DOCUMENT RESUME

ED 403 296 TM 026 017

TITLE	Score Interpretation Guide. 1994 MSPAP and Beyond. Maryland School Performance Assessment Program: Resource Library.
INSTITUTION	Maryland State Dept. of Education. Baltimore. Div. of Planning, Results and Information Management.
PUB DATE	Feb 95
NOTE	84p.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Achievement Tests; Elementary Secondary Education; Language Usage; Mathematics Tests; *Performance Factors; Reading Tests; *Scaling; Science Tests; *Scores; State Programs; *Testing Programs; *Test Interpretation; Test Results; Writing Tests
IDENTIFIERS	*Maryland School Performance Assessment Program

ABSTRACT

This score interpretation guide is designed to help administrators and classroom teachers understand the scores and scales of the 1994 and Beyond Maryland School Performance Assessment Program (MSPAP). MSPAP scale scores indicate a school's level of performance in the content areas of reading, writing, language usage, mathematics, science, and social studies. In general, MSPAP scores range from 350 to 700, but like other test scale scores, they have little intrinsic meaning other than that higher scale scores represent higher performance. Beginning in 1992, the scale scores were designed to be directly comparable year to year, and it is expected that the scale scores will acquire further meaning over time. Proficiency levels and descriptions are intended to inform and guide interpretation of the MSPAP scale scores. Each proficiency level represents a range of performances and of scale scores. The MSPAP School Performance Standards Committee has recommended proficiency level 3 as the level that describes satisfactory performance, and level 2 as the description of excellent performance. For a school to achieve satisfactory performance in an area, 70% of students must achieve at least level 3. Outcome scores, outcome scale scores, and the score reports from the MSPAP program are described. Five appendixes describe the proficiency level scale score ranges, the level descriptions, use of the MSPAP for school improvement, the various score reports, and additional MSPAP documentation. (Contains three appendix tables and one reference.) (SLD)

1994 MSPAP and Beyond
Maryland School Performance Assessment Program

SCORE INTERPRETATION GUIDE

MARYLAND STATE DEPARTMENT OF EDUCATION

FEBRUARY, 1995

State of Maryland
Parris N. Glendening, *Governor*

Maryland State Department of Education
Division of Planning, Results, and Information Management

STATE BOARD OF EDUCATION

Christopher T. Cross, *President*	Chevy Chase	1997
Christopher E. Grant, *Vice President*	Phoenix	1996
Edward Andrews	Rockville	1996
Robert C. Embry, Jr.	Baltimore	1995
George W. Fisher, Sr.	Denton	1997
Marvin E. Jones	Glen Burnie	1995
Elmer B. Kaelin	Hagerstown	1995
Rose LaPlaca	Mitchellville	1998
Joan C. Maynard	Linthicum Heights	1996
Harry D. Shapiro	Baltimore	1997
Edmonia T. Yates	Baltimore	1998
Joseph L. Edmonds, Jr., *Student Member*	Baltimore	1995

Nancy S. Grasmick, *Secretary-Treasurer of the Board, State Superintendent of Schools*

A. Skipp Sanders, *Deputy State Superintendent of Schools*

Joan M. Palmer, *Deputy State Superintendent, School Improvement Services*

Margaret Trader, *Assistant State Superintendent for Instruction*

Mark Moody, *Assistant State Superintendent for Planning, Results, and Information Management*

Steve Ferrara, *Director of Maryland School Performance Assessment Program*

Susan Carole Ciotta, *Specialist in Documents Production*

Hillary R. Michaels, *Specialist, Planning, Results, and Information Management/Assessment*

1994 MSPAP and Beyond
Maryland School Performance Assessment Program

SCORE INTERPRETATION GUIDE

ACKNOWLEDGMENTS

Our thanks to the Local Accountability Coordinators who provided revision, addition, and deletion suggestions for the production of this guide; to Susan Carole Ciotta for layout, design, and production; and to the Assessment Team staff for their contribution.

TABLE OF CONTENTS

INTRODUCTION

The 1994 and Beyond Maryland School Performance Assessment Program (MSPAP) *Score Interpretation Guide* is designed to help Local Accountability Coordinators, school improvement teams, and classroom teachers better understand MSPAP scores and scales, how they can be interpreted, and how they can be used for school improvement planning. *The Guide* is an evolving document that is revised periodically to respond to users' needs. If you have suggestions regarding this guide, please write them on the tear off sheet at the end of this document and send it to Steve Ferrara at the Maryland State Department of Education (MSDE).

The administration of the 1994 Maryland School Performance Assessment Program (MSPAP) took place during May 2-13, 1994. The test administration involved approximately 170,000 grade 3, 5, and 8 students and several thousand school-based educators in approximately 990 schools. The 1994 MSPAP includes performance tasks that assess the grade 3, 5, and 8 Maryland learning outcomes in reading, writing, language usage, mathematics, science, and social studies.

The primary focus of MSPAP is school performance. MSPAP assesses how well a school is achieving the standards for satisfactory and excellent performance in the Maryland Learning Outcomes. An additional goal of MSPAP is to provide information, for use with locally developed information, to guide school improvement planning. This is an important point. The information in MSPAP reports does not provide definitive solutions for school improvement, but highlights areas where schools are doing well and where schools need help.

Two types of scores are available from the 1994 MSPAP relevant to school performance and for use in school improvement planning: scale scores and outcome scores. These two types of MSPAP scores are discussed below.

SCALE SCORES

The 1994 MSPAP was designed to produce scale scores for the content areas of reading, writing, language usage, mathematics, science, and social studies[1]. MSPAP scale scores indicate a school's level of performance in each of the MSPAP content areas. MSPAP scale scores range, in general, from 350 to 700. The 1992 MSPAP scale scores for all grades and content areas were designed to have a mean of approximately 500 and a standard deviation of approximately 50. Beginning with the 1992 MSPAP, scale scores from the same grade level and content area have the same meaning and are directly comparable from year to year. They are not comparable across grade levels or content areas because of differences in test content and difficulty.

MSPAP scale scores, like other test scale scores, have little intrinsic meaning other than that higher scale scores represent higher performance in a content area. It is expected that MSPAP scale scores will acquire further meaning as they are used over time. Interpretation of the scale scores is aided by proficiency level descriptions. Proficiency level descriptions were developed to help bring meaning to MSPAP scale scores and to guide interpretation of the scores for school performance and improvement purposes.

Proficiency Level Descriptions

The proficiency levels. Proficiency levels and descriptions are intended to inform and guide interpretation of MSPAP scale scores. They describe what students at a particular proficiency level generally know and can do in relation to the Maryland learning outcomes. The descriptions generally apply to all students at each proficiency level rather than to specific students within a proficiency level. Individual students whose scale score

locates them at a particular proficiency level may or may not be able to demonstrate all of the knowledge, skills, and processes contained in that proficiency level description.

Proficiency level descriptions for some proficiency levels have not yet been developed because sufficient numbers of items were not located at these levels. This occurred most often at proficiency level 5. As items on future editions of the MSPAP appear at these levels, proficiency level descriptions will be developed. In addition, existing descriptions of other proficiency levels will continue to be refined to include performance information on outcomes that are not included in the current descriptions.

Listed in Appendix A are the scale score ranges for each proficiency level in each content area and grade. Detailed proficiency level descriptions for each content area and grade appear in Appendix B. Proficiency Level 3 describes the satisfactory level of performance in school accountability terms. Examination of the proficiency Level 3 descriptions can aid in school improvement, because they highlight the skills Level 3 students generally exhibit.

As Appendix A indicates, each proficiency level represents a range of performances and of scale scores. For example, grade 3 reading scale scores lower than 490 indicate Level 5 proficiency, those between 490 and 529 indicate Level 4 proficiency, those between 530 and 579 indicate Level 3 proficiency, and so forth.

Development of the proficiency levels. Just as proficiency level descriptions for some proficiency levels have not yet been developed because sufficient numbers of items were not located at these levels, some cut scores have not yet been determined for the same reason. As items on future editions of the MSPAP appear at and around these levels, the remaining cut scores can be developed. Some proficiency level cut scores for the 1994 MSPAP were established for Writing and Language Usage by a content area committee of classroom and resource teachers, principals, a local school system content area supervisor, and a local assistant superintendent. As in previous years, they followed a professional judgment procedure in which they (a) matched 1994 MSPAP items to proficiency level descriptions for Proficiency Levels 1-5, and (b) used the resulting item classifications to establish the location of the cut scores between each proficiency level for MSPAP.

Development of the descriptions. The committees that established the proficiency level cut scores also developed descriptions for each of these levels. Moreover, proficiency level descriptions in Writing and Language Usage were refined in 1994. For both the establishment and refinement of the descriptions, committees: (a) examined each assessment activity at a proficiency level, the accompanying scoring criteria for each activity, and student responses to each activity; (b) used their professional judgment to determine and list the knowledge, skills, and processes each activity required of students; and (c) synthesized the lists of required knowledge, skills, and processes into descriptions, in Maryland learning outcomes terms, of what students at each proficiency level know and can do. Committees refine MSPAP proficiency level descriptions by revising and adding to existing descriptions.

Interpretation and use of the proficiency levels and proficiency level descriptions. Proficiency level descriptions apply generally to any school or other group of students, based on performances by all schools and students in Maryland. The descriptions are not customized specifically for individual students, single schools, or other groups. They describe **in general** what students at each level know and can do. One approach to school improvement can involve targeting instruction on knowledge and skills at Level 3 for students at Levels 4 and 5. See Appendix C for an illustration of this approach[2].

MSPAP School Performance Standards

A cornerstone of the Maryland School Performance Program (MSPP), MSDE's strategy to meet "Schools for Success" goals for the year 2000, is the process of setting standards against which schools are measured. Standards establish satisfactory and excellent performance levels in data-based areas which schools are to meet. These data-based areas include attendance, promotion rates, drop out rates, performance on the Maryland Functional Tests, and performance on the Maryland School Performance Assessment Program.

Development of the school performance standards. Development of the standards for MSPAP used the same procedures that were used to establish school performance standards for the other data-based areas reported in the annual *Maryland School Performance Report*. These standards are rigorous but attainable for schools, school systems, and the state.

> Satisfactory performance denotes a level of performance that is realistic and rigorous for schools, school systems, and the state. It is an acceptable level of performance on a given variable, indicating proficiency in meeting the needs of students. Excellent performance denotes a level of performance that is highly challenging and clearly exemplary for schools, school systems, and the state. It is a distinguished level of performance on a given variable, indicating outstanding accomplishment in meeting the needs of students. (Thorn, Moody, McTighe, Kelly, & Peiffer, 1990, p. 7).

In 1992, the standards were set for Reading, Mathematics, Science, and Social Studies. In 1994, standards were set for Writing and Language Usage. Two groups participated in the standards setting process: the Maryland School Performance Standards Committee and the Maryland School Performance Standards Council. The twenty-member Maryland School Performance Standards Committee included representatives from local school systems and from MSDE. Committee members included teachers, administrators, content area specialists, and assessment specialists. The seventeen-member Standards Council included representatives of local education agencies, local boards of education, the state teacher's union, business interests, students, and the state legislature.

The process of setting standards included several steps. Initially, the Standards Committee recommended a proficiency level to describe satisfactory and excellent performance and the percentage range of students who should score at these levels (i.e., 60% to 80% at the satisfactory level). These recommendations were reviewed and refined by the Standards Council. Both groups reached decisions through concensus.

The recommendations from the Standards Council were then reviewed by the State Board of Education and comments were given through public meetings. Following the public meetings, the MSPAP standards were formally adopted by the State Board of Education.

The MSPP School Performance Standards Committee recommended level 3 as the proficiency level that describes satisfactory performance and level 2 as the proficiency level that describes excellent performance. Once the ranges for satisfactory and excellent school performance were established, the recommendations were forwarded to the Standards Council who choose a single percentage for each standard. The Standards Council concurred with the Standard Committee's definitions for satisfactory and excellent performance. In addition, the Council recommended 70% for satisfactory and 25% for excellent. **For a given school to achieve satisfactory performance in a particular content area/grade level, 70% of students must achieve satisfactory performance (level 3 and above). Furthermore, to achieve excellent performance, a**

school must be at satisfactory and 25% of students must achieve excellent performance. All schools are expected to reach the satisfactory standards by the year 2000.

Interpretation and use of school performance standards for school improvement planning. The 1994 score reports produced by MSDE for each school system and school contain numbers and percentages of students at each proficiency level and at satisfactory and excellent standards. School and system staff can use these percentages, along with the proficiency level descriptions, to begin the process of evaluating their school's performance in 1994 in relation to the Maryland learning outcomes. They can also use this information to assess their school's performance in reaching the standards for the year 2000.

Since the school performance standards focus on how well a school is performing on the outcomes, any student who should be tested is included in the calculation[3]. This includes students who were excused and absent from the MSPAP test administration. In contrast, only those students tested are considered when determining a school's proficiency level percentages, because of the focus on students' strengths and weaknesses. Therefore, proficiency level percentages can be higher than standards percentages, because the proficiency level percentages are usually based on a smaller number of students.

Individual Student Scale Scores

Scale scores for individual students are available for reporting to students and their parents. These scores are not currently widely used or distributed, partly because the primary focus of MSPAP is school performance rather than individual performance. Individual student scale scores in the six MSPAP content areas are reliable and valid for determining general levels of performance on MSPAP. However, these scores should **not** be used for "high stakes" decisions for individual students (e.g., placement in special instructional programs). Further, individual MSPAP scale scores, like all information on student performance and learning, are best used in conjunction with other information such as classroom test grades, report card grades, and teacher reports. Any reporting of individual MSPAP scale scores should involve other such information about student achievement. Outcome Scale Scores for individual students are **not** adequately reliable or valid for use under any circumstances.

OUTCOME SCORES

There are two types of outcome scores: Outcome Scores and Outcome Scale Scores.

Outcome Scores

MSPAP Outcome Scores range from 0 to 100 percent and are reported for each outcome assessed in each MSPAP content area. They are conceptually analogous to Maryland Functional Testing Program domain scores and can be interpreted like these scores[4]. MSPAP Outcome Scores represent the proportion of mastery of the knowledge, skills, processes and other requirements that comprise an outcome area. In other words, the MSPAP school Outcome Score is the average percentage of all score points available on that outcome that a school achieved across all test clusters administered in the school.

Outcome Scores are **not directly** comparable across grades and content areas within a content area, nor are they comparable across years because of differences in content and test difficulty. However, they can be compared using information on the relative difficulty of each outcome. Additionally, it is important to remember that Outcome Scores **cannot** be directly linked to MSPAP proficiency levels.

Interpretation and Use of Outcome Scores

School improvement teams can use profiles of a school's Outcome Scores in a content area along with other information about a school, to determine a school's instructional program's relative strengths and weaknesses in each MSPAP content area. Higher outcome averages indicate higher performance, and lower outcome averages indicate lower performance.

Content area difficulty values are reported on the 1994 Outcome Score Reports. The difficulty refers to the average proportion of the maximum possible score for an outcome across clusters. The outcome difficulty information ranges from 0 to 100%. Lower percentages indicate harder outcomes, and conversely, higher percentages indicate easier outcomes. This information is used in conjunction with Outcome Score averages. The difficulty indicators were developed because of the desire to compare Outcome Score averages within each content area to one another. These averages cannot be compared without information that links them to each other, and that is difficulty.

Outcome Scale Scores

Outcome Scale Scores are directly comparable across outcomes in the same content area, across years, and to the MSPAP proficiency levels. These scores are expressed on the MSPAP scale score scale and range, as do the content area scale scores, from 350 to 700. Therefore, they can be interpreted in relationship to the underlying score scale and proficiency levels. 1994 Outcome Scale Scores will be displayed in a report format.

Interpretation and Use of Outcome Scale Scores

Just as Outcome Scores can aid in school improvement planning, so can Outcome Scale Scores. Unlike the Outcome Scores, Outcome Scale Scores have the added advantage of being comparable across time within a grade and content area since the outcome difficulty is controlled.

MSPAP SCORE REPORTS

There are four types of MSPAP score reports: Maryland School Performance Standards Reports, Proficiency Level and Participation Reports, Outcome Score Reports, and Outcome Scale Score Reports. MSDE provides these reports at the state level and for each local school system and school. Examples of these reports appear in Appendix D. Appendix D also includes Table 2 and Table 3. Table 2 summarizes the reports' elements and gives short descriptions of each report. Table 3 summarizes the reports' primary use and gives examples of questions to answer for better interpretation.

Local school systems can develop additional reports using their local school system data and their own data processing capacities. Many local school systems supplement the state issued reports using "Excel" macros which mirror some state results in graphical displays and which require little computer expertise for producing. These macros were developed for local school system use by the Montgomery County Public School System and MSDE.

MSPAP Standards Reports

MSPAP Standards Reports indicate percentages of students at satisfactory and excellent levels of performance and whether the standards for satisfactory and excellent school performance have been met. For example, as can be seen in Appendix D page 1 in 1994 for grade 5 science 52,497 students were administered the test. Of these, 4,316

students were absent or excused, and scores for 4,017 students were unreported because they were special education, ESOL, or second semester transfer students. About 6% of the students reached the excellent standard, and about 39% reached the satisfactory standard. (The satisfactory percentage includes the students obtaining the excellent standard as well.) The denominator for determining the percentage of students at excellent and satisfactory is based on the total number of students eligible to take the MSPAP, 56,813 students[5].

Information on the numbers and percentages of students by grade, content area, race, and sex is available in the MSPAP Disaggregated Standards Report.

MSPAP Proficiency Level and Participation Reports

Proficiency Level and Participation Reports indicate numbers and percentages of test takers at each of the five MSPAP proficiency levels. They also report numbers and percentages of students who completed assessment activities in each MSPAP content area and therefore received a scale score. Also, the numbers and percentages of students who were absent, excused, or exempted from the MSPAP test administration are reported.

As can be seen on the second page of Appendix D, the total fifth grade June membership in 1994 was 60,639. In science, for example, 181 or 0.30% of fifth graders attained level 1 proficiency. Level 2 had 3,075 students, or 5.9% of the all fifth graders, and so on through level 5. For science, 52,497 or 86.6% completed the test. Moreover, 4,316 students were absent or excused, and 2,668 students were exempted because of special education or ESOL status. In addition, there were 1,349 second semester transfer students. This accounts for 60,830 fifth grade students. Percentages of students at the satisfactory and excellent proficiency levels do not agree with percentages in the MSPAP Standards Report, because the MSPAP Proficiency Level and Participation Report is based solely on the number of students who completed the test, (i.e., 52,497) rather than the total number of possible test takers (i.e., 56,813).

Information on the numbers and percentages of students by grade, content area, race, and sex is also available in the MSPAP Disaggregated Standards Report.

MSPAP Outcome Score Reports

Outcome Score reports contain the average outcome score, or percentage of mastery of an outcome. They also include percentages of students in four outcome score ranges[6]: 0-25, 26-50, 51-75, and 76-100. This information is intended to provide a general idea of the percentage of students who have displayed little or no mastery of the knowledge, skills, and processes required in an outcome (i.e., those in the outcome score range 0-25) and the percentage who have displayed near complete mastery of the outcome (i.e., those in the range 76-100).

For example, as can be noted from the third page of Appendix D, for fifth graders, the difficulty (DIFF) for Concepts of Science is 31, the mean (MEAN) is 32.39, and the median (MDN) is 30. The standard deviation (SD) is 18.44. The highest outcome score (HI) obtained for all students across the state is 100, and conversely, the lowest obtained outcome score (LO) is 4. Fifty-two thousand, four-hundred and ninety-seven students have estimated outcome scores for this outcome. The difficulty is a measure of how easy the outcome was for all students across the state. The higher the difficulty the easier the outcome. Ultimately, we would like to see the outcome difficulties to be about 70. The mean and median are both measures of central tendency, in other words, where the center of the distribution of students is located. Because there is such a large proportion of students at the low end of the scale, the median is a better measure to look at for this

time. The median is the point at which half of the students fall above and half fall below. The mean is different than the median because the mean treats all scores equally, including those at the extreme ends of the scale. The standard deviation indicates how spread out the students are in the distribution. Ideally, this will be a low number. To help understand the standard deviation the score range (high and low scores) is also included.

A total of 52,497 students are accounted for in this area (just as in the MSPAP Standards Report number tested). The Outcome Score Report includes the number and percentages of students falling within four outcome ranges. These ranges **do not** correspond to proficiency levels. Instead they are meant to help people understand how their students are distributed. The 1994 fifth grade students are distributed throughout the four score ranges as follows: falling within the 0 to 25% outcome score range, are 40.4%, or 21,220 students; within the 26 to 50% range are 43.3% of the students; within the 51 to 75% range are 13.8% of the students; and within the 76 to 100% range are two and one-half percent of the students.

The total of students for the outcomes will not always be a stable number, as in science. The total represents the number of students whose test form contained questions pertaining to a particular outcome. It is helpful, especially at the school level, to construct graphs or chart of the students falling within each of the four outcome ranges. By looking at the distribution one can see if all of the students are having trouble with the outcome, if half are having trouble and half are not, or if there appears to be steady growth.

From these data, it can surmised that Concepts of Science is poorly understood by the majority of fifth graders, since the bulk of the students have outcome scores of less than 50%. In science, most of the difficulty indicators are approximately equal. Therefore, they can be compared with respect to their statistics and distributions.

MSPAP Outcome Scale Score Reports

As can be noted from the fourth page of Appendix D, the 1994 Outcome Scale Score Report has a new format. The display includes all of the outcomes in a single page summary for each grade. Each outcome is shown with its mean, standard deviation, 5th, 25th, 50th, 75th, and 95th percentiles. To better understand these scores, it will be helpful to refer to Table 1 from Appendix A, the Proficiency Level Scale Score Ranges. For fifth grade science, the proficiency level scale score ranges are as follows: Proficiency Level 1, 625-700; Proficiency Level 2, 580-624; Proficiency Level 3, 525-579; Proficiency Level 4, 484-524; and Proficiency Level 5, 350-483.

For Concepts of Science grade 5, the outcome scale score mean is about 506 and the standard deviation is almost 59. The median, 50th percentile, is located at 512 on the MSPAP scale score scale. Looking at Table 1 in Appendix A, 512 in fifth grade science is located in proficiency level 4. The 25th and 75th percentiles are located at 471 and 545 respectively. These range into proficiency levels 5 and 3. The 5th and 95th percentiles are located at 378 and 594 outcome scale scores respectively. The 5th and 95th percentiles are located in proficiency levels 5 and 2.

It is important to remember not to over interpret the relationship between the Outcome Scale Scores and proficiency levels. Keep in mind that Outcome Scale Scores represent performance on activities that measure only that outcome and that, in contrast, proficiency levels are based on all the outcomes in a content area.

1993 Anomolies in Grade 3 Reading and Grade 8 Science

The 1993 MSPAP had anomolous grade 3 reading and grade 8 science results. The grade 3 reading results appear lower than they should, and the grade 8 science results appear higher. The primary cause of these anomolies was minor test design changes that

affected equating results. Therefore, the 1993 grade 3 reading and grade 8 science results were not released. For accountability purposes in grade 3 reading and grade 8 science, the first year is 1994 instead of 1993.

CONCLUSION

A variety of reports and scores is available for MSPAP. These are available so that clarification of MSPAP scores for a school and/or system are possible, thus enabling school and instructional improvement.

Comparing MSPAP Scores

Comparisons of MSPAP scores are appropriate for identifying content and outcome areas (a) in which performance differences (i.e., gains, declines, and no changes) can be reasonably accounted for by instructional activities, and (b) as target areas for focused school improvement activities.

Several issues should be considered when comparing MSPAP scores from different years:

Relevant to School Accountability and Performance

1. MSDE will not report 1993 and 1992 scores together. For example, the *1994 Maryland School Performance Report* does not contain the 1992 MSPAP results that were reported in the *1993 Maryland School Performance Report.*
2. Procedures for identifying schools for possible reconstitution in January 1995 use 1993 and the 1994 MSPAP scores. These procedures did not include the 1992 MSPAP scores. The 1993 MSPAP scores are considered baseline for all school accountability comparative purposes, except for grade 3 Reading and grade 8 Science. (For more information on this, please refer to the 1993 Anomolies section above).

Relevant to School Improvement Planning

1. MSPAP scores can be compared for school improvement planning. However, valid interpretation and appropriate use of these scores require that MSPAP scores be used - as is true with information from other tests and sources - with other relevant information. Other relevant information can include information on instructional activities from other tests and from teachers.
2. Content area Scale Scores and Outcome Scale Scores can be directly compared; the same is not true for Outcome Scores. Differences in outcome difficulty must be considered for comparisons of Outcome Scores.

REFERENCE

Thorn, P., Moody, M., McTighe, J., Kelly, N., & Peiffer, R. (1990, April). *Establishing standards for Maryland's School Systems: A systemic approach.* Available from Maryland State Department of Education, Division of Planning, Results and Information Management.

ENDNOTES

1 Procedures for deriving scale scores and outcome scores are described in the MSPAP technical reports available from each school system's Local Accountability Coordinator.

2 Appendix C has two parts. The first is an approach to targeting instruction to move students from Level 4 to Level 3. The second is a set of suggestions and reminders from the MSDE Division of Instruction on aligning instruction to the Maryland Learning Outcomes.

3 Second semester transfer students, special education, and limited English proficiency students are not included in the totals for the performance standards.

4 Functional test domain scores are an estimate of the percentage of all items in a domain that students would get correct if they took all those items, based on the items actually taken. Domain scores are estimated separately from a student's total functional test score.

5 This total is found by adding the number of students tested and absent/excused 52,497 + 4,316.

6 The four ranges on the Outcome Score Report are only equal length score ranges. They are not quartile ranges showing the number of students between the 1st and 25th percentile. Nor are these ranges analogous to proficiency levels.

APPENDIX A

Table 1:
Proficiency level scale score ranges established on MSPAP

Table 1

Proficiency level scale score ranges established on the 1994 MSPAP

Level	Grade 3	Grade 5	Grade 8
READING			
1	620-700	620-700	620-700
2	580-619	580-619	580-619
3	530-579	530-579	530-579
4	490-529	490-529	490-529
5	350-489	350-489	350-489
WRITING			
1	614-700	- - - -	- - - -
2	577-613	567-700	551-700
3	528-576	522-566	505-550
4	350-527	488-521	350-504
5	- - - -	350-487	- - - -
LANGUAGE USAGE			
1	620-700	597-700	- - - -
2	576-619	567-596	565-700
3	521-575	533-566	509-564
4	350-520	350-532	474-508
5	- - - -	- - - -	350-473
MATHEMATICS			
1	626-700	617-700	618-700
2	583-625	575-616	579-617
3	531-582	520-574	525-578
4	489-530	473-519	481-524
5	350-488	350-472	350-480
SCIENCE			
1	619-700	625-700	619-700
2	580-618	580-624	576-618
3	527-579	525-579	532-575
4	488-526	484-524	482-531
5	350-487	350-483	350-481
SOCIAL STUDIES			
1	622-700	619-700	620-700
2	580-621	580-618	582-619
3	525-579	529-579	530-581
4	495-524	350-528	495-529
5	350-494	- - - -	350-494

Dashes indicate proficiency levels for which cut scores could not be established for MSPAP. These cut scores will be established on future editions of MSPAP.

APPENDIX B

Proficiency Level Descriptions

1993 MSPAP PROFICIENCY LEVELS: GRADE 3 READING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

At proficiency Levels 1, 2, 3, 4 and 5, students construct, extend, and examine the meaning of third grade appropriate texts.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

When reading for literary experience, readers:

- ➤ Demonstrate a comprehensive understanding of the text.
- ➤ Make clear multiple connections and extensions of meaning between elements of the author's craft and the meaning of the text.

When reading to be informed, readers:

- ➤ Demonstrate a comprehensive understanding of the text.
- ➤ Make clear connections between texts.
- ➤ Support their responses with relevant text-based information.

When reading to perform a task, readers:

- ➤ Demonstrate a comprehensive understanding of the text with evidence of connections, extensions and examinations of meaning.
- ➤ Extend the meaning of one or more texts through making predictions.
- ➤ Provide clear connections between personal experiences and text-based information.
- ➤ Support their opinions with relevant, explicit text-based information.

LEVEL 2

When reading for literary experience, readers:

- ➤ Demonstrate a developed understanding of the text.
- ➤ Make clear connections and extensions between their ideas and the text.
- ➤ Support their responses with relevant, explicit text-based information.
- ➤ Demonstrate a developed understanding of literary elements.

When reading to be informed, readers:

- ➤ Demonstrate a developed understanding of informational sources.
- ➤ Make clear connections between their ideas and the text.
- ➤ Support their responses with relevant text-based information by citing multiple references.

When reading to perform a task, readers:

- ➤ Demonstrate a developed understanding of texts with evidence of connections, extensions, and examinations of meaning.
- ➤ Make connections between their ideas and text.

LEVEL 3

When reading for literary experience, readers:

- Demonstrate an adequate understanding of the text.
- Make some connections and extensions between their ideas and the text.
- Support the responses with some relevant text-based information.
- Demonstrate an adequate understanding of literary elements.

When reading to be informed, readers:

- Demonstrate an adequate understanding of informational sources.
- Suggest connections between their ideas and the text.
- Support responses with adequate text-based information.

When reading to perform a task, readers:

- Demonstrate adequate understanding of text.
- Provide adequate evidence of constructing meaning.
- Apply graphic information.
- Make some extension between their ideas and the text.

LEVEL 4

When reading for literary experience, readers:

- Demonstrate little understanding of the text.
- Make minimal connections between their ideas and the text.
- Attempt to support their responses with minimal text-based information and/or personal experiences.
- Demonstrate minimal understanding of literary elements.

When reading to be informed, readers:

- Demonstrate a superficial understanding of informational texts.
- Provide limited relevant connections between their ideas and the text.
- Support responses with minimal text-based information.

When reading to perform a task, readers:

- Demonstrate little understanding of the text.
- Provide limited evidence of construction of meaning.
- Make limited extensions between their ideas and the text.

LEVEL 5

When reading for literary experience, readers:

- Demonstrate inadequate understanding of third grade appropriate text.
- Make no meaningful connections between their ideas and the text.
- Show no evidence of supporting their responses with text-based information.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 5 READING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

At proficiency Levels 1, 2, 3, 4 and 5, students construct, extend, and examine the meaning of fifth-grade appropriate texts.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

When reading for literary experience, readers:

- ➤ Demonstrate a comprehensive understanding of the text.
- ➤ Make clear multiple connections and extensions of meaning between elements of the author's craft and the meaning of the text.
- ➤ Make clear connections and extensions between their ideas and the text.
- ➤ Support their opinions with relevant, explicit text-based information.
- ➤ Demonstrate a comprehensive understanding of literary elements.

When reading to be informed, readers:

- ➤ Demonstrate a comprehensive understanding of the text.
- ➤ Make clear connections between their ideas and the text.
- ➤ State relevant opinions or personal judgments and support them with extensive, explicit references to the text.

When reading to perform a task, readers:

- ➤ Demonstrate a comprehensive understanding of the text with evidence of connections, extensions, and examinations of meaning.
- ➤ Support inferences with clear connections between their ideas and the text.

LEVEL 2

When reading for literary experience, readers:

- ➤ Demonstrate a developed understanding of the text.
- ➤ Make clear connections and extensions between their ideas and the text.
- ➤ Support their responses with relevant, explicit text-based information.
- ➤ Demonstrate a developed understanding of literary elements.
- ➤ Make clear connections between elements of the author's craft and the meaning of the text.

When reading to be informed, readers:

- ➤ Demonstrate a developed understanding of informational sources.
- ➤ Make clear connections between their ideas and the text.
- ➤ State relevant opinions, personal judgments, or interpretations and support them with references from the text.

When reading to perform a task, readers:

- Demonstrate a developed understanding of the text with evidence of connections, extensions, and examinations of meaning.
- Make connections between their ideas and the text.
- Support inferences with connections between their ideas and the text.

LEVEL 3

When reading for literary experience, readers:

- Demonstrate an adequate understanding of the text.
- Make some connections and extension between their ideas and the text.
- Support responses with some text-based information.
- Demonstrate an adequate understanding of literary elements.
- Establish connections between elements of the author's craft and the meaning of the text.

When reading to be informed, readers:

- Demonstrate an adequate understanding of informational sources.
- Suggest connections between their ideas and the text.
- State opinions, personal judgments, or interpretations and provide some support with adequate references to the text.

When reading to perform a task, readers:

- Demonstrate adequate understanding of the text.
- Provide adequate evidence of constructing meaning.
- Apply graphic information.
- Integrate information from one or more texts.
- Use personal experience to elaborate ideas from the text.

LEVEL 4

When reading for literary experience, readers:

- Demonstrate a little understanding of what they read.
- Make minimal connections between their ideas and the text.
- Attempt to support their responses with minimal text-based information and/or personal experience.
- Demonstrate minimal understanding of literary elements.

When reading to be informed, readers:

- Demonstrate a superficial understanding of informational sources.
- Provide limited relevant connections between their ideas and the text.
- State relevant but unsupported inferences in connecting their ideas to the text.

When reading to perform a task, readers:

- Demonstrate little understanding of the text.
- Provide limited evidence of construction of meaning.
- Make limited extension between their ideas and the text.

LEVEL 5

When reading for literary experience, readers:

- ➤ Demonstrate inadequate understanding of fifth-grade appropriate texts.

When reading to be informed, readers:

- ➤ Demonstrate inadequate evidence of constructing the meaning of fifth-grade appropriate texts.

When reading to perform a task, readers:

- ➤ Demonstrate inadequate understanding of fifth-grade appropriate texts.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 8 READING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

At proficiency levels 1, 2, 3, 4 and 5, students construct, extend, and examine the meaning of eighth grade appropriate text.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

When reading to be informed, readers:

- Demonstrate a comprehensive understanding of the text.
- Make clear connections between their ideas and the text.
- Indicate more than one perspective regarding the text.

LEVEL 2

When reading for literary experience, readers:

- Demonstrate a developed understanding of the text.
- Analyze literary elements.
- Provide support for conclusions using personal experience and text-based support.
- Support responses with relevant, explicit text-based information.
- Make clear connections between their personal experience and the text.

When reading to be informed, readers:

- Demonstrate a developed understanding of informational sources.
- Make clear connections between their ideas and the text.
- State relevant opinions, personal judgements or interpretations, and support them with references from the text.
- Extend information from text to real-life (authentic) situations.
- Utilize narrative information in conjunction with graphic information to construct meaning.

LEVEL 3

When reading for literary experience, readers:

- Demonstrate an adequate understanding of the text beyond the literal level.
- Make connections between texts and support with text-based information.
- Make connections between personal experience and the text.
- Support responses with relevant text-based information.
- Demonstrate an adequate understanding of literary elements.
- Make predictions that are logical and justified by either text-based or personal references.

When reading to be informed, readers:

- Demonstrate an adequate understanding of informational sources.
- State relevant opinions, personal judgements, or interpretations and support them with references to the text.
- Organize, connect, and elaborate ideas from the text.
- Support responses with implied references to the text.
- Make connections between personal experience and the text.

LEVEL 4

When reading for literary experience, readers:

- Demonstrate little understanding of the text.
- Respond with relevant personal experience and/or text-based information without connections.
- Recognize an author's techniques and interpret their effect.
- Demonstrate minimal understanding of literary elements.

When reading to be informed, readers:

- Demonstrate a superficial understanding of informational sources.
- Identify main topics and some subtopics in informational sources.
- Provide responses that are overly general, overly specific, or are unrelated.
- Support responses with minimal text-based information.

When reading to perform a task, such as creating and labeling a chart, readers:

- Demonstrate a general understanding of the text.
- Locate and organize some relevant information from the text.
- Relate the text to their personal experiences.
- Follow directions.

LEVEL 5

When reading for literary experience, readers:

- Demonstrate inadequate understanding of eighth grade appropriate text.
- Identify literary elements.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1994 MSPAP PROFICIENCY LEVELS: GRADE 3 WRITING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

Writing performance at different grade levels is dependent upon choice and structure of the prompts used to elicit writing, the writer's background, and the developmental level of the student writer. Nevertheless, the following descriptors identify proficiency levels for Grade 3.

PROFICIENCY LEVEL 1

WRITING TO INFORM

Students at Proficiency Level 1:

- ➤ Develop a comprehensive response with evidence of a thorough organizational plan (e.g., ordering of ideas, sequencing)
- ➤ Synthesize information by ordering facts and details
- ➤ Consistently use specific details which are elaborated
- ➤ Consistently direct writing to the intended audience
- ➤ Consistently use appropriate and content-specific vocabulary
- ➤ Consistently enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 1:

- ➤ Take a position, succeed in clarifying a point of view, and consistently use facts and/or personal information to develop support for that position
- ➤ Organize details in a logical plan that is thoroughly maintained
- ➤ Consistently direct writing to the intended audience
- ➤ Consistently choose vocabulary that effectively support the position
- ➤ Consistently enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 1:

- ➤ Fully develop ideas, all of which are relevant to the topic, and choose a literary form, using its appropriate elements to create a complete whole
- ➤ Follow a deliberate plan in which ideas are consistently logically organized
- ➤ Consistently direct writing to the intended audience
- ➤ Choose vocabulary to enhance their writing
- ➤ Consistently enhance what they write by:
  - Selecting language to enhance the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 2

WRITING TO INFORM

Students at Proficiency Level 2:

- ➤ Develop a direct response with evidence of a sufficient organizational plan (e.g., ordering of ideas, sequencing)
- ➤ Synthesize information by ordering facts and details
- ➤ Frequently use specific details which are elaborated
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently use appropriate and content-specific vocabulary
- ➤ Frequently enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 2:

- ➤ Take a position, make an adequate attempt to clarify a point of view, and frequently use facts and/or personal information to develop support for their position
- ➤ Organize details in a logical plan that is adequately maintained
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently support their position by providing sufficient information
- ➤ Frequently choose vocabulary that effectively supports the position
- ➤ Frequently enhance their writing by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 2:

- Fully develop ideas, most of which are relevant to the topic, and choose a literary form using appropriate elements to create a complete whole
- Follow a deliberate plan in which ideas are logically ordered
- Consistently direct writing to the intended audience
- Frequently choose vocabulary to enhance their writing
- Frequently enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 3

WRITING TO INFORM

Students at Proficiency Level 3:

- Develop a direct response with evidence of a general organizational plan (e.g., ordering of ideas, sequencing)
- Synthesize information and elaborate supporting details
- Consistently direct writing to the intended audience
- Generally use appropriate and content-specific vocabulary
- Generally enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 3:

- Take a position, make a limited attempt to clarify a point of view, and generally use facts and/or personal information which may or may not support their position
- Organize details in a plan that may or may not be adequately maintained
- Consistently direct writing to their intended audience
- Generally choose vocabulary that effectively supports the position
- Generally enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 3:

- ➤ Adequately develop ideas that are relevant to a topic and choose a literary form, using its appropriate elements to create a complete whole
- ➤ Partially follow a plan to organize their ideas
- ➤ Generally direct writing to the intended audience
- ➤ Generally enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 4/5

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 4/5:

- ➤ Incompletely develop ideas that are relevant to a topic and choose a literary form in which they use few appropriate elements
- ➤ Minimally follow a plan to organize ideas
- ➤ Rarely direct writing to the intended audience
- ➤ Rarely enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

1994 MSPAP PROFICIENCY LEVELS: GRADE 5 WRITING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

m Writing performance at different grade levels is dependent upon choice and structure of the prompts used to elicit writing, the writer's background, and the developmental level of the student writer. Nevertheless, the following descriptors identify proficiency levels for Grade 5.

PROFICIENCY LEVEL 1/2

WRITING TO INFORM

Students at Proficiency Level 1/2:

- ➤ Explain the topic with adequate extension of specific information
- ➤ Organize information with a logical plan (e.g., ordering ideas, sequencing)
- ➤ Synthesize information and elaborate supporting details
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently choose words, including content-specific vocabulary, that clarify and enrich the topic
- ➤ Frequently enhance what they write by:
  - Varying sentence structure
  - Creating complex sentence
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 1/2:

- ➤ Establish a clear position and sufficiently support it with relevant information
- ➤ Organize information in a comprehensive plan that includes a statement of position, supporting details, and a concluding comment
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently choose vocabulary that effectively support the position
- ➤ Consistently enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Level 1/2:

- ➤ Fully develop ideas and choose a literary form, using its appropriate elements to create a complete whole
- ➤ Frequently organize ideas in a purposeful manner
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently choose vocabulary to enhance their writing

- ➤ Consistently enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 3

WRITING TO INFORM

Students at Proficiency Level 3:

- ➤ Explain the topic with sufficient extension of global information
- ➤ Organize information with a general plan (e.g., organizing ideas, sequencing)
- ➤ Synthesize information and elaborate supporting ideas
- ➤ Consistently direct writing to the intended audience
- ➤ Generally use appropriate vocabulary, including content-specific vocabulary, that clarifies the topic
- ➤ Generally enhance what they write by:
  - Varying sentence structure
  - Creating complex sentences
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 3:

- ➤ Establish a position and partially support it with relevant information
- ➤ Organize information in a general plan that includes support for the position
- ➤ Consistently direct writing to their intended audience
- ➤ Generally choose vocabulary that adequately supports the position
- ➤ Generally enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 3:

- ➤ Adequately develop ideas and choose a literary form, using its appropriate elements to create a complete whole
- ➤ Usually organize ideas in a purposeful manner
- ➤ Consistently direct writing to the intended audience
- ➤ Generally choose vocabulary that adequately supports the position
- ➤ Generally enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 4/5

WRITING TO INFORM

Students at Proficiency Level 4/5:

- ➤ Explain the topic with limited extension of information
- ➤ Organize information in a limited plan
- ➤ Seldom synthesize information
- ➤ Use few supporting details
- ➤ Occasionally choose appropriate vocabulary to clarify the topic
- ➤ Sometimes direct writing to the intended audience
- ➤ Seldom enhance what they write by:
  - Varying sentence structure
  - Creating complex sentence
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 4/5:

- ➤ Usually establish a position and minimally support it with information which may be irrelevant
- ➤ Organize information in a minimal plan that includes support for the position
- ➤ Sometimes direct writing to the intended audience
- ➤ Occasionally choose vocabulary that sufficiently supports the position
- ➤ Seldom enhance what they write by:
  - Varying sentence structure
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 4/5:

- ➤ Incompletely develop ideas which may be relevant to a topic and choose a literary form in which they use a few appropriate elements
- ➤ Randomly organize ideas
- ➤ Minimally direct writing to the intended audience
- ➤ Sometimes choose vocabulary to enhance their writing
- ➤ Seldom enhance what they write by:
  - Selecting language to complement the selected literary form
  - Varying sentence structure
  - Incorporating appropriate mechanics
  - Using language purposefully

1994 MSPAP PROFICIENCY LEVELS: GRADE 8 WRITING *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

Writing performance at different grade levels is dependent upon choice and structure of the prompts used to elicit writing, the writer's background, and the developmental level of the student writer. Nevertheless, the following descriptors identify proficiency levels for Grade 8.

PROFICIENCY LEVEL 1/2

WRITING TO INFORM

Students at Proficiency Level 1/2:

- ➤ Develop a direct response which synthesized specific and purposeful information
- ➤ Organize information in a logical plan that includes support through specific details and examples
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently choose words, including content-specific vocabulary, that clarify and enrich the topic
- ➤ Frequently enhance what they write by:
  - Using a variety of sentence structures, including complex sentences
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 1/2:

- ➤ Take a position, clarify a point of view, and use facts and/or personal information to develop support for the position
- ➤ Organize details in a logical plan that is maintained
- ➤ Consistently direct writing to the intended audience
- ➤ Consistently choose vocabulary that effectively support the position
- ➤ Frequently enhance what they write by:
  - Creating sentence variety
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Level 1/2:

- ➤ Fully develop ideas which are relevant to the topic
- ➤ Choose a literary form, using its elements to create a complete whole
- ➤ Follow a plan in which ideas are logically ordered
- ➤ Consistently direct writing to the intended audience
- ➤ Frequently choose vocabulary to clarify and enhance their writing

- ➤ Frequently enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 3

WRITING TO INFORM

Students at Proficiency Level 3:

- ➤ Develop a response that synthesized general information
- ➤ Organize information in a logical plan that may include details which are adequately supported
- ➤ Generally direct writing to the intended audience
- ➤ Generally choose words, including content-specific vocabulary, that clarify the topic
- ➤ Generally enhance what they write by:
  - Using a variety of sentence structures, including complex sentences
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 3:

- ➤ Take a position and make an attempt to clarify a point of view
- ➤ Use facts and/or personal information to develop support for the position
- ➤ Organize details in a logical plan that is adequately maintained
- ➤ Generally direct writing to their intended audience
- ➤ Generally choose vocabulary that adequately supports the position
- ➤ Generally enhance what they write by:
  - Using a variety of sentence structures, including complex sentences
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 3:

- ➤ Adequately develop ideas and choose a literary form, using its appropriate elements to create a complete whole
- ➤ Usually organize ideas in a purposeful manner
- ➤ Consistently direct writing to the intended audience
- ➤ Generally choose vocabulary to enhance the writing
- ➤ Generally enhance what they write by:
  - Selecting language to complement the literary form
  - Incorporating appropriate mechanics
  - Using language purposefully

PROFICIENCY LEVEL 4/5

WRITING TO INFORM

Students at Proficiency Level 4/5:

- ➤ Develop an indirect response that synthesizes limited information
- ➤ Organize information in a limited plan
- ➤ Use few supporting details
- ➤ Seldom choose appropriate vocabulary to clarify the topic
- ➤ Sometimes direct writing to the intended audience
- ➤ Occasionally enhance what they write by:
  - Using a variety of sentence structures, including complex sentences
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO PERSUADE

Students at Proficiency Level 4/5:

- ➤ Take a position and make an attempt to clarify a point of view
- ➤ Sometimes use facts and/or personal information to develop support for the position
- ➤ Sometimes organize details in a plan that is partially maintained
- ➤ Sometimes direct writing to the intended audience
- ➤ Occasionally choose vocabulary that may supports the position
- ➤ Occasionally enhance what they write by:
  - Varying sentence structure
  - Incorporating appropriate mechanics
  - Using language purposefully

WRITING TO EXPRESS PERSONAL IDEAS

Students at Proficiency Level 4/5:

- ➤ Incompletely develop ideas which may be relevant to a topic and choose a literary form in which they use a few appropriate elements
- ➤ Randomly organize ideas
- ➤ Minimally direct writing to the intended audience
- ➤ Sometimes choose vocabulary to enhance their writing
- ➤ Seldom enhance what they write by:
  - Selecting language to complement the selected literary form
  - Varying sentence structure
  - Incorporating appropriate mechanics
  - Using language purposefully

1994 MSPAP PROFICIENCY LEVELS: GRADE 3 LANGUAGE USAGE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

Language usage at different grade levels reflects increasing sophistication and control over a greater variety of language choices. Proficiency in language usage is demonstrated in terms of how student choose words and language for intended audiences and purposes and how the meaning communicated by language choices is enhanced by considering sentence formation, usage, punctuation, capitalization, and spelling.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Proficiency Level 1 **consistently** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 1 **consistently** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- using quotations accurately
- using punctuation in poetry to focus the reader's attention
- using capitalization correctly in all parts of a sentence
- using capitalization, when appropriate, to adhere to the conventions of poetry
- having few spelling errors

LEVEL 2

Students at Proficiency Level 2 **frequently** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 2 **frequently** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- using quotations accurately
- using capitalization correctly in all parts of a sentence
- having few spelling errors

LEVEL 3

Students at Proficiency Level 3 **generally** choose words and language in writing appropriate for the purpose and audience by:

- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words
- using technical words, if applicable, related to the topic

Students at Proficiency Level 3 **generally** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- using capitalization correctly in all parts of a sentence
- having few spelling errors

LEVEL 4/5

Students at Proficiency Level 4/5 **sometimes** choose words and language in writing appropriate for the purpose and audience by:

- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words

Students at Proficiency Level 4/5 **sometimes** enhance the meaning of what they write by:

- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- having few spelling errors

1994 MSPAP PROFICIENCY LEVELS: GRADE 5 LANGUAGE USAGE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

Language usage at different grade levels reflects increasing sophistication and control over a greater variety of language choices. Proficiency in language usage is demonstrated in terms of how student choose words and language for intended audiences and purposes and how the meaning communicated by language choices is enhanced by considering sentence formation, usage, punctuation, capitalization, and spelling.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Proficiency Level 1 **consistently** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 1 **consistently** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using parenthetical expressions
- using correct end punctuation
- using commas in a series
- using quotations accurately
- using punctuation in poetry to focus the reader's attention
- using capitalization correctly in all parts of a sentence
- using capitalization, when appropriate, to adhere to the conventions of poetry
- having few spelling errors

LEVEL 2

Students at Proficiency Level 2 **frequently** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 2 **frequently** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- using quotations accurately
- using capitalization correctly in all parts of a sentence
- having few spelling errors

LEVEL 3

Students at Proficiency Level 3 **generally** choose words and language in writing appropriate for the purpose and audience by:

- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 3 **generally** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- using capitalization correctly in all parts of a sentence
- having few spelling errors

LEVEL 4/5

Students at Proficiency Level 4/5 **sometimes** choose words and language in writing appropriate for the purpose and audience by:

- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words

Students at Proficiency Level 4/5 **sometimes** enhance the meaning of what they write by:

- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using commas in a series
- having few spelling errors

1994 MSPAP PROFICIENCY LEVELS: GRADE 8 LANGUAGE USAGE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

Language usage at different grade levels reflects increasing sophistication and control over a greater variety of language choices. Proficiency in language usage is demonstrated in terms of how student choose words and language for intended audiences and purposes and how the meaning communicated by language choices is enhanced by considering sentence formation, usage, punctuation, capitalization, and spelling.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVELS 1/2

Students at Proficiency Level 1 **frequently** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words effectively
- using technical words, if applicable, related to the topic

Students at Proficiency Level 1 **frequently** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- using a variety of internal punctuation
- using quotations accurately
- using punctuation in poetry to focus the reader's attention
- using capitalization correctly in all parts of a sentence
- using capitalization, when appropriate, to adhere to the conventions of poetry
- having few spelling errors
- using paragraphing correctly

LEVEL 3

Students at Proficiency Level 3 **generally** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words
- using technical words, if applicable, related to the topic

Students at Proficiency Level 3 **generally** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using parenthetical expressions
- using correct end punctuation
- using a variety of internal punctuation
- using quotations correctly
- using capitalization correctly in all parts of a sentence
- having few spelling errors
- using paragraphing correctly

LEVEL 4

Students at Proficiency Level 4 **sometimes** choose words and language in writing appropriate for the purpose and audience by:

- setting the mood and/or tone
- using graphic images
- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence, progression, or movement
- using descriptive words
- using technical words, if applicable, related to the topic

Students at Proficiency Level 4 **sometimes** enhance the meaning of what they write by:

- varying sentence length
- varying sentence beginnings
- varying sentence types
- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation

- using a variety of internal punctuation
- having few spelling errors
- using paragraphing correctly

LEVEL 5

Students at Proficiency Level 5 **seldom** choose words and language in writing appropriate for the purpose and audience by:

- making associations of words with intended purposes
- making associations of words with intended audiences
- choosing specific words related to the topic
- choosing words to show sequence
- using descriptive words

Students at Proficiency Level 5 **seldom** enhance the meaning of what they write by:

- making subjects and verbs agree
- using correct pronouns
- using correct end punctuation
- having few spelling errors
- using paragraphing

1993 MSPAP PROFICIENCY LEVELS: GRADE 3 MATHEMATICS *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

All 13 Mathematics outcomes are assessed in the MSPAP at Grades 5 and 8. All outcomes except algebra are assessed at Grade 3. Differences in the content assessed at each grade level result from the level of complexity of the concepts that are assessed and the language used in the tasks. Students at a proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- ➤ Develop and apply problem-solving strategies to solve open-ended problems.
- ➤ Apply estimation in problem solving.
- ➤ Evaluate a solution to a problem.
- ➤ Communicate thinking concerning the solutions to multi-step problems.
- ➤ Apply geometric concepts and graphical data in real-life situations.
- ➤ Solve problems involving multiple steps using addition and multiplication.
- ➤ Integrate geometry and arithmetic operations with measurement to solve real-world problems.
- ➤ Demonstrate ability to devise a system for measuring involving estimation.
- ➤ Combine measurement strategies to solve problems.
- ➤ Integrate measurement strategies and arithmetic operations to solve real-world problems.
- ➤ Use basic probability concepts to make predictions in an abstract setting.

LEVEL 2

Students at Level 2:

- ➤ Apply problem solving strategies to investigate geometric concepts.
- ➤ Justify and explain reasoning used to make predictions and draw conclusions.
- ➤ Give an accurate and complete justification of application of patterns, statistical predictions and 2 and 3 dimensional geometric relationships.
- ➤ Demonstrate connections between measurement and geometry.
- ➤ Demonstrate connections between physical material and mathematical ideas.
- ➤ Select and use addition and multiplication to solve problems.
- ➤ Solve two-step problems using addition and multiplication.
- ➤ Write a rule using characteristics of numbers such as odds or evens.
- ➤ Show the effects of operation on numbers.
- ➤ Demonstrate understanding of symmetry and use it to solve real-world problems.
- ➤ Interpret and use information from a display.
- ➤ Collect, organize and display data.
- ➤ Apply multiple probability concepts in a concrete situation.
- ➤ Create and explain an original pattern.
- ➤ Apply estimation in working with quantities, measurement and computation.
- ➤ Estimate and verify measurements.

LEVEL 3

Students at Level 3:

- Find more than one solution to a given problem.
- Apply problem solving strategies to everyday real-life problems.
- Explain solution processes using words and numbers.
- Communicate an explanation of a solution to a mathematical problem involving basic probability and spatial concepts.
- Explain estimation strategies in relation to magnitude of numbers.
- Use estimation strategies to determine a reasonable answer.
- Exhibit evidence of reasoning relating spatial concepts to concrete situations.
- Use mathematical reasoning based on whole number computation.
- Connect mathematical concepts to other disciplines.
- Make connections between topics in mathematics.
- Exhibit a connection between a rule and an event.
- Add money with regrouping.
- Use addition, multiplication and division to solve problems.
- Use technology to add and multiply.
- Create pictorial representations of division.
- Compare fractions using pictorial models.
- Demonstrate connections between arithmetic operations and geometry.
- Solve problems by applying geometric relationships and using geometric reasoning.
- Apply estimation in measurement.
- Use appropriate unit of measurement.
- Use appropriate measuring tool.
- Use counting to determine area.
- Solve real-world problems involving length and area.
- Demonstrate symmetry and congruency.
- Measure using non-standard and standard units.
- Organize and display data as a graph.
- Use deductive reasoning to interpret data to make predictions.
- Apply probability concepts to make predictions.
- Apply basic probability concepts in a given situation.
- Recognize, describe and extend a pattern.

LEVEL 4

Students at Level 4:

- Communicate information obtained from data displays.
- Exhibit correct reasoning based on supplied data.
- Observe, collect and organize data.
- Use probability concepts to interpret a display, chart or graph.
- Develop conjectures based on given data and mathematical reasoning.
- Add more than two addends with regrouping.
- Show fractional parts of a whole.
- Construct number meanings using real-world experiences.
- Round distances to solve a problem.
- Use estimation in measuring length and in computation.
- Use reasoning in geometry.
- Recognize a pattern.

LEVEL 5

Students at Level 5:

- Construct number meanings using real-world experiences and physical materials.
- Color models to demonstrate the meaning of fractional parts.
- Describe a number as odd or even.
- Read temperature.
- Interpret information from displays.
- Observe patterns.
- Describe characteristics of two dimensional shapes and effects of combining them.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 5 MATHEMATICS *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

All 13 Mathematics outcomes are assessed in the MSPAP at Grades 5 and 8. All outcomes except algebra are assessed at Grade 3. Differences in the content assessed at each grade level result from the level of complexity of the concepts that are assessed and the language used in the tasks. Students at a proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- Justify and explain results or solutions to open-ended problems and multi-step problems.
- Reason mathematically to solve problems involving geometric data using shapes and dimensions and to make predictions from patterns in a data chart.
- Apply mathematical thinking to real-world problems.
- Determine if a solution is sensible based on given criteria.
- Solve problems involving money, time, and elapsed time, and demonstrate understanding of the meaning of operations.
- Distinguish among kinds of polygons, design geometric patterns, solve geometric problems involving measurement and spatial reasoning.
- Apply estimation of perimeter to real-world problems.
- Collect, organize and display data for given situations using appropriate displays such as line plots, stem-leaf plots, bar graphs, pictographs or glyphs.
- Make predictions using basic concepts of probability in abstract settings.
- Write a rule based on patterns and create and describe a geometric pattern.
- Write an algebraic equation based on a geometric model.
- Use an algebraic expression to explain a rule.

LEVEL 2

Students at Level 2:

- Justify and explain one or more results based on data from charts, graphs or text that are organized and constructed by the students.
- Use mathematical language to interpret and support scientific conclusions and to communicate problem-solving strategies.
- Use diagrams to model solutions.
- Reason mathematically to solve problems involving the concepts of proportion, perimeter, area and spatial reasoning.
- Use deductive reasoning to make predictions using data from a chart.
- Multiply and divide whole numbers and solve problems involving money and time.
- Distinguish among kinds of polygons.
- Construct a polygon with a given area.

- ➤ Apply estimation strategies to real-world problems involving measurement such as rate/distance.
- ➤ Collect, organize and display data as line plots, charts, tree diagrams and bar graphs; interpret bar graphs and stem and leaf plots.
- ➤ Use a function table to create a rule with an algebraic expression.
- ➤ Describe patterns involving connections between numbers and geometry.
- ➤ Evaluate algebraic operations.
- ➤ Make predictions using number theory and basic concepts of probability.

LEVEL 3

Students at Level 3:

- ➤ Justify and explain a result based on interpretation of data.
- ➤ Explain number relationships, geometric relationships, number concepts and use of operations.
- ➤ Reason mathematically to make comparisons using information from a graphical display, to solve problems, to make predictions and to compare the basic concepts of probability.
- ➤ Use statistical data to build an argument.
- ➤ Use all four arithmetic operations of whole numbers, fractions and decimals, including money. Choose an appropriate operation to solve a problem.
- ➤ Demonstrate an understanding of fractions and the relationship between whole numbers, fractions and decimals.
- ➤ Demonstrate an ability to perform computations using numbers in a variety of equivalent forms.
- ➤ Identify symmetry and construct a circle given its radius.
- ➤ Use arithmetic operations to find area and perimeter.
- ➤ Select the appropriate tool of measurement and measure accurately.
- ➤ Apply knowledge of measurement to real world interdisciplinary problem solving.
- ➤ Measure angles and apply knowledge of congruency.
- ➤ Collect, organize and display data in tables, charts and graphs; interpret data from glyphs and line plots; find the mean.
- ➤ Describe how a change in one variable results in a change in another variable.
- ➤ Develop a probability model for a real-world situation.

LEVEL 4

Students at Level 4:

- ➤ Use reasoning processes to interpret data from a chart and support a position.
- ➤ Identify symmetry and geometric patterns.
- ➤ Distinguish among kinds of triangles and quadrilaterals.
- ➤ Construct a polygon given the name and dimensions.
- ➤ Apply mathematical reasoning to a geometric configuration.
- ➤ Use arithmetic operations to solve real life problems.
- ➤ Collect, organize and display data in a table and model concepts of averaging.
- ➤ Describe relationships among data in a chart/table.

- Demonstrate the understanding of basic concepts of probability.
- Complete geometric patterns.
- Compare and order numbers.
- Create a hypothesis which reflects the understanding of the relationships between two variables.
- Solve for a missing number in a number sentence.

LEVEL 5

Students at Level 5:

- Use arithmetic operations to solve problems.
- Add and subtract whole numbers.
- Generalize a rule from a simple pattern.
- Interpret mathematical data and write a conclusion.
- Collect, organize and display data in a table.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 8 MATHEMATICS *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

All 13 Mathematics outcomes are assessed in the MSPAP at Grades 5 and 8. All outcomes except algebra are assessed at Grade 3. Differences in the content assessed at each grade level result from the level of complexity of the concepts that are assessed and the language used in the tasks. Students at a proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- ➤ Solve problems in probability, statistics and spatial concepts with open-ended answers.
- ➤ Use given pieces of data to solve a multi-step problem.
- ➤ Develop mathematical arguments which validate solutions.
- ➤ Determine area of a figure by partitioning.
- ➤ Determine the circumference of a circle.
- ➤ Describe how a change in one variable results in a change in another variable, given a functional relationship.

LEVEL 2

Students at Level 2:

- ➤ Use deductive reasoning to solve problems.
- ➤ Explain the process for solving a problem using mathematical language.
- ➤ Use obtained data to analyze and make recommendations.
- ➤ Use given pieces of data to solve a three-step problem.
- ➤ Design and conduct a survey.
- ➤ Test conjectures and draw conclusions.
- ➤ Represent number relationships on a 2-dimensional graph (ordered pairs).
- ➤ Generalize a relation from a table and write an equation.
- ➤ Apply ratio and proportion to make and interpret scale drawings.
- ➤ Write a proportion to solve problems.
- ➤ Use order of operations.
- ➤ Apply the Pythagorean theorem.
- ➤ Apply measurement to interdisciplinary and real-world problem solving situations such as elapsed time.

LEVEL 3

Students at Level 3:

- Communicate the results of changing parameters of an experiment.
- Determine the best measurement of central tendency and calculate it.
- Conduct a survey or an experiment to obtain data.
- Evaluate and simplify algebraic expressions and formulas.
- Given a problem situation, write an equation.
- Generalize a relation from a table and/or graph.
- Use obtained data to construct a graph, draw a conclusion and make predictions.
- Determine probability of a given event and explain the process used.
- Perform operations with decimals, percentages and fractions and round appropriately.
- Use estimation to draw a figure of a given shape with given area.
- Determine area of polygons.

LEVEL 4

Students at Level 4:

- Use two or more given pieces of data to solve a two-step problem.
- Choose an appropriate operation to solve a problem.
- Show all possible outcomes of a given event.
- Write the steps necessary to solve a problem in probability and geometry.
- Justify an answer using non-mathematical language.
- Multiply whole numbers and decimals.
- Represent given data on a two dimensional graph.
- Recognize a pattern and apply it; describe how a change in one variable results in a change in another variable.
- Solve proportions.

LEVEL 5

Students at Level 5:

- Choose an answer and explain why the choice was made.
- Use two or more given pieces of data to solve a one-step problem.
- Recognize a pattern.
- Interpret information from a table, chart or graph.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 3 SCIENCE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- Identify that the earth has a variety of features to be investigated.
- Recognize and give the function of special parts of living things.
- Recognize that all living things have basic needs.
- Recognize that a push or a pull is needed to start motion.
- Explore properties of the physical world.
- Describe characteristics of seasons.
- Recognize a fair test and describe a way to conduct an investigation.
- Compare and describe observations to reach logical conclusions and support those conclusions with evidence.
- Describe personal experience in order to explain scientific ideas.
- Use evidence or experience to design many ways of solving a problem.
- Identify a variable and control it in an experiment.
- Describe the use of instruments to control test conditions.
- Communicate an explanation of scientific findings by drawing, labeling pictures and/or writing.

LEVEL 2

Students at Level 2:

- Recognize that the place in which living things are found has a variety of features to be investigated.
- Recognize that all living things can be classified based on similarities and differences.
- Classify materials based on one of their physical properties—magnetism.
- Observe, list and explain physical properties of everyday objects.
- Investigate earth's features.
- List seasonal characteristics from provided information and implications of weather.
- Understand and explain the procedure for an investigation.
- Compare and describe observations to reach logical conclusions and support those conclusions with evidence.
- Use personal experience to explain a scientific idea.
- Recognize a fair test.
- Describe creative uses for an object.
- Explain how an activity assisted learning.
- Recognize and explain thought processes and behaviors used to select materials for an investigation.
- Communicate findings by drawing, labeling pictures and writing.
- Make decisions related to issues which affect society and the environment.
- Use the knowledge of science and personal experience to produce an action plan that will solve a particular problem.

LEVEL 3

Students at Level 3:

- Recognize that living things can be classified.
- Recognize that all living things have special parts that enable them to meet basic needs.
- Observe and compare characteristics of weather.
- List seasonal characteristics from provided information.
- Investigate and identify earth's features.
- Identify that materials have different physical properties that can be compared.
- Recognize that a push or a pull changes the motion of objects.
- Describe how discoveries were made in an investigation.
- Observe, compare and classify characteristics.
- Use personal experience and relate it to a scientific idea or phenomena.
- Recognize, use and extend a pattern.
- Describe evidence to support an idea.
- Recognize a fair test.
- Demonstrate creative thinking in the construction of physical models.
- Explain thought processes used to select materials for investigation.
- List questions that relate to a scientific investigation.
- Observe, interpret and/or communicate findings by drawing pictures or by writing.
- Use knowledge of science to propose solutions to a practical problem and to make decisions.
- Describe to others how a decision was reached.
- Identify issues related to the environment and society.

LEVEL 4

Students at Level 4:

- Identify that all living things have basic needs.
- List the seasons in order.
- Identify seasons based on provided information.
- Distinguish between seasons through drawings.
- Communicate differences in living things.
- Observe, compare and classify characteristics.
- Recognize that scientific ideas are based on personal evidence.
- Describe observations that support an idea.
- Describe a pattern in data.
- Predict results.
- Produce drawings that make distinctions between features.
- Interpret and communicate information.
- Use scientific knowledge to make decisions and solve a practical problem.

LEVEL 5

Students at Level 5:

- Recognize that living things have special parts.
- Identify characteristics of weather through observation.
- Classify characteristics of weather by season.
- List findings.
- Make drawings that communicate findings.
- Use an instrument to make observations, predict results.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 5 SCIENCE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- Recognize that forces cause change in motion.
- Identify that humans depend on natural resources in their community to meet needs and wants.
- Make a prediction and give evidence to support that prediction.
- Compare and analyze observations to reach logical conclusions.
- Organize, display, compare and interpret data collected from different sources.
- Use evidence to support conclusions and develop scientific knowledge.
- Describe practical problems and use the knowledge of science and technology to make the decisions required to solve those problems.

LEVEL 2

Students at Level 2:

- Identify renewable and non-renewable natural resources on which humans depend to meet needs and wants.
- Recognize that the earth's features and conditions support life.
- Recognize that forces cause changes in motion.
- Recognize and describe patterns.
- Utilize patterns to develop a testable hypothesis.
- Design investigations to answer questions and test developed hypotheses.
- Demonstrate the ability to identify variables and use them in a scientific investigation.
- Organize, display, compare and interpret data.
- Demonstrate the ability to interpret and use evidence to support answers and develop scientific knowledge.
- Identify and describe specific problems.
- Use the knowledge of science and technology to design an action to solve a problem.

LEVEL 3

Students at Level 3:

- Recognize human dependency on natural resources.
- Identify natural resources as renewable or non-renewable.
- Recognize that matter undergoes physical and chemical changes.
- Recognize that forces cause changes in motion.
- Recognize that the earth's features and conditions support life.

- ➤ Recognize that individuals and groups of organisms interact with each other and their environment.
- ➤ Develop a hypothesis.
- ➤ Demonstrate that scientific knowledge allows us to make predictions.
- ➤ Recognize a variable and use it during a scientific investigation.
- ➤ Utilize information from a chart or article.
- ➤ Demonstrate that scientific knowledge is based on evidence.
- ➤ Give evidence to support answers.
- ➤ Recognize the importance of developing data in graphic form.
- ➤ Organize, display and interpret data to support a scientific conclusion.
- ➤ Communicate findings in written form.
- ➤ Identify specific problems and/or use the knowledge of science and technology to solve those problems.

LEVEL 4

Students at Level 4:

- ➤ Recognize that forces cause changes in the motion of an object.
- ➤ Recognize the interaction of an organism in its environment.
- ➤ Recognize that organisms undergo changes in their environment and identify the reasons for those changes.
- ➤ Demonstrate that scientific knowledge allows us to make predictions.
- ➤ Recognize the importance of comparing data and displaying it in graphic form.
- ➤ Utilize information from a chart or article.
- ➤ Give evidence to support answers.
- ➤ Demonstrate ability to use instruments, methods and materials to measure.
- ➤ Organize and present or interpret data in graphic form.
- ➤ Communicate findings in writing.
- ➤ Describe a local environmental problem.
- ➤ Utilize knowledge of science and technology to make decisions and solve problems.
- ➤ Recognize scientific ways of thinking.

LEVEL 5

Students at Level 5:

- ➤ Recognize the interaction of organisms with one another and their environment.
- ➤ Demonstrate that scientific knowledge allows us to make predictions.
- ➤ Develop a reasonable, testable hypothesis.
- ➤ Make observations.
- ➤ Display data.
- ➤ Make a list that communicates findings.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 8 SCIENCE *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students at Level 1:

- Recognize that visible light behaves in a variety of ways as it passes through a lens.
- Demonstrate a basic understanding of how genetic traits are passed through multiple generations.
- Understand principles of acid-base neutralization.
- Recognize that the human body is a complex organism, composed of inter-related tissues, organs and systems that are subject to diseases which are transmitted and/or inherited.
- Design a scientifically valid experiment using developmentally appropriate materials and showing the ability to distinguish the controlled variable.
- Analyze the adequacy of supporting data.
- Use data to support an answer.
- Develop a consensus or conclusion which is based on data.
- Effectively communicate experimental findings orally, in writing, or graphically (chart, table, graph).
- Demonstrate a willingness to modify one's ideas based on additional evidence, ideas of others, prior knowledge.

LEVEL 2

Students at Level 2:

- Understand how genetic traits are passed between generations.
- Explain that humans have a major impact on living and non-living environment.
- Correctly complete the Punnett square.
- Identify changes in the earth's physical environment which have influenced changes in life forms over time.
- Name common acids.
- Understand that diseases affect body organs differently since the body is a complex organism composed of inter-related tissues, organs and systems.
- Develop patterns from data and use them to make predictions.
- Describe and compare possible thought precesses used to make predictions, responses or consensus.
- Interpret and explain information using statistical methods for analyzing data.
- Use charts, graphs and diagrams to make inferences, to summarize data and to support conclusions.
- Describe relationships between variables.
- Describe the advantages and disadvantages of using models.
- Organize and use data to construct models and explain the scientific nature of those models.
- Use additional data to modify an initial position.

LEVEL 3

Students at Level 3:

- Recognize that genetic disorders are inherited in predictable ways.
- Understand that human activities and other organisms interact with each other and have a major impact on the living and non-living environment over time.
- Have a general understanding of the effects of disease on human organs.
- Recognize that changes in the earth's physical environment over time have influenced changes in life forms.
- Monitor the patterns of the sun, moon and planets.
- Derive patterns from data and use them to make predictions.
- Obtain data from a graph.
- Use maps, charts and diagrams to make inferences, to summarize data and to support conclusions.
- Develop an analogy to explain data and use it to support a position.
- Describe relationships between variables, which include recognizing the controlled variable.
- Describe advantages or disadvantages of a physical model.
- Predict outcomes from a model and use data from models to support a position.

LEVEL 4

Students at Level 4:

- Distinguish between disease and genetic disorders.
- Recognize that humans have a major impact on living and non-living environment.
- Recognize that the interactions of force and mass cause predictable changes in motion.
- Recognize visible light behaves in a variety of ways.
- Read accurately, collect and record data and ask questions to clarify understanding, to explain information communicated through data (charts, tables, maps, diagrams and graphs).
- Utilize patterns in data to make predictions.
- Use a graph to predict the behavior of variables.
- Use a chart or diagram to make inferences and to summarize data.
- Recognize the relationships between variables.
- Use data to support or modify an initial position.

LEVEL 5

Students at Level 5:

- Read, collect and record data in charts, tables, maps, diagrams and graphs.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 3 SOCIAL STUDIES *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students demonstrate:

- An understanding of geography in a community context by explaining factors influencing location, by describing transportation and communication links, by interpreting maps and by explaining the relationship between physical setting and satisfying wants and needs.
- An ability to gather information and think critically by obtaining and using relevant information from print and non-print sources, by solving problems and by identifying occasions for making decisions.
- An understanding of economics by examining services financed through taxation.

LEVEL 2

Students demonstrate:

- An understanding of political systems by reading and interpreting principles of American government expressed in symbols and by comparing the responsibilities of people living today with those of people living in other times.
- An understanding of geography by interpreting and constructing maps using simple grid systems, cardinal directions, relative distances and signs and symbols explained in a legend.

LEVEL 3

Students demonstrate:

- An understanding of political systems by describing the processes people use for making and changing rules within the family, school and community, and by interpreting symbols.
- An understanding of the people of the nation and world by examining the development of cultures through interaction with the environment, by predicting how conflicts in values or beliefs may affect relationships, and by describing how people share common wants and needs.
- An understanding of geography by locating features on maps, examining environmental concerns in the community, and describing transportation and communication links.
- An understanding of economics by describing the relationship between economic wants and needs, describing the impact of economic specialization on the growth of communities and by identifying economic resources within a community.
- An ability to gather information and think critically by using print and non-print sources of information to interpret problems from social studies content.

- An ability to value self and others by recognizing that people everywhere have similar social needs, motivations and desires but may express them differently.
- An attainment of understandings and attitudes related to democratic processes by proposing rules that promote order and fairness in various situations and distinguishing between the concepts of majority rule and individual rights.

LEVEL 4

Students demonstrate:

- An understanding of geography by interpreting maps using directions, relative distances and sizes, and symbols.
- An understanding of political systems by proposing rules for living in a community.
- An understanding of the people of the nation and world by predicting how differences in values and beliefs may affect relationships in school.
- An ability to identify occasions and processes for making decisions.

LEVEL 5

Students demonstrate:

- An understanding of geography by examining the physical setting of communities and locating features within communities.
- An ability to gather and use print and non-print sources of information.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

1993 MSPAP PROFICIENCY LEVELS: GRADE 5 SOCIAL STUDIES *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students demonstrate:

- An understanding of political systems by determining the importance of historical documents and analyzing historical examples in which individuals brought about civic improvement.
- An understanding of geography by examining people's adaptation to and modification of their environment and by predicting the effects of a geographic setting on people's lives.
- An understanding of economics by analyzing, in both historical and contemporary contexts, the relationship of supply and demand and resources to the production and consumption of goods and services.
- An ability to obtain, organize and use information to define and clarify problems drawn from history and the social sciences, prepare solutions based on available data and reflect on the results.
- An attainment of understandings and attitudes related to examining situations in historical contexts that illustrate conflict between conscience and respect for authority.
- An understanding of people of the nation and world by analyzing the cultural contributions of different groups of people.

LEVEL 2

Students demonstrate:

- An understanding of political systems by analyzing historical documents and relating them to historical events and ideas of the 17th and 18th centuries and analyzing conflict as a method of effecting political change.
- An understanding of the peoples of the nation and world by investigating the history, diversity and commonality of peoples, the reality of human interdependence and the need for cooperation and a multicultural perspective.
- An understanding of geography by examining people's adaptation to and modification of their environment as a result of changes in technology, by predicting resulting effects and by using grid systems and scales to measure distance on a map.
- An understanding of economics by describing, in both historical and contemporary contexts, how resources and demand affect the production of goods and services.
- An ability to value self and others by using case studies to examine the feelings of others and by recognizing the dignity and worth of people from diverse groups.
- An attainment of understandings and attitudes related to democratic processes by analyzing situations in historical contexts that require an understanding of the rule of law and respect for the dignity and rights of all people.

LEVEL 3

Students demonstrate:

- An understanding of political systems by determining the importance of historical documents and using current events to examine the consequences of the exercise and denial of rights.
- An understanding of people of the nation and world by determining the need for cooperation to solve problems and by examining different perspectives of events.
- An understanding of geography by using a map to determine routes, modes of transportation, land features and how people are linked by transportation and communication networks and by examining different ways of defining a region.
- An understanding of economics by describing, in a contemporary context, the impact of resource availability on the production of goods and services and the impact of demand on consumption.
- An ability to obtain, organize, interpret and use information to make decisions.
- An attainment of understandings and attitudes related to democratic processes by analyzing situations in contemporary contexts requiring an understanding of the rule of law and respect for the dignity and rights of all people.

LEVELS 4/5

Students demonstrate:

- An understanding of geography by demonstrating a sense of responsibility to the environment and an ability to construct a map legend.
- An understanding of people of the nation and world by describing cultural contributions of people from other countries.
- An ability to gather, interpret and use information from print and non-print sources.
- An ability to value self and others by examining the feelings of others in a variety of situations.

Students at Levels 4/5 are likely to have provided some responses to assessment activities at Level 3, but not enough assessment activities to place them at proficiency Level 3.

1993 MSPAP PROFICIENCY LEVELS: GRADE 8 SOCIAL STUDIES *

Based on Learning Outcomes Adopted by the
Maryland State Board of Education for the Year 2000

* Students at an MSPAP proficiency level are likely to be able to display most of the knowledge, skills and processes at that level and lower proficiency levels.

LEVEL 1

Students demonstrate:

- An ability to define and clarify problems drawn from history and the social sciences, judge information related to problems, propose solutions and draw conclusions based on available data.
- An attainment of understandings and attitudes related to democratic processes by analyzing situations in which respect for majority rule and minority rights of the individual is demonstrated.

LEVEL 2

Students demonstrate:

- An understanding of geography by examining the role of culture, technology and the environment in the location and distribution of human activities.
- An understanding of the development and current status of economic principles, institutions and processes.
- An ability to obtain, interpret, evaluate, organize and think critically using information from observing, investigating and reading print sources of information.
- An ability to value self and others by examining one's own feelings and values within specific contexts.

LEVEL 3

Students demonstrate:

- An understanding of political systems by using U.S. case studies from historic and contemporary contexts to analyze consequences resulting from the exercise and denial of rights and by analyzing ways in which individuals and groups can advance or impede political change.
- An understanding of people of the nation and world by investigating historical and contemporary cultures and by determining that human experiences in earlier times and other places may be applicable to solving contemporary problems.
- An understanding of geography by interpreting and constructing maps in order to locate places, cultural features and natural features.
- An understanding of economics by analyzing the effects of supply, demand and taxation on the production and consumption of goods and services, and citing examples of economic interdependency among world communities.
- An ability to define and clarify problems drawn from history and the social sciences, propose solutions and draw conclusions from available data.

LEVEL 4

Students demonstrate:

- An understanding of the evolution of the American political systems by using case studies from historical and contemporary contexts to analyze consequences resulting from the exercise and denial of rights and responsibilities.
- An understanding of people of the nation and world by investigating historical and contemporary cultures.
- An understanding of geography by interpreting maps to compare regions on a state, national and global basis, by evaluating the ways humans make use of their physical setting to meet economic needs and the resulting changes in their quality of life, and by analyzing the movement of goods from place to place.
- An understanding of economics by analyzing the role of scarcity in economic decision making and by citing examples of economic interdependency among world communities.
- An ability to obtain, interpret, evaluate, organize and use print and non-print sources of information.
- An ability to accept and value self and others by analyzing diverse cultures, customs and traditions of society.
- An attainment of understandings and attitudes related to democratic processes by using a variety of cultural and ethnic contexts to analyze situations in which individuals demonstrate respect and support for the rights and dignity of all people, and situations illustrating conflicts between conscience and respect for authority.

LEVEL 5

Students demonstrate:

- An understanding of political systems by using U.S. case studies from historical and contemporary contexts to analyze consequences from the exercise and denial of rights and responsibilities.
- An ability to obtain, interpret and use information from reading.
- An ability to value self and others by analyzing the impact of social institutions on the behavior of individuals and groups.
- An attainment of understandings and attitudes which analyze situations from a variety of historical contexts in which respect for rights of the individual is demonstrated.

Students at Level 5 are likely to have provided some responses to assessment activities at Level 4, but not enough assessment activities to place them at proficiency Level 4.

APPENDIX C

Steps School Improvement Teams Can Use for School Improvement Planning Using MSPAP Scores and Other Information: An Example

Suggestions from MSDE Content Specialists for Aiding School Improvement Teams in Aligning Curriculum

STEPS SCHOOL IMPROVEMENT TEAMS CAN FOLLOW FOR SCHOOL IMPROVEMENT PLANNING USING MSPAP SCORES AND OTHER INFORMATION: AN EXAMPLE

The following is an example of one possible approach for school improvement planning. It focuses on moving students from performance Levels 4 and 5 to Level 3.

1. Gather information available to help school improvement teams. This includes the MSPAP Outcome Score Report, MSPAP Outcome Scale Score Report, MSPAP Proficiency Level and Participation Report, and Proficiency Level Descriptions. Other information generated by your school should also be used. This includes what teachers know about their students, report card grades, system assessment information, etc. Another place to look for relevant information is the Maryland School Performance Report, which contains data pertaining to the performance of other school systems and the state.

2. Review the Maryland learning outcomes in the grade level(s) and content area(s) of interest. Verify that the outcomes are included in your curriculum materials and classroom instructional program at **that** and **previous** grades. The review of the learning outcomes should include examination of the sub-outcomes and indicators that accompany each outcome. Some questions you may want to consider are below.
   - Do you know what the outcomes are?
   - Are the outcomes in the curriculum guide?
   - Are the outcomes included at the appropriate grade levels?
   - Are the outcomes being implemented in instruction?
   - In your curriculum, are a variety of strategies used?
   - After considering the above questions, review your materials and instruction to include outcomes inadequately or not covered. These outcomes are **targets** for instruction and learning.

3. Review your school's Outcome Score and/or Outcome Scale Score Reports. Identify outcomes that will need focus. These outcomes are **additional targets** for instruction and learning.
   - You may need some assistance in understanding, interpreting, and using this report. If so you can refer to the MSPAP Score Interpretation Guide, your school system's Local Accountability Coordinator, or staff development office.
   - Be sure to consider the difficulty level of each outcome and the percentages of students at outcome score levels (e.g., 0-25%, 26-59%, etc.) as well as the average outcome scores.
   - If using the Outcome Scale Score Report, place the medians in their appropriate proficiency levels.

4. Review your school's MSPAP Proficiency Level and Participation Report and the Proficiency Level Descriptions for the relevant grade level(s) and content area(s) and determine which outcomes to focus on to move students performing at Levels 4 and 5 to Level 3. These outcomes also become **additional targets** for instruction and learning.
   - The descriptions for Levels 4 and 5 describe, in general, what students at these levels currently know and can do. The description for Level 3 describes, in general terms, what your target for these students should become. These descriptions were written in reference to the Maryland learning outcomes.
   - Again, you may need some assistance in understanding, interpreting, and using this report and the descriptions. If so you can refer to the MSPAP Score Interpretation Guide, your school system's Local Accountability Coordinator, staff development office, or content are instructional supervisors.

5. In steps 2-4 you identified **targets** - that is, specific outcomes - for learning and instruction. You may want to set priorities or choose among these targets rather than aim for all of them at once.

   - Although your teachers may teach the outcomes you have identified as targets, they may need additional staff development that focuses on instructional strategies for teaching the outcomes in question.
   - You may want to compare your school's performance on target areas to the performance of your school system, the state, and other schools like yours. Although such comparisons do not provide information to guide instruction, they may provide a context for helping you think about your school's performance.

6. Incorporate instructional materials and activities that focus on the target outcomes. Monitor student progress on the target (and all) outcomes as part of your classroom assessment activities.

SUGGESTIONS FROM MSDE CONTENT SPECIALISTS FOR AIDING SCHOOL IMPROVEMENT TEAMS IN ALIGNING CURRICULUM

Reading

Focus on varying instructional practices that emphasize necessary strategies to help students become independent when reading for literary experience, reading to be informed, and reading to perform a task.

Model higher level questioning. In discussions, reader response logs and/or journals employ the four stances to help students demonstrate construction, extension, and examination of meaning. The four stances are global understanding, developing interpretation, personal reflection and response, and critical.

Writing and Language Usage

Focus on writing across the curriculum.

Teach writing as a process, focusing on topic, audience, purpose, and form.

Teach strategies for editing.

Vary writing purpose, especially writing to persuade and to express personal ideas.

Mathematics

Instruction in mathematics K-8 should include the appropriate state outcomes and sub-outcomes. In instruction and assessment, teachers should be asking students to explain answers orally and in written form. Mathematical language and reasoning should be emphasized in all mathematics classrooms. Students should be taught to problem solve; to be able to think about what they need to solve problems; and to refer to previous steps in a problem.

Students should be taught when it is appropriate to use a calculator in instruction and assessment.

In statistics, instruction should include discussions on the selection of the appropriate display, the importance of labelling graphs, and the designing of charts. Students should learn how to draw conclusions and justify answers using graphs.

Mathematics instruction is best when students are learning mathematics using real-life applications of the subject.

Science

The science tasks reflect the instructional strategies which students should experience in their classrooms. In MSPAP the five science content outcomes are woven together to form the framework of the task. The various activities develop from the indicator statements under each outcome. Within the context of the task, students are asked to demonstrate what they know and are able to do. They are asked to think about their experiences and communicate their findings in writing or by drawing.

Classroom lessons which are designed around the science outcomes document will provide students with the experiences that are similar to those found in an MSPAP task. Students should be able to work both alone and in teams to solve problems, perform investigations, and create scientific models. They should develop questions, collect data, and interpret scientific information. Whenever possible, students should be asked to support their responses with appropriate evidence. These experiences become even richer when they are integrated with other content areas.

Taken collectively, the science outcomes describe a balanced instructional program. Students should experience science as a body of knowledge, a way of thinking and investigating, and a tool for making decisions and solving problems.

Social Studies

Social Studies teachers should stress interpretation of documents, maps, graphs, and tables.

Moreover, Social Studies teachers should stress problem solving, decision making, active participation, and critical thinking by students in their classes and in their lesson plans.

Attention should be given to including social studies outcomes and indicators when focusing lesson plans.

APPENDIX D

1994 MSPAP Standards Report

1994 MSPAP Proficiency Level and Participation Report

1994 MSPAP Outcome Score Report

1994 MSPAP Outcome Scale Score Report

Table 2: MSPAP Report Elements and Descriptions

Table 3: MSPAP Reports, Use, and Questions

CRTPR04 MARYLAND STATE DEPARTMENT OF EDUCATION
1994 MSPAP STANDARDS REPORT
DATE: 01/20/95
PAGE: 1

SCHOOL SYSTEM: STATE TOTALS
SCHOOL: ALL SCHOOLS

STANDARD: PERCENT EX	SAT	NUMBER TESTED	NUMBER ABSENT/ EXCUSED	NUMBER NOT REPORTED**	PERCENT AT EX*	PERCENT AT SAT*
GRADE 05						
READING	25 70	53,587	1,867	5,376	3.5	30.2
WRITING	25 70	53,949	2,864	4,017	10.7	33.2
LANGUAGE USAGE	25 70	50,917	5,786	4,127	15.6	35.0
MATHEMATICS	25 70	52,283	4,530	4,017	8.0	42.1
SCIENCE	25 70	52,497	4,316	4,017	5.7	38.7
SOCIAL STUDIES	25 70	52,732	4,081	4,017	4.5	32.7

*EXCELLENT (EX) AND SATISFACTORY (SAT) ARE DEFINED AS PERCENTAGES BASED ON THE NUMBER TESTED PLUS THE NUMBER ABSENT/EXCUSED.

**INCLUDES EXEMPTIONS FOR SPECIAL EDUCATION, LEP, AND SECOND SEMESTER TRANSFERS.

NOTE: DATA ARE TO BE CONSIDERED PRELIMINARY UNTIL FURTHER NOTICE.

EMBARGOED UNTIL MSDE OFFICIAL RELEASE

CRTPR02 MARYLAND STATE DEPARTMENT OF EDUCATION DATE: 01/20/95
1994 MSPAP PROFICIENCY LEVEL AND PARTICIPATION REPORT PAGE: 2

SCHOOL SYSTEM: STATE TOTALS
SCHOOL: ALL SCHOOLS
GRADE LEVEL: 05 JUNE MEMBERSHIP: 60,639

Proficiency Level (1=Highest)	Number of Students	Percent of Test Takers	Participation in Assessment	Number of Students	Percent of June, 1994 Membership
MATHEMATICS					
Level 1	485	0.9	Completed Test	52,283	86.2
Level 2	4,033	7.7	Absent/Excused	4,530	7.5
Level 3	19,391	37.1	Exempted	2,668	4.4
Level 4	16,812	32.2	2nd Sem. Transfers	1,349	2.2
Level 5	11,562	22.1	Total Students Accounted For	60,830	100.3
SCIENCE					
Level 1	181	0.3	Completed Test	52,497	86.6
Level 2	3,075	5.9	Absent/Excused	4,316	7.1
Level 3	18,724	35.7	Exempted	2,668	4.4
Level 4	15,262	29.1	2nd Sem. Transfers	1,349	2.2
Level 5	15,255	29.1	Total Students Accounted For	60,830	100.3
SOCIAL STUDIES					
Level 1	250	0.5	Completed Test	52,732	87.0
Level 2	2,328	4.4	Absent/Excused	4,081	6.7
Level 3	16,024	30.4	Exempted	2,668	4.4
Level 4/5	34,130	64.7	2nd Sem. Transfers	1,349	2.2
			Total Students Accounted For	60,830	100.3

*INCLUDES SPECIAL EDUCATION STUDENTS WHO WERE EXEMPTED ONLY FROM THE READING AND LANGUAGE USAGE PORTION OF THE ASSESSMENT.

NOTE: PROFICIENCY LEVELS ARE DEFINED AS PERCENTAGES BASED ON THE NUMBER WHO COMPLETED THE TEST.

NOTE: DATA ARE TO BE CONSIDERED PRELIMINARY UNTIL FURTHER NOTICE.

EMBARGOED UNTIL MSDE OFFICIAL RELEASE

CRTPR03

MARYLAND STATE DEPARTMENT OF EDUCATION
1994 MSPAP OUTCOME SCORE REPORT

DATE: 01/20/95
PAGE: 1

SCHDDL SYSTEM: STATE TOTALS
SCHOOL:
GRADE LEVEL: 05

	*DIFF	MEAN	MDN	SD	HI	LOW	NO. OF STUDENTS	PERCENTAGE WITH OUTCOME SCORES IN: 0-25 N	%	26-50 N	%	51-75 N	%	76-100 N	%
READING															
2. For Literary Experience	35	37.72	38.0	22.89	100	0	16931	6389	37.7	6436	38.0	3141	18.6	965	5.7
3. To be Informed	34	35.06	31.0	22.50	100	1	19119	8079	42.3	6997	36.6	3202	16.7	841	4.4
4. To Perform a Task	36	37.82	38.0	23.91	100	0	18960	6913	36.5	6200	32.7	4303	22.7	1544	8.1
WRITING															
1. To Inform	25	28.82	7.0	30.72	100	5	53949	36573	67.8	4345	8.1	7922	14.7	5109	9.5
2. To Persuade	30	33.82	27.0	28.89	100	2	36829	16793	45.6	7309	19.8	9640	26.2	3087	8.4
3. To Express Pers. Ideas	31	37.23	33.0	23.44	100	11	17120	5328	31.1	7248	42.3	3712	21.7	832	4.9
LANGUAGE USAGE															
1. Language in Use	34	36.31	31.0	26.81	100	2	50294	21767	43.3	13911	27.7	9172	18.2	5444	10.8
MATHEMATICS															
1. Problem Solving	34	43.42	43.0	43.66	100	1	33122	15294	46.2	5590	16.9	1526	4.6	10712	32.3
2. Communication	27	28.70	23.0	23.66	100	1	52283	28809	55.1	12584	24.1	8176	15.6	2714	5.2
3. Reasoning	33	34.60	37.0	24.66	100	2	52283	19982	38.2	19918	38.1	9466	18.1	2917	5.6
4. Connections	29	38.67	23.0	36.24	100	4	52283	26598	50.9	11727	22.4	2664	5.1	11294	21.6
5. Estimation															
6. Arithmetic Operations	33	33.25	30.0	26.01	100	5	52283	24035	46.0	14249	27.3	10460	20.0	3539	6.8
7. Number Relationships	22	22.26	15.0	21.94	100	3	33122	23702	71.6	5074	15.3	3353	10.1	993	3.0
8. Geometry	36	38.10	35.0	22.80	100	5	52283	17983	34.4	19987	38.2	9921	19.0	4392	8.4
9. Measurement	27	27.93	20.0	22.63	100	3	52283	26915	51.5	16560	31.7	6662	12.7	2146	4.1
10. Statistics	28	29.54	20.0	23.55	100	1	52283	28127	53.8	14134	27.0	8290	15.9	1732	3.3
11. Probability	26	27.67	21.0	28.68	100	1	33122	18564	56.0	7274	22.0	4151	12.5	3133	9.5
12. Patterns/Relationships	36	33.86	24.0	32.20	100	5	52283	28904	55.3	3856	7.4	12624	24.1	6899	13.2
13. Algebra	34	43.68	35.0	38.09	100	4	52283	21696	41.5	8654	16.6	9143	17.5	12790	24.5
SCIENCE															
1. Concepts of Science	31	32.39	30.0	18.44	100	4	52497	21220	40.4	22739	43.3	7251	13.8	1287	2.5
2. Nature of Science	32	32.92	32.0	19.37	100	3	52497	19637	37.4	23440	44.7	8424	16.0	996	1.9
3. Habits of Mind	26	28.98	24.0	20.74	100	3	52497	26988	51.4	16654	31.7	6296	12.0	2559	4.9
5. Processes of Science	30	31.11	30.0	17.74	100	5	52497	22805	43.4	21256	40.5	7451	14.2	985	1.9
6. Applications of Science	32	34.30	40.0	22.64	100	3	52497	19302	36.8	24185	46.1	6357	12.1	2653	5.1
SOCIAL STUDIES															
1. Political Systems	32	33.29	27.0	23.47	100	3	36177	14793	40.9	12721	35.2	6825	18.9	1838	5.1
2. Peoples/Nation & World	28	29.70	27.0	21.93	100	3	33423	16626	49.7	10559	31.6	4933	14.8	1305	3.9
3. Geography	33	34.53	30.0	21.15	100	4	52732	20240	38.4	17460	33.1	12674	24.0	2358	4.5
4. Economics	26	27.73	25.0	21.63	100	2	35864	19104	53.3	9470	26.4	6194	17.3	1096	3.1
5. Skills and Processes	33	34.41	32.0	22.59	100	4	52732	19278	36.6	20932	39.7	10131	19.2	2391	4.5
6. Valuing Self and Others	35	35.44	31.0	23.21	100	1	52732	18813	35.7	19962	37.9	10888	20.6	3069	5.8
7. Understand./Attitudes	32	34.15	24.0	24.77	100	3	52732	27040	51.3	13999	26.5	8529	16.2	3164	6.0

*DIFF = DIFFICULTY

NOTE: DATA ARE TO BE CONSIDERED PRELIMINARY UNTIL FURTHER NOTICE.

EMBARGOED UNTIL MSDE OFFICIAL RELEASE

CRTPR07 MARYLAND STATE DEPARTMENT OF EDUCATION DATE: 01/20/95
1994 MSPAP OUTCOME SCALE SCORE REPORT PAGE: 1

SCHOOL SYSTEM: STATE TOTALS
SCHOOL:
GRADE LEVEL: 05

	N	MEAN	STD	PERCENTILES 5th	25th	MDN	75th	95th
READING								
2. For Literary Experience	16931	507.6	47.0	439	484	511	533	577
3. To be Informed	19119	506.1	49.7	375	486	509	534	568
4. To Perform a Task	18960	505.6	50.3	375	479	515	535	566
WRITING								
1. To Inform	53949	487.9	58.2	440	440	440	552	595
2. To Persuade	36829	494.7	57.3	440	440	493	548	595
3. To Express Pers. Ideas	17120	501.6	53.6	440	440	484	560	595
LANGUAGE USAGE								
1. Language in Use	50294	514.1	54.0	425	474	516	551	607
MATHEMATICS								
1. Problem Solving	33122	511.8	110.6	400	400	535	650	650
2. Communication	52283	501.6	65.7	400	480	509	542	591
3. Reasoning	52283	504.8	62.8	400	466	516	540	596
4. Connections	52283	510.8	94.2	400	400	504	587	650
5. Estimation								
6. Arithmetic Operations	52283	498.1	75.5	400	400	512	564	613
7. Number Relationships	33122	492.3	74.7	400	400	508	555	598
8. Geometry	52283	512.0	65.2	400	471	515	553	629
9. Measurement	52283	504.5	70.2	400	453	502	556	617
10. Statistics	52283	505.6	74.2	400	468	500	553	619
11. Probability	33122	493.5	79.4	400	400	514	548	616
12. Patterns/Relationships	52283	487.3	86.6	400	400	493	557	650
13. Algebra	52283	514.3	99.7	400	400	518	594	650
SCIENCE								
1. Concepts of Science	52497	506.2	58.7	378	471	512	545	594
2. Nature of Science	52497	505.0	64.9	375	468	515	554	611
3. Habits of Mind	52497	501.7	67.4	375	471	507	545	604
5. Processes of Science	52497	505.0	60.6	375	469	516	545	594
6. Applications of Science	52497	504.7	70.9	375	443	535	538	617
SOCIAL STUDIES								
1. Political Systems	36177	503.7	62.8	400	456	500	541	606
2. Peoples/Nation & World	33423	502.7	61.2	400	456	510	545	596
3. Geography	52732	505.6	57.9	400	471	505	550	597
4. Economics	35864	500.8	65.6	400	478	510	543	608
5. Skills and Processes	52732	504.0	60.1	400	461	510	544	594
6. Valuing Self and Others	52732	503.9	63.4	400	470	519	560	615
7. Understand./Attitudes	52732	503.1	67.3	400	480	491	539	615

NOTE: DATA ARE TO BE CONSIDERED PRELIMINARY UNTIL FURTHER NOTICE.

EMBARGOED UNTIL MSDE OFFICIAL RELEASE

Table 2
MSPAP Report Elements and Descriptions

REPORT	ELEMENTS	DESCRIPTION OF REPORT
STANDARDS REPORT	Number Tested Number Absent/Excused Number Exempted Percent at Excellent Percent at Satisfactory	For a school to be at satisfactory, 70% of students must be at Level 3 or higher. For a school to be at excellent, 25% of students must be at Level 2 or higher, and the requirements for satisfactory must be met. The numerator consists of number of students at Level 3 or higher, or at Level 2 or higher. The denominator consists of all eligible test takers (all test takers plus absent/excused, but not exempt).
PROFICIENCY LEVEL AND PARTICIPATION	Number of Students in each Proficiency Level Percentages of Students in each Proficiency Level Numbers of Students in each Participation Category (e.g., absent) Total Students Accounted for by June membership	Proficiency Levels range from 1-5. Level 1 is the highest level of performance. Level 5 is the lowest level of performance. Proficiency Levels are groupings of scale scores. Scale scores range from 350 to 700. The numerator consists of number of students within a proficiency level as defined by the scale score cut score. The denominator consists of all eligible test takers only.
OUTCOME REPORT	Difficulty Index Measures of Central Tendency (Mean and Median) Measures of Variability (Standard Deviation, High and Low Scores) Total Number of Students Tested on the Outcome Percentages of Students obtaining : 0-25,26-50,51-75, or 76-100% of outcome items.	Outcome Scores range from 0 to 100%. It is the average of all score points available on an outcome across all clusters. Therefore, these are estimated scores. Outcome Scores are not directly comparable across content area outcomes unless the Difficulty Index is used.
OUTCOME SCALE SCORE REPORT	Mean and Median Outcome Scale Score Outcome Scale Score standard deviation 25th and 75th percentile range 5th and 95th percentile range	Outcome Scale Scores range from 350 to 700. They are directly comparable across outcomes within a content area.

Table 3
MSPAP Reports, Use, and Questions

REPORT	PRIMARY USE	QUESTIONS THAT CAN BE ASKED OR ANSWERED
STANDARDS REPORT	School Performance	What percent of students are at satisfactory (level 3 or above)? What percent of students are at excellent (level 2 or above)? Which content areas have the highest percentage of students at satisfactory and excellent?
PROFICIENCY LEVEL AND PARTICIPATION REPORT	School Performance and School Improvement	How are the students distributed among the proficiency levels? What percentage of eligible students took the test? How many students are absent or exempted?
OUTCOME REPORT	School Improvement	How difficult are the items creating each outcome? What is the median for the group? What is the highest and lowest score obtained? Is there at least one student who is getting all questions? Is the lowest score a zero, or is it higher? What is the percentage of students understanding less than 25% of the outcome? less than 50%, and so on?
OUTCOME SCALE SCORE REPORT	School Improvement	What is the median outcome scale score? Which proficiency level is it in? Are all of the medians in the content area similar? Is the 25th to 75th percentile range small or large? Is the 5th to 95th percentile range small or large? Using the proficiency level cut scores, are most of the students in one proficiency level or across many?

APPENDIX E

Additional MSPAP Documentation

MSPAP REPORTS

The following reports and documents on the Maryland School Performance Assessment Program (MSPAP) are available from Local Accountability Coordinators and MSDE:

MSPAP Score Reports

MSPAP Standards Report
MSPAP Disaggregated Standards Report
MSPAP Proficiency Level and Participation Report
MSPAP Disaggregated Proficiency Level Report
MSPAP Outcome Score Report
MSPAP Outcome Scale Score Report

MSPAP Documents on Score Interpretation and Use

Deriving 1992 MSPAP Scale Scores, hand-out for a presentation
MSPAP Score Interpretation Guide
MSPAP Proficiency Level Descriptions

MSPAP Technical Reports

Final Technical Report, MSPAP 1991
Technical Report, 1992 MSPAP, pre-releases edition
Technical Report, 1993 MSPAP
Technical Report, 1994 MSPAP, pre-release edition
Technical Report 1994 MSPAP, final edition pending

Documents Related to School Improvement Planning

Maryland Learning Outcomes
MSPAP Sample Tasks
MSPAP Public Release Tasks
1991 MSPAP Student Response Booklets
1992 Teacher to Teacher Talk: Student Performance on MSPAP
1993 Teacher to Teacher Talk: Student Performance on MSPAP
1994 Teacher to Teacher Talk: Student Performance on MSPAP
1993 Principal to Principal Talk
1994 Principal to Principal Talk
Scoring MSPAP: A Teacher's Guide
Instructional and Assessment Exemplars
Video on MSPAP Scoring: "Scoring Performance Assessment: Is This What You Want From Me?"

The following are short descriptions of the reports and documents on the Maryland School Performance Assessment Program (MSPAP) that are available from a Local Accountability Coordinator:

MSPAP SCORE REPORTS

MSPAP Standards Report

Indicates the number tested, and the percent of students at or above excellent and satisfactory for the state. These are available for each district and school. This report can be found in the Maryland Report Card.

MSPAP Disaggregated Standards Report

Shows the number and percentages of students by grade, content area, race, and sex. It uses the Standards definition to calculate the percentages, dividing the number of takers at a level by the number of takers plus those absent or excused. This report can be found in the Maryland Report Card.

MSPAP Proficiency Level and Participation Report

Lists the proficiency levels, the number of students at each level, and the percent of students from the total group of test takers. There is also information regarding students who participated in the test, how many completed the test, the number absent/excused, exempted, and second semester transfers. This is based on June membership only.

MSPAP Disaggregated Proficiency Level Report

Based on the actual number of test takers and then breaks down the MSPAP data by grade, race, and sex by content area for the state, districts, and schools.

MSPAP Outcome Score Report

Lists the outcomes and provides the State level outcome difficulty, the two measures of central tendency, the mean and the median. It also includes the standard deviation, the high and low scores, and the number of students who responded to that outcome. Next to the total number who took the outcome, is the number of students who obtained 0 to 25% of the outcome to the last two columns which are the number of students and the percentage of students obtaining between 76% and 100% of an outcome score.

MSPAP Outcome Scale Score Report

New format includes two measures of central tendency, the mean and median (50th percentile) on the MSPAP scale score scale which ranges from 350 to 700. In a summarized form the 5th, 25th, 50th, 75th, and 95th percentiles are reported for each outcome.

DOCUMENTS RELATED TO SCHOOL IMPROVEMENT PLANNING

Maryland Learning Outcomes

Provide information on what students should be able to do. It is the basis for the MSPAP. An example of a math outcome is students will demonstrate their ability to solve problems in mathematics including problems which are solved in a cooperative atmosphere, and problems which are solved with the use of technology.

MSPAP Sample Tasks

Sample tasks which are given to local accountability coordinators and schools to help teachers better understand what types of questions are on the MSPAP.

MSPAP Public Release Tasks

In each content area and grade retired MSPAP tasks from 1992 and 1993 are available. Each task is represented by the Student Answer Book, Student Resource Book (if appropriate), Manipulative List (if appropriate), and Examiner's Manual. The tasks also include an introductory overview including information on scoring each task and the Maryland Learning Outcomes assessed by each activity. Additionally the Scoring Tools and sample responses for each task are included as well.

1991 MSPAP Student Response Booklets

Even though science and social studies were not assessed in 1991, the 1991 MSPAP booklets are available to help teachers understand how MSPAP is set up and the manner and types of information tested in Reading, Writing, Language Usage, and Mathematics.

1992 - 1994 Teacher to Teacher Talk: Student Performance on MSPAP

A compilation of responses, from teachers who scored MSPAP, to the question, "On the basis of your experience scoring MSPAP, what are a few impressions that you would most like to share with other teachers about student performance?".

1993 - 1994 Principal to Principal Talk

A compilation of shared perceptions of principals and teachers on factors contributing to improved student and school performance on MSPAP.

Scoring MSPAP: A Teacher's Guide

Shares information on scoring including how the test is scored, how scoring tools are developed, and the role of Maryland educators in developing scoring related materials.

Instructional and Assessment Exemplars

Series of exemplars that promote performance-based instruction and assessment. The initial focus of the project will include examples that cover all mathematics and science outcomes for grades 1-8.

Video on Scoring MSPAP: "Scoring Performance Assessment: Is This What You Want From Me?"

Video on MSPAP scoring.

MSPAP DOCUMENTS ON SCORE INTERPRETATION AND USE

Deriving 1992 MSPAP Scale Scores

A handout from presentation on how scale scores are obtained from a student's scores on each assessment activity.

MSPAP Score Interpretation Guides

Helps people better understand how the scores and scales that are used in MSPAP are interpreted and used.

MSPAP Proficiency Level Descriptions

Includes all of the proficiencies, at most of the levels for each outcome. For example, when reading for literary experience at level 1 in the third grade, the third grader will be able to exhibit a comprehensive understanding of the text, and make multiple connections and extensions of meaning between elements of the author's craft and the meaning of the text.

MSPAP TECHNICAL REPORTS

All MSPAP Technical Reports provide technical information on each annual edition of MSPAP.

Final Technical Report, MSPAP 1991

Technical Report that includes the original sampling design, scoring procedures, calibration and equating information, and validity and reliability information.

Technical Report, 1992 MSPAP

Technical Report that includes issues which came up in 1992 testing, such as the use of non-parallel test forms, the inclusion of science and social studies areas, and administration problems of the test.

Technical Report, 1993 MSPAP

Technical Report that includes issues which came up in 1993 testing, such as equating.

Technical Report, 1994 MSPAP

Technical Report that includes issues which came up in 1994 testing.

SCORE INTERPRETATION GUIDE RESPONSE FORM

Suggestions for Additions, Deletions, and Revisions

Please jot down in the space below your suggestions for additions, deletions, and revisions to this guide for consideration by MSDE. We ask that you include your name and phone so that we can ask clarification questions when necessary. This information is optional.

You can mail or fax your suggestions to:

Dr. Steven Ferrara, Director of Assessment
Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201
Phone (410) 767-0081
FAX (410) 333-0052

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

optional

Name _____

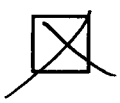
School and school system _____

Day time phone number _____

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

NOTICE

REPRODUCTION BASIS



This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐

This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").