	0.06
17	0.72	0.35	-0.01	0.05
18	0.86	0.41	-0.94	0.06
19	0.91	0.41	-1.24	0.06
20	0.64	0.37	0.59	0.04
21	0.66	0.32	0.41	0.04
22	0.63	0.54	0.95	0.04
25	0.66	0.30	0.46	0.04
26	0.92	0.28	-1.77	0.08
27	0.77	0.46	-0.05	0.05
28	0.39	0.34	1.94	0.05
29	0.86	0.24	-0.96	0.06
30	0.64	0.53	0.64	0.04
31	0.66	0.50	0.65	0.04
32	0.85	0.44	-0.55	0.05
33	0.80	0.47	-0.81	0.06
34	0.63	0.38	0.47	0.04
35	0.66	0.41	0.34	0.04
36	0.62	0.47	0.72	0.04
37	0.76	0.45	-0.17	0.05
40	0.50	0.42	1.35	0.04
41	0.76	0.51	-0.22	0.05
42	0.49	0.27	1.29	0.04
43	0.48	0.33	1.33	0.04
44	0.79	0.44	-0.42	0.05
45	0.84	0.39	-0.92	0.06
46	0.77	0.47	0.00	0.05
47	0.67	0.39	0.74	0.04
48	0.86	0.48	-1.13	0.06
49	0.52	0.49	1.08	0.04
50	0.67	0.48	0.46	0.04
51	0.75	0.45	-0.18	0.05
52	0.42	0.37	1.83	0.04
55	0.75	0.45	0.04	0.05
56	0.85	0.42	-0.83	0.06
57	0.55	0.41	1.19	0.04
58	0.67	0.44	0.47	0.04
59	0.59	0.41	0.53	0.04
60	0.53	0.35	1.21	0.04
61	0.87	0.51	-0.85	0.06
64	0.69	0.50	0.37	0.04
65	0.90	0.45	-1.70	0.07
66	0.74	0.36	-0.22	0.05
67	0.72	0.29	-0.32	0.05
68	0.78	0.50	-0.43	0.05
69	0.77	0.35	-0.20	0.05
70	0.65	0.38	0.45	0.04
Mean	0.72	0.42	0.02	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World History I Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.91	0.29	-1.50	0.06
2	0.80	0.51	-0.47	0.04
3	0.94	0.28	-1.97	0.07
4	0.68	0.37	0.27	0.04
5	0.93	0.25	-1.65	0.06
6	0.69	0.47	0.23	0.04
9	0.83	0.36	-0.62	0.04
10	0.70	0.51	0.13	0.04
11	0.67	0.49	0.38	0.04
12	0.89	0.38	-1.25	0.05
13	0.89	0.34	-1.24	0.05
14	0.90	0.41	-1.40	0.05
15	0.53	0.30	1.12	0.03
16	0.69	0.61	0.17	0.04
17	0.79	0.40	-0.44	0.04
18	0.84	0.44	-0.76	0.04
19	0.76	0.43	-0.12	0.04
20	0.83	0.49	-0.73	0.04
21	0.62	0.23	0.64	0.03
22	0.82	0.33	-0.59	0.04
25	0.69	0.25	0.28	0.04
26	0.93	0.30	-1.85	0.06
27	0.51	0.49	1.22	0.03
28	0.80	0.36	-0.52	0.04
29	0.81	0.31	-0.46	0.04
30	0.66	0.45	0.44	0.03
31	0.61	0.41	0.70	0.03
32	0.51	0.48	1.17	0.03
33	0.82	0.48	-0.75	0.04
34	0.66	0.42	0.42	0.03
35	0.87	0.42	-1.12	0.05
36	0.74	0.53	-0.01	0.04
37	0.65	0.35	0.49	0.03
40	0.55	0.46	0.94	0.03
41	0.46	0.54	1.43	0.03
42	0.51	0.51	1.19	0.03
43	0.76	0.33	-0.17	0.04
44	0.85	0.42	-1.01	0.05
45	0.66	0.44	0.48	0.03
46	0.73	0.41	-0.08	0.04
47	0.61	0.34	0.65	0.03
48	0.64	0.56	0.51	0.03
49	0.45	0.40	1.51	0.03
50	0.59	0.46	0.78	0.03
51	0.68	0.37	0.31	0.04
52	0.66	0.31	0.49	0.03
55	0.85	0.37	-0.80	0.05
56	0.69	0.34	0.27	0.04
57	0.67	0.46	0.39	0.04
58	0.86	0.31	-0.98	0.05
59	0.54	0.36	1.04	0.03
60	0.62	0.34	0.60	0.03
61	0.74	0.52	-0.10	0.04
64	0.67	0.46	0.38	0.04
65	0.64	0.40	0.54	0.03
66	0.34	0.42	2.11	0.04
67	0.65	0.46	0.49	0.03
68	0.82	0.47	-0.66	0.04
69	0.55	0.37	1.00	0.03
70	0.61	0.30	0.72	0.03
Mean	0.71	0.40	0.04	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World History II Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.81	0.37	-0.62	0.04
2	0.80	0.30	-0.88	0.04
3	0.84	0.46	-0.85	0.04
4	0.62	0.32	0.37	0.03
5	0.76	0.37	-0.31	0.04
6	0.87	0.36	-1.21	0.04
7	0.80	0.45	-0.46	0.04
8	0.83	0.41	-0.96	0.04
11	0.79	0.33	-0.58	0.04
12	0.73	0.39	-0.08	0.03
13	0.84	0.45	-0.83	0.04
14	0.66	0.36	0.10	0.03
15	0.70	0.52	0.04	0.03
16	0.58	0.54	0.72	0.03
17	0.85	0.25	-1.06	0.04
18	0.57	0.29	0.73	0.03
19	0.35	0.44	1.89	0.04
20	0.71	0.56	0.19	0.03
23	0.45	0.33	1.15	0.03
24	0.81	0.48	-0.51	0.04
25	0.85	0.52	-0.93	0.04
26	0.60	0.51	0.58	0.03
27	0.75	0.35	-0.44	0.04
28	0.57	0.36	0.77	0.03
29	0.68	0.46	0.13	0.03
30	0.72	0.50	-0.02	0.03
31	0.59	0.27	0.29	0.03
32	0.74	0.50	-0.10	0.04
33	0.80	0.52	-0.62	0.04
34	0.59	0.35	0.72	0.03
35	0.67	0.50	0.02	0.03
38	0.81	0.56	-0.46	0.04
39	0.62	0.50	0.53	0.03
40	0.45	0.43	1.26	0.03
41	0.57	0.33	0.45	0.03
42	0.51	0.42	0.98	0.03
43	0.60	0.38	0.45	0.03
44	0.70	0.44	0.06	0.03
45	0.87	0.48	-1.05	0.04
46	0.37	0.29	1.70	0.04
47	0.36	0.30	1.73	0.04
48	0.73	0.48	-0.11	0.04
49	0.83	0.47	-0.70	0.04
50	0.91	0.38	-1.74	0.05
53	0.78	0.52	-0.31	0.04
54	0.37	0.33	1.09	0.03
55	0.62	0.56	0.57	0.03
56	0.57	0.39	0.57	0.03
57	0.84	0.42	-0.90	0.04
58	0.55	0.41	0.73	0.03
61	0.91	0.33	-1.58	0.05
62	0.73	0.34	-0.30	0.04
63	0.44	0.38	1.29	0.03
64	0.66	0.40	0.08	0.03
65	0.50	0.33	0.91	0.03
66	0.64	0.50	0.57	0.03
67	0.62	0.52	0.55	0.03
68	0.51	0.53	1.22	0.03
69	0.61	0.53	0.43	0.03
70	0.98	0.24	-2.76	0.08
Mean	0.68	0.42	0.04	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World History II Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.83	0.32	-0.47	0.05
2	0.86	0.38	-0.72	0.05
3	0.89	0.46	-1.12	0.06
4	0.74	0.32	0.16	0.04
5	0.76	0.41	0.10	0.04
6	0.75	0.25	0.11	0.04
7	0.50	0.46	1.44	0.04
8	0.84	0.42	-0.64	0.05
11	0.79	0.32	-0.17	0.05
12	0.78	0.39	-0.11	0.05
13	0.85	0.42	-0.56	0.05
14	0.90	0.33	-1.28	0.07
15	0.75	0.27	0.18	0.04
16	0.64	0.29	0.80	0.04
17	0.43	0.43	1.83	0.04
18	0.67	0.36	0.51	0.04
19	0.73	0.45	0.20	0.04
20	0.79	0.36	-0.08	0.05
23	0.88	0.44	-1.04	0.06
24	0.68	0.38	0.51	0.04
25	0.52	0.37	1.36	0.04
26	0.84	0.49	-0.66	0.05
27	0.80	0.36	-0.22	0.05
28	0.74	0.41	0.18	0.04
29	0.73	0.49	0.19	0.04
30	0.75	0.47	0.10	0.04
31	0.64	0.41	0.70	0.04
32	0.78	0.47	-0.13	0.05
33	0.40	0.29	1.89	0.04
34	0.78	0.42	-0.16	0.05
35	0.64	0.41	0.72	0.04
38	0.84	0.44	-0.64	0.05
39	0.87	0.46	-0.85	0.06
40	0.69	0.35	0.45	0.04
41	0.41	0.25	1.93	0.04
42	0.66	0.43	0.63	0.04
43	0.79	0.37	-0.11	0.05
44	0.71	0.41	0.36	0.04
45	0.90	0.46	-1.30	0.07
46	0.61	0.28	0.93	0.04
47	0.66	0.41	0.62	0.04
48	0.72	0.45	0.29	0.04
49	0.85	0.46	-0.69	0.05
50	0.73	0.26	0.29	0.04
53	0.55	0.32	1.21	0.04
54	0.56	0.51	1.11	0.04
55	0.93	0.31	-1.67	0.08
56	0.59	0.39	1.01	0.04
57	0.78	0.40	-0.07	0.05
58	0.49	0.43	1.52	0.04
61	0.63	0.33	0.72	0.04
62	0.83	0.44	-0.52	0.05
63	0.65	0.45	0.65	0.04
64	0.81	0.50	-0.32	0.05
65	0.74	0.38	0.16	0.04
66	0.72	0.48	0.24	0.04
67	0.61	0.35	0.93	0.04
68	0.91	0.35	-1.36	0.07
69	0.46	0.33	1.68	0.04
70	0.98	0.29	-3.39	0.17
Mean	0.72	0.39	0.12	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Earth Science Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.77	0.54	-0.28	0.04
2	0.79	0.45	-0.36	0.04
3	0.53	0.32	0.99	0.03
4	0.79	0.43	-0.57	0.04
5	0.52	0.32	0.88	0.03
6	0.55	0.29	0.93	0.03
7	0.86	0.36	-0.93	0.05
8	0.70	0.32	0.10	0.04
9	0.83	0.43	-0.90	0.05
13	0.69	0.28	0.17	0.04
14	0.79	0.30	-0.44	0.04
15	0.61	0.45	0.61	0.04
16	0.76	0.52	-0.26	0.04
17	0.78	0.41	-0.31	0.04
18	0.77	0.60	-0.28	0.04
19	0.72	0.31	-0.17	0.04
20	0.83	0.41	-0.70	0.04
21	0.69	0.49	0.03	0.04
22	0.66	0.38	0.28	0.04
27	0.77	0.47	-0.45	0.04
28	0.84	0.51	-0.86	0.04
29	0.83	0.45	-0.55	0.04
30	0.77	0.24	-0.27	0.04
34	0.72	0.41	-0.08	0.04
35	0.65	0.42	0.35	0.04
36	0.73	0.58	0.04	0.04
37	0.67	0.50	0.36	0.04
38	0.73	0.34	-0.18	0.04
39	0.72	0.40	0.19	0.04
40	0.77	0.38	-0.28	0.04
41	0.68	0.34	0.23	0.04
42	0.71	0.24	-0.10	0.04
43	0.70	0.32	0.08	0.04
44	0.85	0.51	-0.89	0.05
45	0.80	0.39	-0.57	0.04
46	0.64	0.41	0.45	0.04
47	0.72	0.52	-0.06	0.04
48	0.68	0.42	0.24	0.04
49	0.73	0.29	-0.21	0.04
50	0.54	0.29	0.81	0.03
51	0.91	0.41	-1.82	0.06
52	0.82	0.45	-0.58	0.04
53	0.64	0.44	0.46	0.04
54	0.68	0.35	0.25	0.04
55	0.79	0.42	-0.45	0.04
56	0.64	0.54	0.49	0.04
57	0.74	0.28	-0.12	0.04
58	0.67	0.34	0.23	0.04
59	0.78	0.55	-0.27	0.04
60	0.65	0.48	0.59	0.04
Mean	0.72	0.41	-0.08	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Earth Science Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.88	0.45	-1.16	0.04
2	0.90	0.37	-1.24	0.05
3	0.72	0.40	0.12	0.03
4	0.61	0.39	0.79	0.03
5	0.88	0.35	-1.01	0.04
6	0.43	0.38	1.66	0.03
7	0.87	0.43	-0.99	0.04
8	0.64	0.36	0.61	0.03
9	0.71	0.43	0.20	0.03
10	0.77	0.48	-0.22	0.03
11	0.74	0.41	0.02	0.03
12	0.56	0.38	0.96	0.03
17	0.75	0.42	0.02	0.03
18	0.69	0.42	0.31	0.03
19	0.59	0.18	0.90	0.03
20	0.69	0.37	0.35	0.03
21	0.68	0.29	0.43	0.03
22	0.69	0.34	0.34	0.03
23	0.90	0.40	-1.32	0.05
24	0.75	0.41	-0.07	0.03
25	0.89	0.48	-1.27	0.05
26	0.66	0.19	0.58	0.03
27	0.47	0.46	1.40	0.03
31	0.90	0.30	-1.23	0.05
32	0.69	0.34	0.34	0.03
33	0.69	0.25	0.41	0.03
34	0.80	0.53	-0.38	0.04
35	0.74	0.50	-0.01	0.03
39	0.65	0.41	0.57	0.03
40	0.67	0.44	0.43	0.03
41	0.82	0.38	-0.62	0.04
42	0.69	0.42	0.33	0.03
43	0.78	0.43	-0.20	0.03
44	0.80	0.43	-0.34	0.03
45	0.77	0.38	-0.14	0.03
46	0.82	0.50	-0.60	0.04
47	0.92	0.36	-1.54	0.05
48	0.61	0.35	0.78	0.03
49	0.85	0.42	-0.78	0.04
50	0.51	0.39	1.25	0.03
51	0.76	0.41	-0.11	0.03
52	0.62	0.33	0.77	0.03
53	0.73	0.37	0.12	0.03
54	0.75	0.49	-0.06	0.03
55	0.63	0.40	0.64	0.03
56	0.89	0.45	-1.10	0.04
57	0.91	0.38	-1.34	0.05
58	0.75	0.31	-0.05	0.03
59	0.79	0.44	-0.27	0.03
60	0.82	0.25	-0.47	0.04
Mean	0.74	0.39	-0.04	0.03



Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Biology Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.80	0.30	-0.63	0.04
2	0.88	0.40	-1.10	0.05
3	0.72	0.33	-0.31	0.04
4	0.79	0.40	-0.37	0.04
5	0.67	0.37	0.38	0.04
6	0.85	0.36	-0.87	0.05
7	0.90	0.32	-1.46	0.05
8	0.79	0.46	-0.40	0.04
9	0.86	0.45	-0.97	0.05
10	0.91	0.38	-1.49	0.06
11	0.56	0.45	0.84	0.03
12	0.89	0.25	-1.26	0.05
13	0.90	0.39	-1.26	0.05
14	0.86	0.45	-0.93	0.05
18	0.73	0.29	-0.11	0.04
19	0.62	0.37	0.48	0.03
20	0.72	0.48	0.04	0.04
21	0.80	0.30	-0.91	0.05
22	0.82	0.38	-0.60	0.04
23	0.67	0.37	0.22	0.04
24	0.74	0.40	-0.07	0.04
25	0.83	0.28	-0.53	0.04
26	0.74	0.49	-0.25	0.04
27	0.89	0.45	-1.07	0.05
28	0.93	0.33	-1.82	0.06
29	0.87	0.32	-0.98	0.05
30	0.42	0.33	1.73	0.04
31	0.48	0.32	0.96	0.03
36	0.55	0.33	0.87	0.03
37	0.77	0.37	-0.17	0.04
38	0.63	0.39	0.55	0.03
39	0.47	0.24	1.25	0.03
40	0.66	0.38	0.34	0.04
41	0.74	0.48	-0.04	0.04
42	0.70	0.31	0.09	0.04
43	0.48	0.35	1.23	0.03
44	0.65	0.42	0.33	0.04
45	0.49	0.39	1.20	0.03
49	0.72	0.48	0.26	0.04
50	0.78	0.49	-0.20	0.04
51	0.52	0.35	1.08	0.03
52	0.59	0.46	0.75	0.03
53	0.68	0.36	0.28	0.04
54	0.63	0.38	0.58	0.03
55	0.72	0.28	0.06	0.04
56	0.81	0.46	-0.54	0.04
57	0.86	0.31	-1.15	0.05
58	0.93	0.29	-1.88	0.06
59	0.72	0.41	0.03	0.04
60	0.76	0.51	-0.20	0.04
Mean	0.73	0.38	-0.16	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Biology Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.71	0.35	0.11	0.03
2	0.86	0.46	-1.01	0.04
3	0.91	0.38	-1.69	0.05
4	0.85	0.28	-0.86	0.04
5	0.75	0.41	-0.10	0.03
6	0.89	0.41	-1.31	0.04
7	0.91	0.43	-1.56	0.05
8	0.94	0.42	-2.03	0.06
9	0.77	0.43	-0.24	0.03
10	0.72	0.36	0.14	0.03
11	0.35	0.30	2.04	0.03
12	0.75	0.53	-0.17	0.03
17	0.66	0.43	0.42	0.03
18	0.90	0.41	-1.45	0.05
19	0.74	0.45	-0.10	0.03
20	0.87	0.40	-0.99	0.04
21	0.95	0.27	-2.22	0.06
22	0.66	0.35	0.43	0.03
23	0.76	0.39	-0.15	0.03
24	0.80	0.23	-0.42	0.03
25	0.56	0.32	0.97	0.03
26	0.64	0.56	0.49	0.03
27	0.66	0.33	0.43	0.03
28	0.57	0.48	0.92	0.03
29	0.66	0.51	0.40	0.03
30	0.78	0.41	-0.29	0.03
31	0.77	0.44	-0.25	0.03
32	0.42	0.28	1.71	0.03
33	0.71	0.51	0.10	0.03
34	0.86	0.47	-0.96	0.04
38	0.67	0.41	0.38	0.03
39	0.66	0.34	0.41	0.03
40	0.75	0.33	-0.09	0.03
41	0.52	0.41	1.17	0.03
42	0.52	0.28	1.16	0.03
43	0.89	0.46	-1.39	0.05
44	0.63	0.48	0.63	0.03
45	0.79	0.49	-0.38	0.03
46	0.76	0.43	-0.21	0.03
47	0.76	0.51	-0.23	0.03
48	0.62	0.36	0.65	0.03
49	0.79	0.51	-0.38	0.03
50	0.70	0.51	0.11	0.03
51	0.68	0.38	0.38	0.03
55	0.65	0.52	0.49	0.03
56	0.81	0.48	-0.60	0.04
57	0.80	0.46	-0.47	0.03
58	0.64	0.37	0.54	0.03
59	0.74	0.40	0.01	0.03
60	0.90	0.44	-1.46	0.05
Mean	0.73	0.41	-0.14	0.03

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Chemistry Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.97	0.21	-2.71	0.13
2	0.46	0.27	1.51	0.04
3	0.84	0.26	-0.43	0.05
4	0.90	0.41	-1.24	0.07
5	0.81	0.52	-0.53	0.06
6	0.39	0.36	1.94	0.04
7	0.79	0.32	-0.24	0.05
8	0.82	0.50	-0.56	0.06
9	0.91	0.28	-1.34	0.07
10	0.89	0.39	-1.15	0.07
14	0.46	0.40	1.82	0.04
15	0.62	0.40	0.56	0.04
16	0.81	0.28	-0.27	0.05
17	0.74	0.38	0.03	0.05
18	0.88	0.36	-0.93	0.06
19	0.33	0.29	2.15	0.05
20	0.77	0.46	-0.26	0.05
21	0.57	0.39	1.14	0.04
22	0.91	0.41	-1.34	0.07
26	0.52	0.27	0.97	0.04
27	0.65	0.53	0.51	0.04
28	0.75	0.27	0.01	0.05
29	0.72	0.31	0.46	0.05
30	0.76	0.35	-0.16	0.05
31	0.93	0.37	-1.70	0.08
32	0.90	0.41	-1.35	0.07
33	0.39	0.35	2.05	0.04
36	0.45	0.37	1.37	0.04
37	0.51	0.30	1.09	0.04
38	0.80	0.42	-0.22	0.05
39	0.73	0.47	0.18	0.05
40	0.76	0.46	-0.01	0.05
41	0.72	0.42	0.29	0.05
42	0.66	0.51	0.55	0.04
43	0.76	0.41	0.13	0.05
46	0.77	0.45	-0.17	0.05
47	0.80	0.51	-0.32	0.05
48	0.69	0.31	0.30	0.05
49	0.67	0.41	0.54	0.04
50	0.81	0.35	-0.27	0.05
51	0.82	0.33	-0.50	0.06
52	0.44	0.45	1.64	0.04
53	0.68	0.53	0.51	0.04
54	0.65	0.45	0.63	0.04
55	0.60	0.40	0.94	0.04
56	0.86	0.45	-0.71	0.06
57	0.87	0.51	-1.11	0.07
58	0.65	0.45	0.49	0.05
59	0.65	0.25	0.70	0.04
60	0.84	0.35	-0.66	0.06
Mean	0.71	0.39	0.09	0.05

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course Chemistry Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.81	0.34	-0.17	0.04
2	0.89	0.43	-0.87	0.05
3	0.54	0.36	1.24	0.03
4	0.73	0.12	0.32	0.04
5	0.92	0.25	-1.33	0.06
6	0.92	0.40	-1.35	0.06
7	0.63	0.31	0.85	0.04
8	0.44	0.39	1.77	0.04
12	0.79	0.27	-0.09	0.04
13	0.53	0.34	1.33	0.03
14	0.86	0.52	-0.59	0.05
15	0.70	0.19	0.48	0.04
16	0.79	0.15	-0.04	0.04
17	0.64	0.34	0.84	0.04
18	0.77	0.38	0.09	0.04
19	0.71	0.43	0.44	0.04
20	0.69	0.41	0.53	0.04
21	0.72	0.48	0.40	0.04
22	0.67	0.32	0.66	0.04
23	0.98	0.22	-2.91	0.12
27	0.88	0.34	-0.79	0.05
28	0.73	0.38	0.32	0.04
29	0.76	0.31	0.10	0.04
30	0.70	0.41	0.46	0.04
31	0.45	0.28	1.80	0.04
32	0.56	0.40	1.23	0.03
33	0.86	0.39	-0.54	0.05
34	0.75	0.32	0.20	0.04
37	0.59	0.38	1.02	0.04
38	0.70	0.39	0.51	0.04
39	0.72	0.27	0.43	0.04
40	0.64	0.44	0.84	0.04
41	0.64	0.37	0.81	0.04
42	0.47	0.39	1.59	0.03
45	0.60	0.36	0.97	0.04
46	0.67	0.49	0.64	0.04
47	0.77	0.43	0.01	0.04
48	0.68	0.33	0.62	0.04
49	0.92	0.41	-1.36	0.06
50	0.64	0.33	0.81	0.04
51	0.67	0.30	0.72	0.04
52	0.83	0.31	-0.39	0.05
53	0.90	0.37	-1.04	0.06
54	0.89	0.38	-0.89	0.05
55	0.64	0.41	0.83	0.04
56	0.89	0.49	-0.98	0.05
57	0.78	0.41	0.01	0.04
58	0.98	0.17	-2.99	0.13
59	0.79	0.42	-0.04	0.04
60	0.92	0.31	-1.31	0.06
Mean	0.74	0.35	0.10	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World Geography Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.89	0.20	-1.39	0.06
2	0.69	0.42	-0.06	0.04
3	0.81	0.36	-0.86	0.05
4	0.79	0.38	-0.56	0.05
5	0.87	0.36	-1.36	0.06
6	0.89	0.36	-1.72	0.07
7	0.58	0.44	-0.03	0.04
8	0.79	0.33	-0.62	0.05
9	0.87	0.40	-1.20	0.06
10	0.86	0.28	-1.09	0.05
11	0.56	0.39	0.69	0.04
12	0.54	0.48	0.69	0.04
13	0.72	0.32	-0.25	0.04
14	0.73	0.43	-0.40	0.04
15	0.47	0.28	1.32	0.04
16	0.78	0.44	-0.46	0.05
17	0.71	0.23	0.07	0.04
21	0.60	0.37	0.97	0.04
22	0.69	0.43	-0.08	0.04
23	0.72	0.29	-0.29	0.04
24	0.57	0.31	0.63	0.04
25	0.71	0.42	-0.04	0.04
26	0.74	0.42	-0.30	0.04
29	0.76	0.46	-0.48	0.05
30	0.56	0.40	0.70	0.04
31	0.44	0.34	1.39	0.04
32	0.67	0.34	0.22	0.04
33	0.61	0.49	0.56	0.04
34	0.67	0.37	0.02	0.04
35	0.88	0.39	-1.31	0.06
36	0.41	0.42	1.52	0.04
37	0.63	0.41	0.52	0.04
38	0.65	0.43	0.25	0.04
39	0.68	0.47	-0.03	0.04
40	0.61	0.38	0.45	0.04
43	0.69	0.38	0.22	0.04
44	0.70	0.36	-0.10	0.04
45	0.70	0.45	0.07	0.04
46	0.65	0.41	0.16	0.04
47	0.65	0.47	0.29	0.04
48	0.63	0.51	0.31	0.04
49	0.65	0.34	0.30	0.04
50	0.61	0.40	0.33	0.04
54	0.75	0.41	-0.56	0.05
55	0.75	0.33	-0.34	0.04
56	0.66	0.53	0.11	0.04
57	0.49	0.25	1.23	0.04
58	0.34	0.24	1.91	0.04
59	0.39	0.35	1.45	0.04
60	0.64	0.50	0.36	0.04
61	0.60	0.37	0.42	0.04
62	0.89	0.38	-1.65	0.06
63	0.85	0.44	-1.36	0.06
64	0.55	0.55	0.60	0.04
65	0.76	0.53	-0.29	0.04
66	0.70	0.51	0.02	0.04
67	0.51	0.35	1.27	0.04
68	0.44	0.14	1.43	0.04
69	0.84	0.36	-1.10	0.05
70	0.57	0.34	0.61	0.04
Mean	0.67	0.39	0.05	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 High School End-of-Course World Geography Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.78	0.32	-0.36	0.05
2	0.83	0.41	-0.91	0.05
3	0.69	0.39	0.17	0.04
4	0.83	0.40	-0.82	0.05
5	0.66	0.50	0.32	0.04
6	0.75	0.35	-0.18	0.04
7	0.65	0.49	0.28	0.04
8	0.74	0.33	-0.04	0.04
9	0.53	0.21	1.09	0.04
10	0.74	0.53	-0.16	0.04
11	0.54	0.38	0.87	0.04
12	0.77	0.51	-0.40	0.05
13	0.59	0.47	0.69	0.04
14	0.76	0.43	-0.27	0.04
15	0.54	0.56	0.87	0.04
16	0.68	0.33	0.23	0.04
17	0.75	0.28	-0.22	0.04
18	0.54	0.26	0.92	0.04
19	0.49	0.20	1.14	0.04
20	0.71	0.50	0.00	0.04
21	0.61	0.36	0.70	0.04
25	0.74	0.47	-0.19	0.04
26	0.56	0.23	0.83	0.04
27	0.81	0.40	-0.61	0.05
28	0.74	0.58	-0.23	0.04
29	0.74	0.47	-0.19	0.04
32	0.64	0.35	0.43	0.04
33	0.70	0.29	0.11	0.04
34	0.82	0.50	-0.73	0.05
35	0.67	0.47	0.22	0.04
36	0.46	0.42	1.40	0.04
39	0.79	0.49	-0.59	0.05
40	0.63	0.35	0.39	0.04
41	0.46	0.31	1.46	0.04
42	0.82	0.47	-0.77	0.05
43	0.75	0.36	-0.22	0.04
47	0.68	0.45	0.11	0.04
48	0.87	0.45	-1.20	0.06
49	0.80	0.42	-0.58	0.05
50	0.65	0.41	0.29	0.04
51	0.69	0.42	0.08	0.04
52	0.67	0.23	0.19	0.04
53	0.54	0.33	0.96	0.04
54	0.72	0.43	-0.08	0.04
55	0.85	0.45	-0.98	0.05
56	0.56	0.42	0.77	0.04
57	0.47	0.23	1.33	0.04
58	0.77	0.41	-0.43	0.05
59	0.48	0.42	1.27	0.04
60	0.83	0.46	-0.78	0.05
61	0.70	0.41	-0.24	0.04
62	0.73	0.43	-0.11	0.04
63	0.88	0.42	-1.29	0.06
64	0.47	0.36	1.35	0.04
65	0.74	0.52	-0.08	0.04
66	0.71	0.52	-0.17	0.04
67	0.78	0.45	-0.44	0.05
68	0.51	0.36	1.11	0.04
69	0.48	0.36	1.21	0.04
70	0.80	0.45	-0.53	0.05
Mean	0.68	0.40	0.12	0.04

VASOL Assessments - Spring 2004

Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.93	0.27	-0.82	0.04
2	Multiple Choice	0.94	0.28	-0.94	0.04
3	Multiple Choice	0.89	0.40	-0.27	0.03
4	Multiple Choice	0.85	0.34	0.19	0.03
5	Multiple Choice	0.85	0.40	0.20	0.03
6	Multiple Choice	0.75	0.45	0.88	0.02
7	Multiple Choice	0.94	0.39	-1.07	0.04
8	Multiple Choice	0.86	0.38	-0.04	0.03
9	Multiple Choice	0.93	0.35	-0.87	0.04
10	Multiple Choice	0.97	0.32	-2.07	0.06
11	Multiple Choice	0.86	0.22	0.26	0.02
26	Multiple Choice	0.92	0.25	-0.50	0.03
27	Multiple Choice	0.96	0.25	-1.26	0.04
28	Multiple Choice	0.93	0.38	-0.93	0.04
29	Multiple Choice	0.85	0.27	0.29	0.02
30	Multiple Choice	0.87	0.48	-0.08	0.03
31	Multiple Choice	0.77	0.32	0.87	0.02
32	Multiple Choice	0.86	0.23	0.26	0.02
33	Multiple Choice	0.72	0.28	1.22	0.02
34	Multiple Choice	0.73	0.40	1.09	0.02
35	Multiple Choice	0.67	0.30	1.53	0.02
36	Multiple Choice	0.87	0.37	-0.09	0.03
37	Multiple Choice	0.91	0.41	-0.35	0.03
38	Multiple Choice	0.96	0.40	-1.55	0.05
39	Multiple Choice	0.89	0.39	-0.19	0.03
40	Multiple Choice	0.82	0.47	0.52	0.02
41	Multiple Choice	0.86	0.38	0.18	0.03
42	Multiple Choice	0.91	0.30	-0.60	0.03
43	Multiple Choice	0.95	0.29	-1.38	0.05
44	Multiple Choice	0.80	0.32	0.65	0.02
51	Composing	0.74	0.68	1.28	0.01
52	Written Expression	0.74	0.71	1.20	0.01
53	Usage & Mechanics	0.82	0.77	0.77	0.01
Mean		0.86	0.38	-0.05	0.03

VASOL Assessments - Spring 2003

Item Analysis for Writing High School EOC: Multiple Choice Core 1, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.93	0.28	-0.92	0.07
2	Multiple Choice	0.93	0.30	-0.83	0.07
3	Multiple Choice	0.87	0.41	-0.19	0.05
4	Multiple Choice	0.83	0.34	0.29	0.05
5	Multiple Choice	0.82	0.39	0.26	0.05
6	Multiple Choice	0.72	0.45	0.98	0.04
7	Multiple Choice	0.92	0.39	-0.90	0.07
8	Multiple Choice	0.82	0.37	0.23	0.05
9	Multiple Choice	0.91	0.36	-0.42	0.06
10	Multiple Choice	0.97	0.31	-2.09	0.11
11	Multiple Choice	0.87	0.23	0.06	0.05
26	Multiple Choice	0.91	0.27	-0.53	0.06
27	Multiple Choice	0.95	0.28	-1.42	0.08
28	Multiple Choice	0.93	0.38	-0.92	0.07
29	Multiple Choice	0.84	0.30	0.11	0.05
30	Multiple Choice	0.83	0.50	0.02	0.05
31	Multiple Choice	0.74	0.31	0.85	0.04
32	Multiple Choice	0.85	0.25	0.26	0.05
33	Multiple Choice	0.70	0.29	1.27	0.04
34	Multiple Choice	0.69	0.39	1.27	0.04
35	Multiple Choice	0.66	0.31	1.40	0.04
36	Multiple Choice	0.86	0.37	-0.09	0.05
37	Multiple Choice	0.89	0.42	-0.35	0.05
38	Multiple Choice	0.95	0.43	-1.55	0.09
39	Multiple Choice	0.87	0.39	-0.19	0.05
40	Multiple Choice	0.77	0.47	0.52	0.04
41	Multiple Choice	0.84	0.39	0.18	0.05
42	Multiple Choice	0.91	0.30	-0.60	0.06
43	Multiple Choice	0.95	0.29	-1.38	0.08
44	Multiple Choice	0.79	0.32	0.65	0.04
51	Composing	0.73	0.68	1.26	0.02
52	Written Expression	0.73	0.71	1.17	0.02
53	Usage & Mechanics	0.82	0.78	0.76	0.02
Mean		0.84	0.38	-0.03	0.05



VASOL Assessments - Spring 2004

Item Analysis for Writing High School EOC: Multiple Choice Core 2, Writing Prompt 1

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.93	0.33	-1.74	0.13
2	Multiple Choice	0.91	0.39	-1.60	0.12
3	Multiple Choice	0.83	0.48	-0.95	0.10
4	Multiple Choice	0.88	0.27	-0.91	0.10
5	Multiple Choice	0.74	0.41	0.11	0.08
6	Multiple Choice	0.66	0.42	0.86	0.07
7	Multiple Choice	0.66	0.43	0.88	0.07
8	Multiple Choice	0.85	0.36	-0.65	0.09
9	Multiple Choice	0.84	0.45	-0.89	0.10
10	Multiple Choice	0.80	0.47	-0.39	0.08
25	Multiple Choice	0.83	0.38	-0.69	0.09
26	Multiple Choice	0.74	0.49	0.10	0.08
27	Multiple Choice	0.63	0.49	0.77	0.07
28	Multiple Choice	0.62	0.50	0.83	0.07
29	Multiple Choice	0.78	0.51	-0.17	0.08
30	Multiple Choice	0.60	0.26	1.26	0.06
31	Multiple Choice	0.83	0.52	-0.75	0.09
32	Multiple Choice	0.86	0.41	-0.97	0.10
33	Multiple Choice	0.59	0.48	1.09	0.07
34	Multiple Choice	0.37	0.39	2.20	0.06
35	Multiple Choice	0.76	0.53	-0.08	0.08
36	Multiple Choice	0.66	0.52	0.61	0.07
37	Multiple Choice	0.53	0.45	1.39	0.06
38	Multiple Choice	0.53	0.46	1.56	0.06
39	Multiple Choice	0.79	0.55	-0.30	0.08
40	Multiple Choice	0.71	0.42	0.27	0.07
41	Multiple Choice	0.83	0.46	-0.58	0.09
42	Multiple Choice	0.79	0.39	-0.17	0.08
43	Multiple Choice	0.86	0.38	-0.64	0.09
44	Multiple Choice	0.70	0.49	0.40	0.07
51	Composing	0.68	0.76	1.35	0.04
52	Written Expression	0.68	0.79	1.34	0.04
53	Usage & Mechanics	0.70	0.81	1.03	0.03
Mean		0.73	0.47	0.14	0.08

VASOL Assessments - Spring 2004

Item Analysis for Writing High School EOC: Multiple Choice Core 2, Writing Prompt 2

Item Number	Response Type	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	Multiple Choice	0.96	0.26	-1.92	0.13
2	Multiple Choice	0.94	0.33	-1.60	0.12
3	Multiple Choice	0.89	0.41	-0.95	0.09
4	Multiple Choice	0.91	0.23	-0.91	0.09
5	Multiple Choice	0.80	0.42	0.11	0.06
6	Multiple Choice	0.69	0.48	0.86	0.05
7	Multiple Choice	0.69	0.43	0.88	0.05
8	Multiple Choice	0.89	0.35	-0.65	0.08
9	Multiple Choice	0.88	0.45	-0.89	0.09
10	Multiple Choice	0.86	0.41	-0.39	0.07
25	Multiple Choice	0.86	0.32	-0.32	0.07
26	Multiple Choice	0.79	0.45	0.30	0.06
27	Multiple Choice	0.67	0.48	1.04	0.05
28	Multiple Choice	0.69	0.52	0.83	0.05
29	Multiple Choice	0.84	0.47	-0.17	0.07
30	Multiple Choice	0.61	0.23	1.83	0.05
31	Multiple Choice	0.87	0.48	-0.74	0.08
32	Multiple Choice	0.89	0.40	-1.02	0.09
33	Multiple Choice	0.67	0.44	1.05	0.05
34	Multiple Choice	0.38	0.37	2.89	0.05
35	Multiple Choice	0.83	0.50	-0.20	0.07
36	Multiple Choice	0.74	0.52	0.47	0.06
37	Multiple Choice	0.57	0.45	1.70	0.05
38	Multiple Choice	0.58	0.48	1.61	0.05
39	Multiple Choice	0.84	0.49	-0.37	0.07
40	Multiple Choice	0.78	0.43	0.14	0.06
41	Multiple Choice	0.88	0.41	-0.55	0.08
42	Multiple Choice	0.83	0.41	-0.18	0.07
43	Multiple Choice	0.89	0.37	-0.61	0.08
44	Multiple Choice	0.78	0.46	0.28	0.06
51	Composing	0.69	0.73	1.70	0.03
52	Written Expression	0.69	0.75	1.67	0.03
53	Usage & Mechanics	0.75	0.81	1.06	0.02
Mean		0.78	0.45	0.21	0.07

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 5 US History to 1877 Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.85	0.46	-1.09	0.03
2	0.48	0.47	1.13	0.02
3	0.73	0.25	-0.39	0.02
4	0.75	0.51	-0.48	0.03
5	0.82	0.38	-0.96	0.03
6	0.60	0.52	0.37	0.02
10	0.70	0.51	-0.12	0.02
11	0.89	0.44	-1.46	0.03
12	0.75	0.47	-0.38	0.02
13	0.78	0.54	-0.54	0.03
14	0.61	0.42	0.21	0.02
15	0.56	0.50	0.66	0.02
16	0.43	0.44	1.11	0.02
19	0.69	0.41	-0.12	0.02
20	0.93	0.33	-2.03	0.04
21	0.61	0.35	0.36	0.02
22	0.90	0.39	-1.37	0.03
23	0.77	0.40	-0.58	0.03
24	0.61	0.54	0.46	0.02
25	0.73	0.38	-0.40	0.02
26	0.62	0.23	0.04	0.02
27	0.92	0.37	-1.86	0.04
28	0.64	0.37	0.39	0.02
31	0.68	0.47	0.01	0.02
32	0.65	0.58	0.29	0.02
33	0.42	0.47	1.34	0.02
34	0.47	0.38	0.66	0.02
35	0.80	0.48	-0.68	0.03
36	0.50	0.47	0.87	0.02
37	0.40	0.51	1.53	0.02
38	0.88	0.38	-1.31	0.03
42	0.59	0.26	0.29	0.02
43	0.69	0.45	0.01	0.02
44	0.44	0.38	1.18	0.02
45	0.57	0.30	0.44	0.02
46	0.61	0.40	0.30	0.02
47	0.58	0.36	0.54	0.02
48	0.63	0.32	0.14	0.02
49	0.57	0.41	0.52	0.02
50	0.44	0.27	0.96	0.02
Mean	0.66	0.41	0.00	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 5 US History to 1877 Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.57	0.45	0.62	0.03
2	0.74	0.49	-0.27	0.03
3	0.71	0.24	-0.01	0.03
4	0.87	0.32	-1.38	0.05
5	0.94	0.32	-2.34	0.06
6	0.62	0.51	0.23	0.03
10	0.67	0.49	0.07	0.03
11	0.95	0.27	-2.36	0.07
12	0.86	0.40	-1.36	0.05
13	0.76	0.56	-0.62	0.04
14	0.63	0.38	0.39	0.03
15	0.45	0.26	1.28	0.03
16	0.51	0.44	0.84	0.03
19	0.60	0.39	0.33	0.03
20	0.50	0.43	0.84	0.03
21	0.58	0.34	0.60	0.03
22	0.73	0.52	-0.24	0.03
23	0.68	0.45	-0.03	0.03
24	0.63	0.54	0.18	0.03
25	0.67	0.47	0.12	0.03
26	0.79	0.50	-0.77	0.04
27	0.50	0.38	0.95	0.03
28	0.72	0.35	-0.13	0.03
31	0.69	0.51	-0.20	0.03
32	0.40	0.35	1.22	0.03
33	0.44	0.48	1.11	0.03
34	0.72	0.50	-0.30	0.03
35	0.79	0.46	-0.85	0.04
36	0.86	0.44	-1.59	0.05
37	0.38	0.45	1.49	0.03
38	0.77	0.54	-0.67	0.04
42	0.82	0.42	-0.94	0.04
43	0.73	0.46	-0.30	0.03
44	0.43	0.35	1.28	0.03
45	0.72	0.60	-0.29	0.03
46	0.61	0.39	0.27	0.03
47	0.65	0.54	-0.06	0.03
48	0.61	0.28	0.40	0.03
49	0.83	0.35	-1.00	0.04
50	0.50	0.35	1.03	0.03
Mean	0.67	0.42	-0.06	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 6 US History From 1877 to Present Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.56	0.49	0.85	0.02
2	0.81	0.20	-0.62	0.03
3	0.49	0.33	0.78	0.02
4	0.80	0.40	-0.67	0.03
5	0.61	0.55	0.78	0.02
6	0.71	0.55	0.28	0.02
7	0.89	0.27	-1.34	0.03
11	0.77	0.35	-0.38	0.03
12	0.72	0.39	0.04	0.02
13	0.77	0.37	-0.42	0.03
14	0.46	0.27	1.28	0.02
15	0.59	0.44	0.66	0.02
16	0.65	0.43	0.52	0.02
17	0.63	0.47	0.64	0.02
18	0.89	0.39	-1.38	0.03
19	0.79	0.50	-0.51	0.03
20	0.67	0.57	0.15	0.02
21	0.89	0.38	-1.28	0.03
22	0.70	0.52	0.25	0.02
26	0.66	0.52	0.14	0.02
27	0.72	0.44	0.05	0.02
28	0.65	0.47	0.34	0.02
29	0.74	0.45	-0.14	0.02
30	0.75	0.58	-0.03	0.02
31	0.86	0.44	-1.10	0.03
32	0.71	0.40	-0.02	0.02
33	0.47	0.32	0.83	0.02
34	0.87	0.46	-1.08	0.03
36	0.76	0.39	-0.31	0.03
37	0.59	0.37	0.77	0.02
38	0.89	0.42	-1.41	0.03
39	0.93	0.41	-1.83	0.04
40	0.70	0.43	0.28	0.02
44	0.77	0.49	-0.15	0.02
45	0.44	0.30	1.37	0.02
46	0.59	0.33	0.82	0.02
47	0.84	0.33	-0.86	0.03
48	0.44	0.42	1.21	0.02
49	0.59	0.42	0.77	0.02
50	0.59	0.44	0.70	0.02
Mean	0.70	0.42	0.00	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
Grade 6 US History From 1877 to Present Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.77	0.48	-0.21	0.04
2	0.83	0.46	-0.86	0.05
3	0.87	0.36	-1.21	0.05
4	0.89	0.37	-0.82	0.05
5	0.57	0.53	0.57	0.04
6	0.64	0.40	0.52	0.04
7	0.49	0.31	1.26	0.04
11	0.77	0.46	-0.04	0.04
12	0.71	0.43	-0.04	0.04
13	0.69	0.36	0.23	0.04
14	0.74	0.40	-0.50	0.04
15	0.62	0.36	0.75	0.04
16	0.63	0.42	0.53	0.04
17	0.70	0.35	0.38	0.04
18	0.59	0.52	0.44	0.04
19	0.79	0.54	-0.38	0.04
20	0.87	0.35	-1.01	0.05
21	0.87	0.41	-1.13	0.05
22	0.77	0.55	-0.35	0.04
26	0.74	0.44	-0.05	0.04
27	0.74	0.55	0.00	0.04
28	0.68	0.48	0.32	0.04
29	0.58	0.41	0.88	0.04
30	0.81	0.42	-0.57	0.05
31	0.86	0.42	-0.73	0.05
32	0.45	0.41	1.47	0.04
33	0.47	0.35	1.72	0.04
34	0.58	0.34	0.94	0.04
36	0.78	0.38	-0.28	0.04
37	0.68	0.41	0.21	0.04
38	0.89	0.42	-1.45	0.06
39	0.93	0.43	-2.13	0.08
40	0.82	0.51	-1.08	0.05
44	0.64	0.36	0.26	0.04
45	0.67	0.41	0.13	0.04
46	0.50	0.40	1.05	0.04
47	0.83	0.34	-0.83	0.05
48	0.66	0.47	0.26	0.04
49	0.59	0.39	0.64	0.04
50	0.53	0.38	0.89	0.04
Mean	0.71	0.42	-0.01	0.04

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 7 Civics and Economics Core 1

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.80	0.08	-0.82	0.03
2	0.67	0.40	0.22	0.02
3	0.73	0.41	-0.05	0.02
4	0.57	0.47	0.69	0.02
5	0.52	0.44	0.77	0.02
6	0.71	0.49	-0.05	0.02
7	0.68	0.33	0.01	0.02
8	0.58	0.60	0.78	0.02
9	0.72	0.49	-0.04	0.02
10	0.61	0.46	0.49	0.02
11	0.83	0.32	-0.83	0.03
14	0.49	0.46	1.17	0.02
15	0.56	0.34	0.69	0.02
16	0.64	0.47	0.43	0.02
17	0.94	0.30	-2.09	0.04
18	0.67	0.40	0.16	0.02
19	0.57	0.41	0.32	0.02
20	0.83	0.40	-0.84	0.03
23	0.77	0.46	-0.44	0.03
24	0.77	0.44	-0.38	0.02
25	0.81	0.38	-0.67	0.03
26	0.66	0.32	0.14	0.02
27	0.71	0.42	-0.14	0.02
28	0.75	0.47	-0.25	0.02
29	0.90	0.30	-1.41	0.03
32	0.72	0.49	-0.03	0.02
33	0.67	0.39	-0.01	0.02
34	0.68	0.34	0.06	0.02
35	0.67	0.36	0.03	0.02
36	0.67	0.38	0.12	0.02
39	0.78	0.42	-0.60	0.03
40	0.40	0.46	1.51	0.02
41	0.78	0.44	-0.42	0.03
42	0.66	0.34	0.27	0.02
43	0.81	0.30	-0.64	0.03
46	0.44	0.26	1.28	0.02
47	0.61	0.43	0.56	0.02
48	0.63	0.51	0.47	0.02
49	0.69	0.48	-0.09	0.02
50	0.75	0.42	-0.37	0.02
Mean	0.69	0.40	0.00	0.02

Virginia SOL - Spring 2004 Administration - Item Analysis  
 Grade 7 Civics and Economics Core 2

Item Number	P-Value	Point Biserial	Rasch diff.	SE (diff.)
1	0.93	0.35	-2.24	0.06
2	0.84	0.38	-1.05	0.04
3	0.76	0.50	-0.39	0.03
4	0.61	0.45	0.47	0.03
5	0.64	0.31	0.46	0.03
6	0.33	0.37	1.89	0.03
7	0.68	0.32	0.15	0.03
8	0.40	0.11	1.87	0.03
9	0.92	0.43	-2.03	0.06
10	0.73	0.49	0.19	0.03
11	0.84	0.30	-0.92	0.04
14	0.50	0.44	0.87	0.03
15	0.70	0.46	-0.10	0.03
16	0.91	0.39	-1.75	0.05
17	0.71	0.29	-0.07	0.03
18	0.67	0.42	0.07	0.03
19	0.88	0.41	-0.92	0.04
20	0.83	0.39	-0.94	0.04
23	0.76	0.46	-0.41	0.03
24	0.70	0.46	0.13	0.03
25	0.81	0.35	-0.68	0.04
26	0.77	0.47	-0.49	0.04
27	0.72	0.42	-0.16	0.03
28	0.71	0.36	-0.07	0.03
29	0.64	0.33	0.24	0.03
32	0.73	0.49	-0.16	0.03
33	0.67	0.40	0.47	0.03
34	0.69	0.56	0.12	0.03
35	0.72	0.38	0.25	0.03
36	0.69	0.58	0.34	0.03
39	0.64	0.40	0.66	0.03
40	0.44	0.47	1.32	0.03
41	0.87	0.35	-0.99	0.04
42	0.79	0.44	-0.23	0.03
43	0.78	0.27	-0.19	0.03
46	0.77	0.44	-0.46	0.03
47	0.63	0.45	0.38	0.03
48	0.50	0.32	1.24	0.03
49	0.58	0.44	0.91	0.03
50	0.78	0.43	-0.35	0.03
Mean	0.71	0.40	-0.06	0.03





# **APPENDIX D**

Committee Member Selection for  
Summer 2003



COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF EDUCATION  
P.O. BOX 2120  
RICHMOND, VIRGINIA 23218-2120

SUPTS. MEMO NO. 67  
November 15, 2002

ADMINISTRATIVE

TO: Division Superintendents

FROM: Jo Lynne DeMary  
Superintendent of Public Instruction

SUBJECT: Request for Nominations for the 2003 Standards  
of Learning Assessment Content Review Committees

The Division of Assessment and Reporting is seeking nominations for membership on the 2003 Standards of Learning Assessments Content Review Committees. Approximately 12-15 members are needed for each of the 26 content committees. School divisions are encouraged to nominate at least one representative for each content committee. Although content committee participation is limited to one representative per school division, a school division may have multiple representatives serving on different content committees.

Over the next three years, a system will be phased-in for implementing a partial rotation of membership on an annual basis. A partial rotation of committee members annually will provide an opportunity for more teachers to contribute to the development of the Standards of Learning assessments while retaining the experience and knowledge of veteran committee members.

Committee members will be chosen based on the following criteria:

- grade-level and content area expertise and experience;
- in-depth knowledge of the Standards of Learning;
- instructional/supervisory experience with students of varied learning styles, abilities, and aptitudes, including students with disabilities and students with limited English proficiency; and
- balanced regional representation.

Committee members selected for the 2003 Standards of Learning Content Review Committees will be expected to:

- serve a one-year term with the option to apply for a second-year term in 2004;
- sign a Non-Disclosure/Conflict of Interest Agreement;
- participate in two (2-4 day) committee meetings in Richmond (see tentative schedule on page 4 in the application packet);
- review the Standards of Learning test forms for alignment with the test blueprints;
- examine test items to confirm a match with the Standards of Learning and review items for appropriateness and fairness;
- examine field test data for potential test items; and
- recommend items to be included in the test item bank, edited to be field tested, or dismissed from further consideration.

Committees members will be provided the following:

- reimbursement for meals and travel expenses in accordance with state travel policy and guidelines;
- lodging;
- honorarium of \$50 per meeting day for committee members not under contract with a school division at the time of meetings; and
- certificate for recertification points.

Individuals may initiate the application process for the 2003 Content Review Committees or may be nominated. In either case, all nominees must complete an application; however, committee members who served during 2002 will only need to complete certain pages of the application. The applicant must provide two professional references in support of their nomination and obtain approval from the division superintendent. Detailed information is included in the application packet that outlines requirements, provisions, selection criteria, and a prototype of a typical meeting day's agenda.

You are invited to identify in your division one distinguished educator for each of the 26 committees and encourage them to apply for this important service.

Completed applications are due to the Virginia Department of Education by January 24, 2003.

If you have questions, please contact Lolita B. Hall (mailto:lbhall@mail.vak12ed.edu), associate director, Division of Assessment and Reporting at (804) 786-9422.

Thank you in advance for your continued support of this effort.

JLD/SLR/LBH/jc

Attachment

<http://www.pen.k12.va.us/VDOE/suptsmemos/2002/adm067a.doc>



COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF EDUCATION  
P.O. BOX 2120  
RICHMOND, VIRGINIA 23218-2120

SUPTS. MEMO NO. 68  
November 22, 2002

ADMINISTRATIVE

TO: Division Superintendents

FROM: Jo Lynne DeMary  
Superintendent of Public Instruction

SUBJECT: Request for Nominations for the 2003 Standards  
of Learning Assessment End-of-Course Content  
Area Bias Review Committees

The Division of Assessment and Reporting is accepting nominations for membership on the 2003 Standards of Learning Assessments End-of-Course Content Bias Review Committees. Approximately 12-15 members are needed for each of the four end-of-course content areas: English, mathematics, history and social science, and science. The bias committee members are responsible for reviewing test items for stereotyping or non-offensive terms including equity and fairness in regard to any particular gender, ethnic, religious, political, age, or socio-economics groups. School divisions are encouraged to nominate at least one representative for each of the bias committees. Although the bias committee participation is limited to one representative per school division, a school division may have multiple representatives serving on different bias committees.

Over the next three years, a system will be phased-in for implementing a partial rotation of membership on an annual basis. A partial rotation of committee members annually will provide an opportunity for more teachers to contribute to the development of the Standards of Learning assessments while retaining the experience and knowledge of veteran committee members.

Bias committee members will be chosen based on the



following criteria:

- training and experience in dealing with issues of stereotyping, equity and fairness;
- in-depth knowledge of the Standards of Learning;
- instructional/supervisory experience with students of varied learning styles, abilities, and aptitudes, including students with disabilities and students with limited English proficiency; and
- balanced regional representation.

Committee members selected for the 2003 Standards of Learning End-of-Course Content Area Bias Review will be expected to:

- serve a one-year term with the option to apply for a second-year term in 2004;
- sign a Non-Disclosure/Conflict of Interest Agreement;
- participate in one (2-3 day) committee meeting in Richmond (see tentative schedule on page 4 in the application packet);
- examine test items for stereotyping regarding any particular gender, ethnic, religious, political, age, or socio-economics groups;
- determine if test items are fair to all students who have taken a particular course in Virginia schools, regardless of the students' gender, ethnicity, religion, or socio-economics status;
- review field test data to determine if students of different groups perform differently and identify possible reasons for differential performance; and
- recommend test items that are free from bias and eligible to be included in the test item bank.

Bias committees members will be provided the following:

- reimbursement for meals and travel expenses in accordance with state travel policy and guidelines;
- lodging;
- honorarium of \$50 per meeting day for committee members not under contract with a school division at the time of meetings; and
- certificate for recertification points.

Individuals may initiate the application process for the

2003 End-of-Course Content Area Bias Review Committees or may be nominated. In either case, all nominees must complete an application; however, bias committee members who served during 2002 will only need to complete certain pages of the application. The applicant must provide two professional references in support of their nomination and obtain approval from the division superintendent. Detailed information is included in the application packet that outlines requirements, provisions, selection criteria, and a prototype of a typical meeting day's agenda.

You are invited to identify in your division one distinguished educator for each of the four bias committees and encourage them to apply for this important service. Completed applications are due to the Virginia Department of Education by January 31, 2003.

If you have questions, please contact Lolita B. Hall (mailto:lbhall@pen.k12ed.edu), associate director, Division of Assessment and Reporting at (804) 786-9422.

Thank you in advance for your continued support of this effort.

JDL/SLR/LBH/jc

Attachment

<http://www.pen.k12.va.us/VDOE/suptsmemos/2002/adm068a.doc>





**Division of Assessment and Reporting**

# **VIRGINIA STANDARDS OF LEARNING ASSESSMENTS**

## **2003 Content Review Committees**

### **BACKGROUND INFORMATION**

Virginia Department of Education  
Division of Assessment and Reporting  
P.O. Box 2120  
Richmond, Virginia 23218-2120  
Fax: 804/371-8978



## ***Content Review Committee Member Requirements and Provisions***

The Division of Assessment and Reporting is seeking nominations for membership on the 2003 Standards of Learning Assessment Content Review Committees. Approximately 12-15 members are needed for each of the 26 content committees. School divisions are encouraged to nominate at least one representative for each content committee. Although content committee participation is limited to one representative per school divisions, a school division may have multiple representatives serving on different content committees.

Over the next three years a system will be phased-in for recruiting and implementing a partial rotation of committee membership on annual basis. A partial rotation of committee members annually will provide an opportunity for more teachers to contribute to the development of the Standards of Learning assessments while retaining the experience and knowledge of veteran committee members.

Content committee members are expected to:

- Serve a one-year term with the option to apply for a second-year term in 2004;
- Sign a Non-Disclosure/Conflict of Interest Agreement;
- Participate in two (2-4 day) committee meetings during 2003 in Richmond (see tentative schedule on page 4 in the application packet);
- Follow procedures and guidelines outlined by meeting facilitator(s);
- Review the Standards of Learning test forms for alignment with the test blueprints;
- Examine test items to confirm a match with the Standards of Learning and review items for appropriateness and fairness;
- Examine field test data for potential test items;
- Contribute to group discussions;
- Recommend items to be included in the test item bank, edited to be field tested, or dismissed from further consideration.
- Stay goal-focused and maintain a broad-based perspective throughout the review process in regard to all students in the Commonwealth.

## **Content Review Committee Members Requirements and Provisions (cont'd)**

Content committee members will be provided the following:

- Reimbursement for meals and travel expenses in accordance with state travel policy and guidelines;
- Lodging;
- Honorarium of \$50 per meeting day for committee members not under contract with a school division at the time of meetings; and
- Certificate for Recertification Points.

## Content Review Committee Members Selection Criteria

To be considered for membership on the 2003 Content Review Committees *all nominees, including individuals who have served in previous years, must complete an application; however, committee members who served during 2002 will only need to complete certain pages of the application.* The application must be submitted to the Virginia Department of Education on or before January 24, 2003. Applications will be reviewed and notification letters will be mailed to applicants and their division superintendent by March 24, 2003.

Committee members will be selected based on the submission of a completed application that communicates the following qualities:

- Expertise and recent teaching/supervisory experience in a specific content area and level;
- In-depth knowledge of the Standards of Learning and how they should be applied in teaching students or supervising professional staff; and
- Varied experiences in working with students who have different learning styles, abilities, and aptitudes, including students with disabilities and students with limited English proficiency.

The application review team *may* conduct a telephone interview with the applicant and one or both of the Professional References identified in the application. Using the criteria above in comparison to information reviewed, the most qualified educators will be selected for committee membership. All applicants will not necessarily be selected.



Virginia Department of Education  
Division of Assessment and Reporting  
Hotel (To Be Confirmed), Richmond, Virginia  
Tentative Dates as Listed

**2003 Standards of Learning Assessments Content Review Meeting**

**Agenda Prototype**

(Typical Daily Schedule)

8:00 – 8:30 a.m.	Registration Continental Breakfast
8:30 a.m.	Welcome, Introductions (Day One)  Orientation (Day One)  Begin Work on Task(s) for the Day
10:15 – 10:30 a.m.	Refreshment Break  Continue with Task(s)
12:00 Noon – 1:00 p.m.	Lunch  Continue with Task(s)
2:45 – 3:00 p.m.	Refreshment Break  Continue with Task(s)
4:45 – 5:00 p.m.	Summary/Next Steps <ul style="list-style-type: none"><li>▪ Meeting Evaluation (Last Day)</li><li>▪ Travel Reimbursement Requests (Last Day)</li></ul> Adjourn  Dinner on Your Own

NOTE: Committee members are expected to be in attendance daily throughout the entire agenda. The length of meetings may vary by grade levels and content areas.



**Division of Assessment and Reporting**

# **VIRGINIA STANDARDS OF LEARNING ASSESSMENTS**

## **2003 Content Review Committees**

### **APPLICATION PACKET**

**Submit on or Before  
January 24, 2003**

to

Virginia Department of Education  
Division of Assessment and Reporting  
P.O. Box 2120  
Richmond, Virginia 23218-2120  
Fax: 804/371-8978

## Non-Disclosure/Conflict of Interest Agreement

All persons agreeing to serve as members of Virginia Standards of Learning Content Review Committees must do so with full knowledge that the security and confidentiality of these materials may in no way be breached. In order to participate, each committee member must agree to and sign the following non-disclosure stipulations.

As a member of the content review committee, I agree to adhere to the following:

1. Not to disclose or allow to be disclosed, specific test items and/or content, scoring keys, or other test-related materials used during this review process;
2. Not to reproduce, electronically or otherwise, in whole or in part, any materials used or reviewed during this review process;
3. Not to use membership on this committee or the information gained through the content review process for financial gain as a test item writer, an author or co-author of textbooks and professional journals, or any other such publications related to the Virginia Standards of Learning.

School Division/Organization \_\_\_\_\_

Print Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

VIRGINIA DEPARTMENT OF EDUCATION  
DIVISION OF ASSESSMENT AND REPORTING  
101 NORTH 14<sup>TH</sup> STREET  
P. O. BOX 2120  
RICHMOND, VIRGINIA 23218-2120

Virginia Department of Education  
Division of Assessment and Reporting

**2003 Application for Standards of Learning Assessments  
Content Review Committees**

Applications for the 2003 Virginia Standards of Learning Assessments Content Review Committees may be mailed or faxed and must be received on or before January 24, 2003 by:

Lolita Hall, Associate Director  
Division of Assessment and Reporting  
Virginia Department of Education  
P. O. Box 2120  
Richmond, VA 23218-2120  
Fax: (804) 371-8978 Phone: (804) 786-9422

The application packet may be obtained in an electronic format at:  
<http://www.pen.k12.va.us/VDOE/suptsmemos/2002/adm067a.doc> or you may call 804/225-2102 to request a paper copy.

**Directions:** To access the electronic format, go to Web address. Open file. Download file and save as WORD document. Complete the application electronically, print, obtain signatures, and mail or fax to the Virginia Department of Education. If you are a new applicant, please complete and submit all pages 1-9. If you served on a Content Review Committee during the summer 2002, please submit *only* pages 1, 2, 3, 4, 7, 8, 9.

1. **PROVIDE CONTACT INFORMATION** (Type or Print Clearly)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_ MI \_\_\_\_\_  
Position \_\_\_\_\_ Content \_\_\_\_\_ Grade \_\_\_\_\_  
Title \_\_\_\_\_ Area \_\_\_\_\_ Level \_\_\_\_\_  
School Division \_\_\_\_\_  
School \_\_\_\_\_

**WORK**

Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone ( ) \_\_\_\_\_ Fax ( ) \_\_\_\_\_  
E-mail \_\_\_\_\_

**HOME**

Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone ( ) \_\_\_\_\_ ( ) \_\_\_\_\_  
E-mail \_\_\_\_\_

**2. If you wish, please indicate your gender and ethnicity:**  
(Provision for this information is optional.)

**Gender:**

\_\_\_\_\_ Female  
\_\_\_\_\_ Male

**Ethnicity:**

\_\_\_\_\_ American Indian or Alaskan Native  
\_\_\_\_\_ Asian or Pacific Islander  
\_\_\_\_\_ Black (Not of Hispanic Origin)  
\_\_\_\_\_ White (Not of Hispanic Origin)

**3. Check the content *committee(s)* for which you are applying:**

**Tentative 2003 Summer Schedule**

<b>Content Committee</b>	<b>Date #1</b>	<b>Date #2</b>
<input type="checkbox"/> Grade 3 English	July 14-18	N/A
<input type="checkbox"/> Grade 3 Mathematics	July 14-17	N/A
<input type="checkbox"/> Grade 3 History	July 14-17	N/A
<input type="checkbox"/> Grade 3 Science	July 14-17	N/A
<input type="checkbox"/> Grade 5 English: Reading	July 10-11	Aug 04-06
<input type="checkbox"/> Grade 5 English: Writing	July 10-11	Aug 04-06
<input type="checkbox"/> Grade 5 Mathematics	July 10-11	Aug 04-06
<input type="checkbox"/> Grade 5 History	July 10-11	Aug 04-06
<input type="checkbox"/> Grade 5 Science	July 10-11	Aug 04-06
<input type="checkbox"/> Grade 8 English: Reading	July 07-09	July 24-25
<input type="checkbox"/> Grade 8 English: Writing	July 07-09	July 24-25
<input type="checkbox"/> Grade 8 Mathematics	July 07-09	July 24-25
<input type="checkbox"/> Grade 8 History	July 07-09	July 24-25
<input type="checkbox"/> Grade 8 Science	July 07-09	July 24-25
<input type="checkbox"/> ECO: English: Reading	June 24-25	July 21-23
<input type="checkbox"/> EOC: English: Writing	June 26-27	July 28-30
<input type="checkbox"/> EOC: Algebra I	June 24-25	July 21-23
<input type="checkbox"/> EOC: Algebra II	June 26-27	July 28-30
<input type="checkbox"/> EOC: Geometry	June 24-25	July 21-23
<input type="checkbox"/> EOC: Virginia and U.S. History	June 24-25	July 21-23
<input type="checkbox"/> EOC: World History I	June 24-25	July 21-23
<input type="checkbox"/> EOC: World History II	June 26-27	July 28-30
<input type="checkbox"/> EOC: World Geography	June 26-27	July 28-30
<input type="checkbox"/> EOC: Biology	June 24-25	July 21-23
<input type="checkbox"/> EOC: Chemistry	June 26-27	July 28-30
<input type="checkbox"/> EOC: Earth Science	June 26-27	July 28-30

Key: EOC =End-of-Course

4. **Briefly describe your college training and expertise in the content area of the committee(s) on which you wish to serve.**

5. **Briefly describe your teaching/supervisory responsibilities for the last three years. Please include subject(s) and grade(s).**

(a) 2002-to-Present – Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

(b) 2001-2002– Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

(c) 2000-2001 – Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

6. **Briefly explain how you *apply* the Virginia Standards of Learning in your current assignment.**



**Virginia Standards of Learning Assessments  
2003 Content Review Committees**

**Professional Reference**

*Please complete the following information. The completed application packet, including two professional references, must be sent to the applicant's division superintendent for approval. The approved application packet must be received at the Virginia Department of Education by **January 24, 2003**.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Name of Professional Reference \_\_\_\_\_

Position Title \_\_\_\_\_

School (if applicable) \_\_\_\_\_

School Division (if applicable) \_\_\_\_\_

Phone (\_\_\_\_) \_\_\_\_\_ E-mail \_\_\_\_\_

I have direct contact with the applicant on a regular basis in regards to his/her current instructional/supervisory assignment. This individual is highly qualified to serve on the Content Review Committee for which he/she has applied.

I have reviewed this application and support the nomination.

\_\_\_\_\_  
(Signature of Professional Reference) Date \_\_\_\_\_

Optional

*You may attach to the application additional information about the applicant, such as a letter of recommendation.*



**Virginia Standards of Learning Assessments  
2003 Content Review Committees**

**Professional Reference**

*Please complete the following information. The completed application packet, including two professional references, must be sent to the applicant's division superintendent for approval. The approved application packet must be received at the Virginia Department of Education by **January 24, 2003**.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Name of Professional Reference \_\_\_\_\_

Position Title \_\_\_\_\_

School (if applicable) \_\_\_\_\_

School Division (if applicable) \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

I have direct contact with the applicant on a regular basis in regards to his/her current instructional/supervisory assignment. This individual is highly qualified to serve on the Content Review Committee for which he/she has applied.

I have reviewed this application and support the nomination.

\_\_\_\_\_  
(Signature of Professional Reference) Date \_\_\_\_\_

Optional

*You may attach to the application additional information about the applicant, such as a letter of recommendation.*

**Virginia Standards of Learning Assessments  
2003 Content Review Committees**

**Approval of Nomination**

*Each nomination for membership on a Virginia Standards of Learning Assessments Content Review Committee must be approved by the applicant's division superintendent.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Approval of Nomination:

\_\_\_\_\_  
(Signature, Division Superintendent)      Date \_\_\_\_\_

The completed application packet for the 2003 Virginia Standards of Learning Assessments Content Review Committees may be mailed or faxed and must be received on or before January 24, 2003 by:

Lolita Hall, Associate Director  
Division of Assessment and Reporting  
Virginia Department of Education  
P. O. Box 2120  
Richmond, VA 23218-2120  
Fax: (804) 371-8978      Phone: (804) 786-9422





**Division of Assessment and Reporting**

# **VIRGINIA STANDARDS OF LEARNING ASSESSMENTS**

## **2003 End-of-Course Content Area Bias Content Review Committees**

### **BACKGROUND INFORMATION**

Virginia Department of Education  
Division of Assessment and Reporting  
P.O. Box 2120  
Richmond, Virginia 23218-2120  
Fax: 804/371-8978

## ***End-of-Course Content Area Bias Review Committee Member Requirements and Provisions***

The Division of Assessment and Reporting is seeking nominations for membership on the 2003 Standards of Learning Assessment End-of-Course Content Area Bias Review Committees. Approximately 12-15 members are needed for each of the four content areas: English, mathematics, science, and history and social science. School divisions are encouraged to nominate at least one representative for each content committee. Although content committee participation is limited to one representative per school divisions, a school division may have multiple representatives serving on different content committees.

Over the next three years a system will be phased-in for recruiting and implementing a partial rotation of committee membership on annual basis. A partial rotation of committee members annually will provide an opportunity for more teachers to contribute to the development of the Standards of Learning assessments while retaining the experience and knowledge of veteran committee members.

Bias committee members are expected to:

- Serve a one-year term with the option to apply for a second-year term in 2004;
- Sign a Non-Disclosure/Conflict of Interest Agreement;
- Participate in one (2-3 day) committee meeting during 2003 in Richmond (see tentative schedule on page 4 in the application packet);
- Follow procedures and guidelines outlined by meeting facilitator(s);
- Examine test items for stereotyping regarding any particular gender, ethnic, religious, political, age or socio-economics groups;
- Determine if test items are fair to all students who have taken a particular course in Virginia schools, regardless of the students gender, ethnicity, religion or socio-economics status;
- Review field test data to determine if students of different groups perform differently and identify possible reasons for differential performance; and
- Recommend test items that are free from bias and eligible to be included the test item bank.

## **Bias Review Committee Members Requirements and Provisions (cont'd)**

Bias committee members will be provided the following:

- Reimbursement for meals and travel expenses in accordance with state travel policy and guidelines;
- Lodging;
- Honorarium of \$50 per meeting day for committee members not under contract with a school division at the time of meetings; and
- Certificate for Recertification Points.

## End-of-Course Content Area Bias Review Committee Members Selection Criteria

To be considered for membership on the 2003 End-of-Course Content Area Bias Review Committees *all nominees, including individuals who have served in previous years, must complete an application; however, committee members who served during 2002 will only need to complete certain pages of the application.* The application must be submitted to the Virginia Department of Education on or before January 31, 2003. Applications will be reviewed and notification letters will be mailed to applicants and their division superintendent by March 24, 2003.

Bias committee members will be selected based on the submission of a completed application that communicates the following qualities:

- Training and experience in dealing with issues of stereotyping, equity and fairness;
- In-depth knowledge of the Standards of Learning;
- Instructional/supervisory experience with students of varied learning styles, abilities, and aptitudes, including students with disabilities and students with limited English proficiency; and
- Balanced regional representation.

The application review team *may* conduct a telephone interview with the applicant and one or both of the Professional References identified in the application. Using the criteria above in comparison to information reviewed, the most qualified educators will be selected for committee membership. All applicants will not necessarily be selected.

Virginia Department of Education  
Division of Assessment and Reporting  
Hotel (To Be Confirmed), Richmond, Virginia  
Tentative Dates as Listed

**2003 Standards of Learning Assessments End-of-Course Content Area  
Bias Review Meetings**

**Agenda Prototype**

(Typical Daily Schedule)

8:00 – 8:30 a.m.	Registration Continental Breakfast
8:30 a.m.	Welcome, Introductions (Day One)  Orientation (Day One)  Begin Work on Task(s) for the Day
10:15 – 10:30 a.m.	Refreshment Break  Continue with Task(s)
12:00 Noon – 1:00 p.m.	Lunch  Continue with Task(s)
2:45 – 3:00 p.m.	Refreshment Break  Continue with Task(s)
4:45 – 5:00 p.m.	Summary/Next Steps <ul style="list-style-type: none"><li>▪ Meeting Evaluation (Last Day)</li><li>▪ Travel Reimbursement Requests (Last Day)</li></ul> Adjourn  Dinner on Your Own

NOTE: Committee members are expected to be in attendance daily throughout the entire agenda. The length of meetings may vary by content areas.







**Division of Assessment and Reporting**

**VIRGINIA STANDARDS OF  
LEARNING  
ASSESSMENTS**

**2003 End-of-Course Content Area Bias  
Review Committees**

**APPLICATION  
PACKET**

**Submit on or Before  
January 31, 2003**

**to**

Virginia Department of Education  
Division of Assessment and Reporting  
P.O. Box 2120  
Richmond, Virginia 23218-2120  
Fax: 804/371-8978

## Non-Disclosure/Conflict of Interest Agreement

All persons agreeing to serve as members of Virginia Standards of Learning Content Area Bias Review Committees must do so with full knowledge that the security and confidentiality of these materials may in no way be breached. In order to participate, each committee member must agree to and sign the following non-disclosure stipulations.

As a member of the End-of-Course Content Area Bias review committee, I agree to adhere to the following:

1. Not to disclose or allow to be disclosed, specific test items and/or content, scoring keys, or other test-related materials used during this review process;
2. Not to reproduce, electronically or otherwise, in whole or in part, any materials used or reviewed during this review process;
3. Not to use membership on this committee or the information gained through the content review process for financial gain as a test item writer, an author or co-author of textbooks and professional journals, or any other such publications related to the Virginia Standards of Learning.

School Division/Organization \_\_\_\_\_

Print Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

VIRGINIA DEPARTMENT OF EDUCATION  
DIVISION OF ASSESSMENT AND REPORTING  
101 NORTH 14<sup>TH</sup> STREET  
P. O. BOX 2120  
RICHMOND, VIRGINIA 23218-2120

Virginia Department of Education  
Division of Assessment and Reporting

**2003 Application for Standards of Learning Assessments  
End-of-Course Content Area Bias Review Committees**

Applications for the 2003 Virginia Standards of Learning Assessments End-of-Course Content Area Bias Review Committees may be mailed or faxed and must be received on or before January 31, 2003 by:

Lolita Hall, Associate Director  
Division of Assessment and Reporting  
Virginia Department of Education  
P. O. Box 2120  
Richmond, VA 23218-2120  
Fax: (804) 371-8978 Phone: (804) 786-9422

The application packet may be obtained in an electronic format at:  
<http://www.pen.k12.va.us/VDOE/suptsmemos/2002/adm068a.doc> or you may call 804/225-2102 to request a paper copy.

**Directions:** To access the electronic format, go to Web address. Open file. Download file and save as WORD document. Complete the application electronically, print, obtain signatures, and mail or fax to the Virginia Department of Education. If you are a new applicant, please complete and submit all pages 1-9. If you served on a Content Review Committee during the summer 2002, please submit *only* pages 1, 2, 3, 4, 7, 8, 9.

1. **PROVIDE CONTACT INFORMATION** (Type or Print Clearly)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_ MI \_\_\_\_\_  
Position \_\_\_\_\_ Content \_\_\_\_\_ Grade \_\_\_\_\_  
Title \_\_\_\_\_ Area \_\_\_\_\_ Level \_\_\_\_\_  
School Division \_\_\_\_\_  
School \_\_\_\_\_

**WORK**

Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone ( ) \_\_\_\_\_ Fax ( ) \_\_\_\_\_  
E-mail \_\_\_\_\_

**HOME**

Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone ( ) \_\_\_\_\_ ( ) \_\_\_\_\_  
E-mail \_\_\_\_\_

**2. If you wish, please indicate your gender and ethnicity:**

(Provision for this information is optional.)

**Gender:**

- Female
- Male

**Ethnicity:**

- American Indian or Alaskan Native
- Asian or Pacific Islander
- Black (Not of Hispanic Origin)
- Hispanic
- White (Not of Hispanic Origin)

**3. Check the bias *committee(s)* for which you are applying:**

**Tentative 2003 Summer Schedule**

**Bias Committee**

**Date**

- |   |            |
|---|------------|
| <input type="checkbox"/> EOC: English Bias                | August 7-8 |
| <input type="checkbox"/> EOC: Mathematics Bias            | August 7-8 |
| <input type="checkbox"/> EOC: History/Social Science Bias | August 6-8 |
| <input type="checkbox"/> EOC: Science                     | August 7-8 |

Key: EOC =End-of-Course

4. **Briefly describe your college training and expertise in the content area of the committee(s) on which you wish to serve.**

5. **Briefly describe your teaching/supervisory responsibilities for the last three years. Please include subject(s) and grade(s), training and experience in dealing with issues of stereotyping, equity and fairness.**

(a) 2002-to-Present – Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

(b) 2001-2002– Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

(c) 2000-2001 – Content Area \_\_\_\_\_ Grade Level \_\_\_\_\_

6. **Briefly explain how you *apply* the Virginia Standards of Learning in your current assignment.**

7. **Briefly describe your teaching/supervisory experience with students who have special needs.** (Special needs include those students with different learning styles, who have disabilities, and who are disadvantaged--economically and academically).
  
8. **Briefly describe your teaching experience of students with limited English proficiency or who speak English as a second language.**
  
9. **Briefly explain why you are interested in serving as a member of an End-of-Course Content Area Bias Review Committee.**
  
10. **Provide two professional references that will support your nomination as a member of the Standards of Learning Assessment Bias Review Committee.** *(Refer to Pages 7 and 8 of this application packet.) The professional references must:*
  - have direct contact with you on a regular basis in regards to your current assignment; and
  - review and sign your application prior to obtaining final approval by your division superintendent.
  
11. **Obtain approval for your nomination as a member of the Standards of Learning Assessment Bias Review Committee by your division superintendent.** *(Refer to Page 9 of this application packet.)*

**Virginia Standards of Learning Assessments  
2003 End-of-Course Content Area Bias Review Committees**

**Professional Reference**

*Please complete the following information. The completed application packet, including two professional references, must be sent to the applicant's division superintendent for approval. The approved application packet must be received at the Virginia Department of Education by **January 31, 2003**.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Name of Professional Reference \_\_\_\_\_

Position Title \_\_\_\_\_

School (if applicable) \_\_\_\_\_

School Division (if applicable) \_\_\_\_\_

Phone (     ) \_\_\_\_\_ E-mail \_\_\_\_\_

I have direct contact with the applicant on a regular basis in regards to his/her current instructional/supervisory assignment. This individual is highly qualified to serve on the End-of-Course Content Area Bias Review Committee for which he/she has applied.

I have reviewed this application and support the nomination.

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature of Professional Reference)

Optional

*You may attach to the application additional information about the applicant, such as a letter of recommendation.*



**Virginia Standards of Learning Assessments  
2003 End-of-Course Content Area Bias Review Committees**

**Professional Reference**

*Please complete the following information. The completed application packet, including two professional references, must be sent to the applicant's division superintendent for approval. The approved application packet must be received at the Virginia Department of Education by **January 31, 2003**.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Name of Professional Reference \_\_\_\_\_

Position Title \_\_\_\_\_

School (if applicable) \_\_\_\_\_

School Division (if applicable) \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

I have direct contact with the applicant on a regular basis in regards to his/her current instructional/supervisory assignment. This individual is highly qualified to serve on the End-of-Course Content Area Bias Content Review Committee for which he/she has applied.

I have reviewed this application and support the nomination.

\_\_\_\_\_  
(Signature of Professional Reference) Date \_\_\_\_\_

Optional

*You may attach to the application additional information about the applicant, such as a letter of recommendation.*

**Virginia Standards of Learning Assessments  
2003 End-of-Course Content Area Bias Review Committees**

**Approval of Nomination**

*Each nomination for membership on a Virginia Standards of Learning Assessments End-of-Course Content Area Bias Review Committee must be approved by the applicant's division superintendent.*

Name of Applicant \_\_\_\_\_ Committee \_\_\_\_\_

Approval of Nomination:

\_\_\_\_\_ Date \_\_\_\_\_  
(Signature, Division Superintendent)

The completed application packet for the 2003 Virginia Standards of Learning Assessments End-of-Course Content Area Bias Review Committees may be mailed or faxed and must be received on or before January 31, 2003 by:

Lolita Hall, Associate Director  
Division of Assessment and Reporting  
Virginia Department of Education  
P. O. Box 2120  
Richmond, VA 23218-2120  
Fax: (804) 371-8978 Phone: (804) 786-9422



# 2003 Summer/Fall Standards of Learning Assessment Review Committees

# FACTS



Division of Assessment and Reporting

### SOL Assessment Review Committees

- 35 Grade-Level/Content
- 4 End-of-Course Content Area Bias
- 3 Direct Writing
- 1 Special Education
- 1 Limited English Proficiency (LEP) (Mathematics)

### Applications Submitted

- 610 Grade-Level Content Review
- 58 EOC Content Area Bias Review
- 15 Special Education
- 14 LEP Mathematics
- 697 Total

### School Divisions Submitted 15 or more Applications

- Newport News City (15)
- Gloucester County (16)
- Rockingham County (16)
- Chesapeake City (18)
- Suffolk City (19)
- Frederick County (20)
- Spotsylvania County (22)
- Richmond City (23)
- Hanover County (24)
- Fairfax County (30)
- Virginia Beach City (31)
- Russell County (33)
- Henrico County (39)

### Membership Selection

- 449 Committee Members Representing 89 of 133 (66%) School Divisions
- Committee Representation by Superintendent Regions

Region 1 - 83 (18%)  
 Region 2 - 92 (20%)  
 Region 3 - 50 (11%)  
 Region 4 - 77 (17%)  
 Region 5 - 39 ( 9%)  
 Region 6 - 46 (10%)  
 Region 7 - 47 (10%)  
 Region 8 - 15 ( 3%)

### Years of Experience on Committees

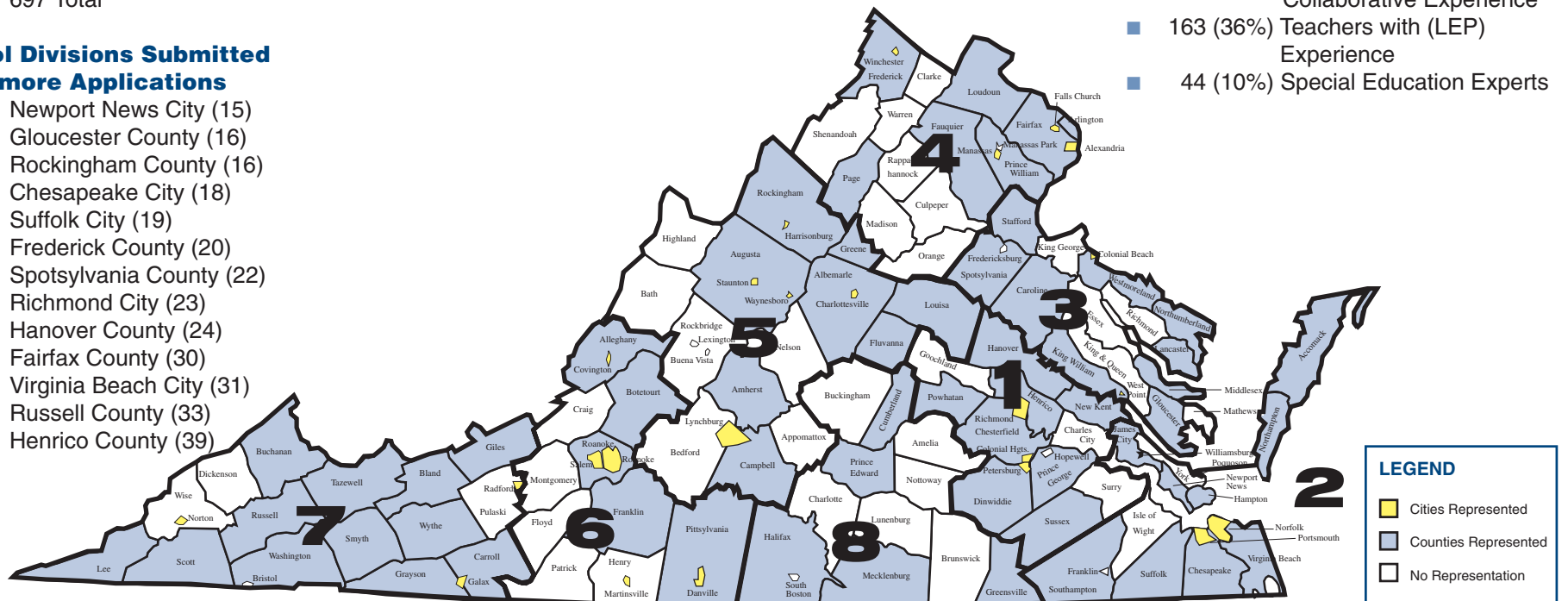
- 277 (62%) New
- 105 (23%) 1Year
- 67 (15%) 2 or More Years

### Educational Expertise

- 362 (81%) Content Teachers
- 77 (17%) Divisionwide Instructional Supervisors
- 10 ( 2%) Others

### Specialized Expertise

- 169 (38%) Teachers with Inclusion/ Collaborative Experience
- 163 (36%) Teachers with (LEP) Experience
- 44 (10%) Special Education Experts



Committee Membership Representation by School Division and Region



# **APPENDIX E**

Additional Reliability Analyses



**Spring 2004 Virginia Grade 3 Assessments:  
Reliabilities by Subgroup**

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
English: Reading & Writing.	Core 1	.87	.86	.86	.84	.86	.85	.86	n/a	.83
	Core 2	.89	.87	n/a	.84	.88	.84	.88	n/a	.84
Mathematics	Core 1	.89	.88	.90	.85	.89	.87	.87	n/a	.86
	Core 2	.90	.88	n/a	.85	.89	.87	.88	n/a	.86
History & Social Science	Core 1	.87	.86	.86	.84	.86	.85	.85	n/a	.85
	Core 2	.86	.84	n/a	.79	.84	.82	.84	n/a	.85
Science	Core 1	.86	.85	.86	.83	.85	.83	.84	n/a	.82
	Core 2	.86	.83	n/a	.75	.84	.81	.83	n/a	.83

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin), 6 = Native Hawaiian  
 LEP: Limited English Proficiency  
 n/a: n-count < 100



**Spring 2004 Virginia Grade 5 Assessments:  
Reliabilities by Subgroup**

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
English: Reading/Lit. & Res.	Core 1	.90	.89	.89	.86	.89	.88	.89	n/a	.89
	Core 2	.90	.87	n/a	.88	.88	.88	.87	n/a	.89
Mathematics	Core 1	.89	.87	.86	.86	.88	.87	.87	n/a	.87
	Core 2	.91	.89	n/a	.88	.90	.90	.89	n/a	.89
History & Social Science	Core 1	.86	.85	.86	.84	.84	.85	.85	n/a	.85
	Core 2	.89	.86	n/a	.89	.86	.89	.87	n/a	.91
Science	Core 1	.86	.84	.85	.83	.84	.85	.82	n/a	.85
	Core 2	.87	.84	n/a	.85	.84	.86	.84	n/a	.85

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin), 6 = Native Hawaiian  
 LEP: Limited English Proficiency  
 n/a: n-count < 100

**Spring 2004 Virginia Grade 8 Assessments:  
Reliabilities by Subgroup**

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
English: Reading/Lit. & Res.	Core 1	.90	.88	.91	.85	.88	.87	.88	n/a	.88
	Core 2	.91	.89	n/a	.89	.89	.91	.90	n/a	n/a
Mathematics	Core 1	.93	.91	.94	.90	.91	.91	.91	n/a	.92
	Core 2	.94	.93	n/a	.93	.93	.94	.93	n/a	n/a
History & Social Science	Core 1	.92	.90	n/a	.91	.90	.91	.91	n/a	.86
	Core 2	.92	.90	n/a	n/a	.89	n/a	.90	n/a	n/a
Science	Core 1	.91	.88	.89	.87	.87	.88	.88	n/a	.88
	Core 2	.92	.90	n/a	.91	.89	.90	.90	n/a	n/a

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin), 6 = Native Hawaiian  
 LEP: Limited English Proficiency  
 n/a: n-count < 100

**Spring 2004 Virginia High School End-of-Course Assessments:  
Reliabilities by Subgroup**

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
English: Reading/Lit. & Res.	Core 1	.84	.82	.87	.79	.81	.82	.81	n/a	.80
	Core 2	.86	.83	n/a	.82	.84	.86	.83	n/a	n/a
Algebra I	Core 1	.92	.90	.92	.91	.90	.90	.90	n/a	.91
	Core 2	.92	.91	n/a	.92	.89	.91	.91	n/a	n/a
Geometry	Core 1	.89	.88	.88	.88	.86	.88	.87	n/a	.89
	Core 2	.91	.90	n/a	.93	.87	.90	.89	n/a	n/a
Algebra II	Core 1	.90	.89	.89	.89	.89	.90	.88	n/a	.90
	Core 2	.89	.88	n/a	.88	.88	.91	.89	n/a	n/a
Virginia & United States History	Core 1	.92	.92	.92	.91	.91	.91	.92	n/a	.90
	Core 2	.92	.91	n/a	.91	.90	.92	.91	n/a	.89
World History I	Core 1	.92	.91	.92	.90	.90	.91	.91	n/a	.91
	Core 2	.92	.90	n/a	.91	.89	.91	.91	n/a	.88
World History II	Core 1	.92	.91	.91	.90	.90	.90	.91	n/a	.89
	Core 2	.91	.89	n/a	.89	.88	.90	.90	n/a	.92
World Geography	Core 1	.91	.89	n/a	.88	.87	.89	.90	n/a	.89
	Core 2	.91	.89	n/a	.90	.87	.90	.90	n/a	.93
Earth Science	Core 1	.90	.88	.90	.89	.86	.89	.87	n/a	.86
	Core 2	.89	.86	n/a	.86	.84	.85	.87	n/a	.87

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
Biology	Core 1	.88	.87	.85	.86	.84	.85	.85	n/a	.83
	Core 2	.91	.90	n/a	.92	.88	.90	.89	n/a	.87
Chemistry	Core 1	.88	.87	n/a	.88	.86	.87	.86	n/a	.88
	Core 2	.86	.85	n/a	.86	.84	.89	.85	n/a	n/a

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin), 6 = Native Hawaiian

LEP: Limited English Proficiency

n/a: n-count < 100

**Spring 2004 Virginia Grade 5 Writing Assessments:  
Reliabilities by Subgroup**

Assessment Configuration		Gender		Ethnicity						
MC	Prompt	M	F	1	2	3	4	5	6	LEP
Core 1	Core 1	.73	.71	.68	.74	.73	.74	.71	n/a	.78
Core 1	Core 2	.74	.73	.75	.69	.74	.73	.72	n/a	.76
Core 2	Core 1	.81	.81	.79	.82	.81	.81	.80	n/a	.81
Core 2	Core 2	.80	.78	n/a	n/a	.82	n/a	.79	n/a	n/a
Core 3	Core 1	.77	.74	n/a	n/a	.75	n/a	.75	n/a	n/a
Core 3	Core 2	.75	.74	n/a	n/a	.76	.80	.73	n/a	n/a

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin),  
6 = Native Hawaiian  
LEP: Limited English Proficiency  
n/a: n-count < 100

**Spring 2004 Virginia Grade 8 Writing Assessments:  
Reliabilities by Subgroup**

Assessment Configuration		Gender		Ethnicity						
MC	Prompt	M	F	1	2	3	4	5	6	LEP
Core 1	Core 1	.80	.79	.76	.81	.79	.81	.78	n/a	.82
Core 1	Core 2	.81	.80	.82	.79	.80	.82	.80	n/a	.84
Core 2	Core 1	.84	.85	.85	.81	.81	.79	.85	n/a	.79
Core 2	Core 2	.84	.83	n/a	n/a	.83	n/a	.83	n/a	n/a
Core 3	Core 1	.82	.79	n/a	n/a	.79	n/a	.80	n/a	n/a
Core 3	Core 2	.81	.78	n/a	n/a	.78	n/a	.79	n/a	n/a

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin),  
6 = Native Hawaiian  
LEP: Limited English Proficiency  
n/a: n-count < 100

**Spring 2004 Virginia High School End-of-Course Writing Assessments:  
Reliabilities by Subgroup**

Assessment Configuration		Gender		Ethnicity						
MC	Prompt	M	F	1	2	3	4	5	6	LEP
Core 1	Core 1	.82	.79	.82	.79	.82	.81	.79	.84	.82
Core 1	Core 2	.83	.81	n/a	.82	.80	.85	.81	n/a	.83
Core 2	Core 1	.88	.88	n/a	.87	.85	.86	.89	n/a	.86
Core 2	Core 2	.87	.86	n/a	.81	.84	.83	.87	n/a	.80

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin),

6 = Native Hawaiian

LEP: Limited English Proficiency

n/a: n-count < 100

**Spring 2004 Virginia Grades 5, 6 and 7 History Assessments:  
Reliabilities by Subgroup**

SOL Assessment	Form	Gender		Ethnicity						
		M	F	1	2	3	4	5	6	LEP
US History to 1877	Core 1	.88	.86	.87	.86	.84	.85	.87	n/a	.87
	Core 2	.89	.88	n/a	.88	.86	.87	.88	n/a	.86
US History: from 1877 to Present	Core 1	.88	.86	.88	.84	.85	.86	.86	n/a	.86
	Core 2	.88	.87	n/a	.87	.86	.86	.87	n/a	.86
Civics and Economics	Core 1	.87	.85	.88	.84	.83	.84	.86	n/a	.86
	Core 2	.88	.85	n/a	.85	.85	.85	.86	n/a	.86

Notes: Ethnicity 1 = American Indian or Alaskan Native, 2 = Asian or Pacific Islander, 3 = African American, 4 = Hispanic, 5 = White (Not of Hispanic Origin), 6 = Native Hawaiian  
 LEP: Limited English Proficiency  
 n/a: n-count < 100



**Spring 2004 Virginia Grade 3 Assessments:  
Reliability of School Means**

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<b>SOL Assessment</b>	<b>Form</b>	<b>Reliability of School Means</b>
English: Reading & Writing.	Core 1	.93
	Core 2	.90
Mathematics	Core 1	.95
	Core 2	.92
History & Social Science	Core 1	.95
	Core 2	.96
Science	Core 1	.94
	Core 2	.93

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**Spring 2004 Virginia Grade 5 Assessments:  
Reliability of School Means**

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<b>SOL Assessment</b>	<b>Form</b>	<b>Reliability of School Means</b>
English: Reading/Lit. & Res.	Core 1	.95
	Core 2	.92
Mathematics	Core 1	.97
	Core 2	.95
History & Social Science	Core 1	.94
	Core 2	.96
Science	Core 1	.95
	Core 2	.95

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**Spring 2004 Virginia Grade 8 Assessments:  
Reliability of School Means**

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<b>SOL Assessment</b>	<b>Form</b>	<b>Reliability of School Means</b>
English: Reading/Lit. & Res.	Core 1	.97
	Core 2	.96
Mathematics	Core 1	.98
	Core 2	.98
History & Social Science	Core 1	.97
	Core 2	.91
Science	Core 1	.97
	Core 2	.97

---

**Spring 2004 Virginia High School End-of-Course Assessments:  
Reliability of School Means**

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<b>SOL Assessment</b>	<b>Form</b>	<b>Reliability of School Means</b>
English: Reading/Lit. & Res.	Core 1	.97
	Core 2	.93
Algebra I	Core 1	.99
	Core 2	.99
Geometry	Core 1	.98
	Core 2	.96
Algebra II	Core 1	.98
	Core 2	.96
Virginia & United States History	Core 1	.97
	Core 2	.96
World History I	Core 1	.98
	Core 2	.98
World History II	Core 1	.98
	Core 2	.98
World Geography	Core 1	.98
	Core 2	.97
Earth Science	Core 1	.98
	Core 2	.97
Biology	Core 1	.98
	Core 2	.95
Chemistry	Core 1	.98
	Core 2	.96

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**Spring 2004 Virginia Grade 5 Writing Assessments:  
Reliability of School Means**

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<b>Assessment Configuration</b>		<b>Reliability of School Means</b>
<b>MC</b>	<b>Prompt</b>	
Core 1	Core 1	.96
Core 1	Core 2	.96
Core 2	Core 1	.61
Core 2	Core 2	.84
Core 3	Core 1	.93
Core 3	Core 2	.90

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**Spring 2004 Virginia Grade 8 Writing Assessments:  
Reliability of School Means**

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<b>Assessment Configuration</b>		<b>Reliability of School Means</b>
<b>MC</b>	<b>Prompt</b>	
Core 1	Core 1	.98
Core 1	Core 2	.95
Core 2	Core 1	.77
Core 2	Core 2	.95
Core 3	Core 1	.94
Core 3	Core 2	.93

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**Spring 2004 Virginia High School End-of-Course Writing Assessments:  
Reliability of School Means**

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<b>Assessment Configuration</b>		<b>Reliability of School Means</b>
<b>MC</b>	<b>Prompt</b>	
Core 1	Core 1	.96
Core 1	Core 2	.95
Core 2	Core 1	.95
Core 2	Core 2	.91

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**Spring 2004 Virginia Grades 5, 6 and 7 History Assessments:  
Reliability of School Means**

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<b>SOL Assessment</b>	<b>Form</b>	<b>Reliability of School Means</b>
US History to 1877	Core 1	.98
	Core 2	.98
US History: from 1877	Core 1	.99
	Core 2	.99
Civics and Economics	Core 1	.98
	Core 2	.98

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