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**ABSTRACT**

This report is designed to provide numerical data about student performance on the curriculum of the Boston (Massachusetts) Public Schools (BPS) as measured by curriculum referenced tests (CRTs). BPS Department of Educational Testing analyzed data from the 1986 CRT final exams in: reading and language arts (grades K-8), high school English (six levels), mathematics (grades 1-8), high school mathematics (nine levels), science (grades K-8), high school science (six levels), social studies (grades 3-8), U.S. History and Civics, Spanish I and II, and French I. BPS curriculum guides direct instruction in most subjects. Since each curriculum guide is matched with a curriculum referenced test, assessment of the extent to which students meet specific objectives set forth in the guides is possible. This analysis is used to identify strengths and deficits in curriculum implementation or instruction as measured by student CRT performance. Results may be used for specific intervention at the school level or for discerning school district patterns. The report contains descriptions of each instrument, the specific curriculum objectives addressed by the CRT, the student population, system strengths and weaknesses, and extensive tables presenting school-by-school analyses of percent of correct responses to each test item. (MDE)

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ED286892

**Boston Public Schools**

**QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986**

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**QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986**

**BOSTON PUBLIC SCHOOLS**

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**January 1987**

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## FOREWORD

This "Quantitative Analysis of Curriculum Effectiveness" is a new publication by the Office of Research and Development (R&D). It is designed to provide extensive numerical data on the performance of Boston Public Schools (BPS) students on our curriculum, and has been developed as part of R&D's educational accountability and planning program.

The data and analyses in this publication focus exclusively on the curriculum referenced tests (CRT's) program conducted by R&D's Department of Educational Testing. This monograph details student performance on the 1986 CRT final exams, grouped by grade level and subject area, in:

- Reading/Language Arts (Levels K-8)
- High School English (6 levels)
- Mathematics (Levels 1-8)
- High School Mathematics (9 levels)
- Science (Levels K-8)
- High School Science (6 levels)
- Social Studies (Levels 3-8)
- High School Social Studies (U.S. History and Civics)
- High School Foreign Languages (Spanish I & II, French I)

The special contribution of this analysis of CRT data is that it speaks directly to the effectiveness of BPS curricula. Classroom instruction for most subjects taught at BPS (e.g., Math, Science) is directed by curriculum guides at each grade level, which delineate specific, measurable objectives to be achieved for each strand or domain in the subject area (e.g., computation in arithmetic). Each curriculum guide, in turn, is accompanied by a matching curriculum referenced test (CRT) developed by R&D's Department of Educational Testing in collaboration with staff from the Division of Curriculum & Instruction. In essence, each curriculum objective is measured by a specific test item, and each group of objectives or curriculum strand is measured by a cluster of test items called a domain. This structure allows assessment of the effectiveness of the BPS curriculum by measuring the extent to which students have learned or "meet" the specific groups of objectives set out in the curriculum guides.

The Division of Curriculum and Instruction, and personnel at district and school levels, can apply this analysis to identify strengths and deficits in curriculum implementation or instruction --as suggested by student CRT performance-- and design finely targeted, information-driven instructional interventions at the school level. This method can also serve to identify patterns of specific strengths and deficits across schools within districts, or patterns of compounding deficits across systemwide curriculum levels. This can assist the Division of Curriculum & Instruction and community district superintendents to plan targeted remedial programs aimed at intervening strategically in the BPS curriculum.

The quantitative data provided in this publication should offer the opportunity for valuable and insightful analyses of our educational curriculum, and serve as a springboard to an intensive dialogue and concerted planning efforts by our professional personnel. It is our hope that this monograph will play a positive and constructive role in promoting organizational learning and creative school-based planning.

Yohel Camayd-Freixas, Ph.D.  
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Department of Educational Testing

January 1987

QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS

BOSTON PUBLIC SCHOOLS

1986

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## ACKNOWLEDGEMENTS

This publication, Quantitative Analysis of Curriculum Effectiveness: 1986, is a new report. It contains a tremendous amount of information on student performance on each of the final Curriculum Referenced Tests administered in the spring of 1986. For the first time, the system is provided with information on each of the items at the system, district, and school levels. This discrete information will provide the base on which to build improved and more focused instructional initiatives.

Given the magnitude of the endeavor, a number of departments were involved in the publication. From the Office of Information Systems: Albert Lau provided the leadership in the data processing effort, and Arlene Thompson and Christopher Murray handled most of the programming and data processing. From the Office of Curriculum and Instruction: the program directors gave guidance in examining the curriculum objectives. From the Department of Educational Testing a very special thanks is due to Edwina Anderson who contributed the layout and design for this publication and coordinated the printing process.

This document is the result of collaborative efforts of a number of departments and to them the Office of Research and Development dedicates this publication.

Yohel Camayd-Freixas, Ph.D.  
Office of Research and Development

Maryellen Donahue  
Department of Educational Testing

January 1987



## HOW TO READ THIS REPORT

This document is organized by subject area and, within each subject area, analyses of curriculum referenced test (CRT) data is conducted by grade level. The sections for each grade level are described below:

### CRT Summary

For each CRT test there is a narrative summary page that describes the CRT instrument and the specific curriculum strands addressed by the CRT, the population to whom the test was administered, and outlines analyses of performance strengths and weaknesses in the curriculum made evident by these data. In this latter section, an overview of student achievement is provided from a system-wide perspective. District and school personnel are encouraged to apply similar analyses to their individual district or school.

### CRT and Curriculum Objectives Correlation Sheet

This sheet lists the objectives tapped by each item within each domain for tests at grade levels 3 and above. The Kindergarten, Grade 1, and Grade 2 levels do not have this item-by-item breakdown because teachers report item scores aggregated by each domain or curriculum strand, and single item/objective data is thus not available. The young age of students taking this test necessitates their writing directly in the test booklets, rather than on separate answer sheets. Teachers must then hand-score the booklets and record the students' scores for each subtest on data collection sheets.

### Data Pages (Levels K-2)

For levels K-2 the school code and name are listed on the left-hand side of the upright page, and all the curriculum strand/domain titles are listed on the top of each column. To facilitate explanation of how this table may be analyzed, a portion of the Mathematics-Level 1 test is reproduced in page viii and analyzed below.

In this example it can be seen that at the Ohrenberger School, the average number of items that Grade 1 students answered correctly in the Numbers/Numeration domain was 8 out of a possible 10 items; in Fractions/Money the average

was 7 out of 10 items; in Measurement/Geometry the average was 8 out of 10 items; and in Computation the average was 16 out of 20 items. When comparing the average scores of the Ohrenberger school to those of District E (the second line from the bottom), we can see that Grade 1 students at that school performed, on average, as well as other students in the District in both the Fractions/Money domain and in Measurement/Geometry; and better than average in domains such as Numbers/Numeration and Computation. Comparing the Ohrenberger's average scores in these domains to those of the system (the bottom line), one can see that the students in Grade 1 at that school performed, on average, as well as other students in the system in both Fractions/Money and Measurement/Geometry, and better than other students in the system in both Numbers/Numeration and Computation.

SCHOOL CODE	SCHOOL NAME	MATHEMATICS			
		NUMB./ NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)
4230	HEMIGAN ELEMENTARY	07	06	00	14
4271	FURLEY ELEMENTARY	07	08	00	16
4360	MCKAY ELEMENTARY	08	07	07	14
4410	OHRENBERGER ELEMENTARY	08	07	00	14
4580	FROTTER ELEMENTARY	07	07	00	15
4610	HARACE MANN SCHOOL	03	06	00	09
4620	JACKSON MANN ELEMENTARY	07	07	00	14
013E		07	07	00	15
013A		07	07	00	15
013B		07	07	00	15
013C		07	07	00	15
013D		08	08	09	17
013E		07	07	00	15
5101	SYSTEM WIDE TOTALS	07	07	00	15

Data Page (Levels 3 through High School)

For grade levels 3 and higher, data are available for each curriculum objective and CRT item. These data are outlined in the "Data Page". The school codes are listed on the left side of the upright page, and individual CRT item numbers are across the top of the page; the last column indicates the CRT total on all items for the school. This data sheet should be used in conjunction with the preceding page that lists the correlation of the CRT items with the curriculum objectives. These comparisons should help determine which particular items or curriculum domain students in the school are mastering or not mastering, as well as to identify any pattern of curriculum performance that may be typical for the given school or district. To support this explanation, portions of the printout and the objectives correlation sheets have been reproduced below, along with an example:

Printout Sample

SCHL	42	43	44	45	TOTA
2170	71	68	72	55	69
2170	90	75	76	62	76
4570	90	71	66	47	71
2060	60	64	57	55	61
2070	88	65	77	56	71
2240	73	68	62	59	71
DISA	80	69	71	57	71
2110	84	72	77	72	74
2170	69	61	67	54	66
2140	75	75	76	52	73
2200	83	64	73	56	74
2950	74	66	62	59	73
DISH	76	68	70	57	72
DISA	80	69	71	57	71
DISH	76	68	70	57	72
DISC	79	68	74	52	70
DISH	77	67	70	54	71
DIST	73	65	66	46	69
SDOT	77	67	71	53	71

Objectives Correlation Sample

B.4	Identifying the sequence	6	READING
C.5	Writer's purpose	7	
C.7	Inferring unstated points	7	
C.8	Interpreting figurative language	8	
D.3	Fact/opinion	9	
B.3	Details	0	
C.1	Fiction/non-fiction	1	
C.9	Connotation of words & tone of passage	2	
D.2	Predicting further outcome	3	
D.7	Identifying irrelevant information	4	

In this example, by reading down the column labeled 42, it can be seen that for CRT item # 42 (fiction/non-fiction) there is a range in the percent of students answering the item correctly: At the Taft (school #2170) and the Tobin (#4570) 90% of the students answered this item correctly, whereas, at the Lewis (#2060) only 60% of their students answered it correctly. Review of the Objectives Correlation Sample shows that item #42 measures objective "C.1", which taps the discrimination between fiction and non-fiction. Educationally, this suggests that students at the Lewis School may need additional review in discriminating between fiction and non-fiction, while those at the Taft and at the Tobin know those skills well. Similarly, the last column labeled "TOTAL" shows the average percent of CRT items answered correctly. Looking at the five middle schools listed for Area B, it can be seen that the Shaw (#2110) and the Thompson (#2200) had the highest average scores (74%), and both of these schools scored a bit above the District B average (i.e., 72%) as well as the system average (71%), although not by much; these schools are performing similarly and well in this particular CRT for this grade level.

ELEMENTARY SCHOOLS BY DISTRICT  
AS LISTED ON PRINTOUTS

DISTRICT A

4160 GARDNER  
4170 GARFIELD  
4173 WINSHIP  
4220 HAMILTON  
4221 BALDWIN  
4570 TOBIN  
4571 FARRAGUT  
4010 AGASSIZ  
4240 ELLIS  
4241 HIGGINSON  
4270 J. KENNEDY  
4310 LONGFELLOW  
4311 MANNING  
4370 MENDELL  
4371 FULLER  
4430 PARKMAN

DISTRICT B

4030 BEETHOVEN  
4031 KILMER  
4081 BATES  
4082 MOZART  
4290 LEE  
4560 SUMNER  
4561 PHILBRICK  
4690 MATTAHUNT  
4070 CHITTICK  
4080 CONLEY  
4151 TAYLOR  
4190 E. GREENWOOD  
4192 F. ROOSEVELT  
4200 GREW  
4201 CHANNING  
4670 P.A. SHAW

DISTRICT C

4051 DICKERMAN  
4130 S. GREENWOOD  
4131 ENDICOTT  
4140 EVERETT  
4150 FIFIELD  
4250 GOLLAND  
4340 MARSHALL  
4350 MATHER  
4390 KENNY  
4391 O'HEARN  
4400 MURPHY  
4550 STONE  
4022 PERKINS  
4052 WINTHROP  
4100 DEVER  
4120 EMERSON  
4121 MASON  
4530 RUSSELL  
4531 CLAP  
4590 TYMAN  
4592 PERRY  
4630 CONDON

DISTRICT D

4260 HURLEY  
4280 KENT  
4283 WARREN-PRESOTT  
4381 ELIOT  
4640 BLACKSTONE  
4650 QUINCY  
4062 BRADLEY  
4321 ALIGHIERI  
4322 OTIS  
4361 ADAMS  
4541 P. KENNEDY  
4543 O'DONNELL

DISTRICT E

4053 HERNANDEZ  
4061 GUILD  
4113 HALE  
4210 HALEY  
4230 HENNIGAN  
4271 J. CURLEY  
4360 MCKAY  
4410 OHRENBERGER  
4580 TROTTER  
4610 HORACE MANN  
4620 JACKSON-MANN

MIDDLE SCHOOLS BY DISTRICT  
AS LISTED ON PRINTOUTS

DISTRICT A

2130 EDISON  
2170 TAFT  
4570 TOBIN  
2060 LEWIS  
2070 M. CURLEY  
2240 T. ROOSEVELT

DISTRICT B

2110 R. SHAW  
2120 LEWENBERG  
2140 IRVING  
2200 THOMPSON  
2950 ROGERS

DISTRICT C

2030 CLEVELAND  
2080 HOLMES  
2180 WILSON  
2090 GAVIN  
2190 MCCORMACK  
2260 DEARBORN

DISTRICT D

2010 EDWARDS  
2040 TIMILITY  
2050 BARNES

DISCTRICT E

2100 KING  
2270 MACKEY  
2980 WHEATLEY  
4360 MCKAY (Gr. 6)

HIGH SCHOOLS BY DISTRICT  
AS LISTED ON PRINTOUTS

DISTRICT A

1040 BRIGHTON  
1110 JAMAICA PLAIN

DISTRICT B

1250 WEST ROXPURY  
1100 HYDE PARK

DISTRICT C

1060 DORCHESTER  
1120 BURKE  
1160 SOUTH BOSTON

DISTRICT D

1050 CHARLESTOWN  
1070 EAST BOSTON

DISTRICT E

1080 BOSTON ENGLISH  
1190 BOSTON HIGH  
1210 MADISON PARK  
1240 UMANA TECH.

**READING/LANGUAGE ARTS  
ELEMENTARY AND MIDDLE**

## READING/LANGUAGE ARTS - LEVEL K

### INSTRUMENT AND POPULATION DESCRIPTION

The test consists of three parts measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension. The Activities Checklist (Part I), worth 30 points, is primarily designed to address speaking and listening objectives. The Small Group Test (Part II), worth 40 points, is a paper and pencil test designed to assess a child's proficiency in writing, phonics, and study skills. The Individual Test (Part III), worth 30 points, is designed to assess student proficiency in alphabet skills and understanding at different levels of comprehension.

The population includes all students enrolled in Kindergarten II who were administered an on-level test and for whom valid scores were reported.

### SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of students taking this test, they responded in some cases orally and in other cases by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and tabulated the oral responses and recorded the students' scores for each of the three sections on data collection sheets, thus, individual item data for analysis are not available. Overall, students performed well on the test, with a system-wide average score of 83%. On the Activities Checklist, the average score was 26 points out of a possible 30. On the Small Group Test, the average score was 34 points out of a possible 40. On the Individual Test the average score was 23 points out of a possible 30 points.

12/23/86

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS

TECR97D02

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	LEVEL KII INDIVIDUAL TEST (OUT OF 30)	// //
4160	GARDNER ELEMENTARY	26	35	23	/
4170	GARFIELD ELEMENTARY	24	33	21	/
4173	WINSHIP ELEMENTARY	26	33	23	/
4220	HAMILTON ELEMENTARY	25	35	22	/
4221	BALDWIN ELEMENTARY	21	30	19	/
4570	TOBIN ELEMENTARY	27	33	21	/
45.1	FARRAGUT ELEMENTARY	26	37	23	/
4010	AGASSIZ ELEMENTARY	27	36	25	/
4240	ELI IS ELEMENTARY	26	33	17	/
4241	HIGGINSON ELEMENTARY	21	34	22	/
4270	J KENNEDY ELEMENTARY	27	36	25	/
4310	LONGFELLOW ELEMENTARY	28	39	28	/
4311	MANNING ELEMENTARY	27	38	21	/
4370	MENDELL ELEMENTARY	23	32	22	/
4371	FULLER ELEMENTARY	27	32	17	/
4430	PARKMAN ELEMENTARY	27	36	23	/
DISA		26	34	22	/
4030	BEETHOVEN ELEMENTARY	28	32	18	/
4031	KILMER ELEMENTARY	28	37	26	/
4081	BATES ELEMENTARY	25	33	20	/
4082	MOZART ELEMENTARY	16	32	20	/
4290	LEE ELEMENTARY	24	33	19	/
4560	SUMNER ELEMENTARY	26	32	20	/
4561	PHILBRICK ELEMENTARY	29	37	21	/

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BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS - LEVEL KII

TECR97D02

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4690	MATTAHUNT ELEMENTARY	28	36	26	/
4070	CHITTICK ELEMENTARY	26	32	23	/
4080	CONLEY ELEMENTARY	30	37	30	/
4151	TAYLOR ELEMENTARY	27	35	26	/
4190	E GREENWOOD ELEMENTARY	25	33	26	/
4192	F ROOSEVELT ELEMENTARY	27	36	27	/
4200	GREW ELEMENTARY	26	35	22	/
4201	CHANNING ELEMENTARY	28	36	27	/
4670	P A SHAW ELEMENTARY	21	32	20	/
DISB		26	34	23	/
4051	DICKERMAN ELEMENTARY	27	35	21	/
4130	S GREENWOOD ELEMENTARY	27	35	25	/
4131	ENDICOTT ELEMENTARY	28	39	27	/
4140	EVERETT ELEMENTARY	24	25	24	/
4150	FIFIELD ELEMENTARY	24	35	22	/
4250	HOLLAND ELEMENTARY	29	35	24	/
4340	MARSHALL ELEMENTARY	25	35	23	/
4350	MATHER ELEMENTARY	25	33	22	/
4390	KENNY ELEMENTARY	29	37	26	/
4391	OHEARN ELEMENTARY	29	36	26	/
4400	MURPHY ELEMENTARY	29	37	24	/
4550	STONE ELEMENTARY	24	34	22	/
4022	PERKINS ELEMENTARY	26	35	24	/
4052	WINTHROP ELEMENTARY	23	33	19	/

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BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS - LEVEL KJJ

11 CR97002

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4100	DEVER ELEMENTARY	25	31	23	/
4120	EMERSON ELEMENTARY	22	25	22	/
4121	MASON ELEMENTARY	24	35	21	/
4530	RUSSELL ELEMENTARY	27	36	27	/
4531	CLAP ELEMENTARY	29	36		/
4590	TYNAN ELEMENTARY	27	38	28	/
4592	PERRY ELEMENTARY	24	35	26	/
4630	CONDON ELEMENTARY		34	24	/
DISC		26	34	24	/
4280	KENT ELEMENTARY	28	33	19	/
4283	WPRESCOTT ELEMENTARY	25	34	24	/
4381	ELIOT ELEMENTARY	26	35	23	/
4640	BLACKSTONE ELEMENTARY	25	32	20	/
4650	QUINCY ELEMENTARY	23	34	23	/
4062	BRADLEY ELEMENTARY	27	34	20	/
4321	ALIGHIERI ELEMENTARY	28	37	27	/
4322	OTIS ELEMENTARY	28	36	25	/
4361	ADAMS ELEMENTARY	28	36	22	/
4541	P KENNEDY ELEMENTARY	26	34	20	/
4543	ODONNELL ELEMENTARY	26	33	22	/
DISD		26	34	22	/
4061	GUILD ELEMENTARY	27	37	24	/
4113	HALE ELEMENTARY	26	35	17	/
4210	HALEY ELEMENTARY	28	35	22	/

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BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS - LEVEL KII

TFCR97D02

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4230	HENNIGAN ELEMENTARY	23	33	22	/
4271	CURLEY ELEMENTARY	29	35	24	/
4360	MCKAY ELEMENTARY	27	35	24	/
4410	OHRENBERGER ELEMENTARY	27	36	26	/
4580	TROTTER ELEMENTARY	29	37	27	/
4610	HORACE MANN SCHOOL	23	29	18	/
4620	JACKSON MANN ELEMENTARY	27	35	25	/
DISE		27	35	24	/
DISA		26	34	22	/
DISB		26	34	23	/
DISC		26	34	24	/
DISD		26	34	22	/
DISE		27	35	24	/
STOT	SYSTEM WIDE TOTALS	26	34	23	/

## READING/LANGUAGE ARTS - LEVEL 1

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills/Language Structure (10 items), Literal Comprehension (8 items), Interpretive Comprehension (1 item), Evaluative Comprehension (4 items), and Vocabulary (12 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the scores for the subtests on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 75%. On the Writing portion the average score was 21 out of a possible 30 points. On the Dictation section the average score was 7 out of a possible 10 points. In Study Skills/Language Structure the average score was 9 out of a possible 10 points. In the Listening section the average score was 14 out of a possible 20 points and in Reading the average was 24 out of a possible 30 points. Students appear to be mastering the objectives in Study Skills/Language Structure, but performance is weaker in the areas of Listening and Reading.

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BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 READING/LANGUAGE ARTS LEVEL 1

TECR98002

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRJC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4690	MATTAHUNT ELEMENTARY	20	07	08	05	10
4070	CHITTICK ELEMENTARY	25	07	09	06	12
4080	CONLEY ELEMENTARY	20	09	11	06	11
4151	TAYLOR ELEMENTARY	24	07	09	06	11
4192	F ROOSEVELT ELEMENTARY	18	06	08	07	09
4200	GREW ELEMENTARY	21	08	09	11	16
4201	CHANNING ELEMENTARY	19	06	08	07	11
4670	P A SHAW ELEMENTARY	24	14	11	06	11
DISB		21	07	09	07	12
4051	DICKERMAN ELEMENTARY	18	10	08	05	11
4130	S GREENWOOD ELEMENTARY	20	06	08	05	11
4131	ENDICOTT ELEMENTARY	18	06	08	05	11
4140	EVERETT ELEMENTARY	20	05	08	06	10
4150	FIFIELD ELEMENTARY	19	10	10	06	11
4250	HOLLAND ELEMENTARY	21	05	08	05	09
4350	MATHER ELEMENTARY	13	05	08	05	09
4390	KENNY ELEMENTARY	23	07	09	06	11
4391	UHEARN ELEMENTARY	21	06	08	06	10
4400	MURPHY ELEMENTARY	16	05	08	05	10
4550	STONE ELEMENTARY	21	06	08	07	12
4022	PERKINS ELEMENTARY	17	06	08	13	16
4052	WINTHROP ELEMENTARY	27	09	09	08	13
4100	DEVER ELEMENTARY	23	07	08	06	12
4120	EMERSON ELEMENTARY	21	05	08	05	09

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4160	GARDNER ELEMENTARY	20	08	09	08	12
4170	GARFIELD ELEMENTARY	22	07	09	06	10
4173	WYNSHIP ELEMENTARY	22	08	08	07	11
4220	HAMILTON ELEMENTARY	18	05	07	04	10
4221	BALDWIN ELEMENTARY	23	06	09	06	11
4570	TOBIN ELEMENTARY	18	06	09	07	12
4571	FARRAGUT ELEMENTARY	26	07	08	07	12
4010	AGASSIZ ELEMENTARY	19	08	10	05	10
4240	ELLIS ELEMENTARY	10	05	08	06	11
4241	HIGGINS, ' ELEMENTARY	21	06	09	07	12
4270	J KENNEDY ELEMENTARY	23	07	08	06	11
4310	LYNGFELLOW ELEMENTARY	25	06	08	05	10
4311	MANNING ELEMENTARY	24	07	09	08	12
4370	MENDELL ELEMENTARY	25	09	09	06	12
4371	FULLER ELEMENTARY	21	13	11	06	11
4430	PARKMAN ELEMENTARY	21	07	09	08	13
DISA		21	07	09	06	11
4030	BEETHOVEN ELEMENTARY	26	06	09	07	11
4031	KILMER ELEMENTARY	24	06	08	06	11
4081	BATES ELEMENTARY	24	07	09	07	11
4082	MOZART ELEMENTARY	17	07	09	09	15
4297	LEE ELEMENTARY	25	05	09	06	11
4560	SUMNER ELEMENTARY	19	06	09	06	11
4561	PHILBRICK ELEMENTARY	20	06	08	06	11

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4121	MASON ELEMENTARY	22	05	09	08	13
4530	RUSSELL ELEMENTARY	23	07	09	07	12
4531	CLAP ELEMENTARY	17	05	09	05	12
4590	TYVAN ELEMENTARY	25	07	09	07	12
4592	PERRY ELEMENTARY	23	05	08	05	10
4630	CONDON ELEMENTARY	19	06	08	06	11
01SC		20	06	08	06	11
4280	KENT ELEMENTARY	20	07	09	08	14
4283	WPRESCOTT ELEMENTARY	22	09	09	06	12
4381	ELIOT ELEMENTARY	21	07	09	06	12
4640	BLACKSTONE ELEMENTARY	19	06	08	09	15
4650	QUINCY ELEMENTARY	19	05	08	06	11
4062	BRALEY ELEMENTARY	24	05	09	07	11
4321	ALIGHIERI ELEMENTARY	22	07	09	09	14
4322	OTIS ELEMENTARY	17	06	09	08	12
4361	ADAMS ELEMENTARY	27	08	09	06	13
4541	P. KENNEOY ELEMENTARY	26	07	09	07	13
4543	ODONVILL ELEMENTARY	25	08	09	07	12
0150		20	07	09	07	13
4053	HERNANDEZ ELEMENTARY	26	24	17	18	12
4061	GUILD ELEMENTARY	24	07	09	08	10
4113	HALE ELEMENTARY	22	06	09	07	11
4210	HALEY ELEMENTARY	18	06	09	08	12
4230	HEWIGAN ELEMENTARY	23	09	09	07	09

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BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 READING/LANGUAGE ARTS LEVEL 1

TEC R98D02

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4271	CURLEY ELEMENTARY	24	07	09	07	12
4360	MCKAY ELEMENTARY	19	06	08	07	10
4410	OHRENBERGER ELEMENTARY	15	06	09	07	11
4580	TROTTER ELEMENTARY	23	06	08	06	11
4610	MORACE MANN SCHOOL	19	10	05	03	05
4620	JACKSON MANN ELEMENTARY	21	12	08	05	10
DISE		21	09	09	08	11
OISA		21	07	09	06	11
DISB		21	07	09	07	12
DISC		20	06	08	06	11
DISO		20	07	09	07	13
DISE		21	09	09	08	11
STOT	SYSTEM WIDE TOTALS	21	07	09	07	12



## READING/LANGUAGE ARTS - LEVEL 2

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Study/Skills/Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (5 items), Evaluative Comprehension (8 items), and Vocabulary (5 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in Grade 2 who were administered an on-level test and for whom valid scores were reported.

### SYSTEM STRENGTHS AND WEAKNESSES

The young age of the students taking these tests necessitated their writing directly in the test booklets, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 78%. On the Writing portion the average score was 23 out of a possible 30 points. On the Dictation section the average score was 6 out of a possible score of 10. On the Study Skills/Language Arts section the average score was 7 out of a possible 10 points. The average score on the Listening section was 14 out of a possible 20 points and on the Reading portion the average was 28 out of a possible 40 points. Students appear to be functioning well in Writing, Dictation, and Study Skills/Language Structure, but are experiencing some difficulty with the comprehension objectives that are tapped in the Listening and Reading sections of the test.

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BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS LEVEL 2

TECR100002

SCHOOL CODE	SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4160	GARDNER ELEMENTARY		26	07	07	08	16
4170	GARFIELD ELEMENTARY		25	08	08	07	15
4173	WINSHIP ELEMENTARY		27	08	08	08	14
4220	HAMILTON ELEMENTARY		21	06	07	08	17
4221	BALDWIN ELEMENTARY		23	05	08	06	13
4570	TOBIN ELEMENTARY		22	07	07	08	15
4571	FARRAGUT ELEMENTARY		23	06	07	07	13
4010	AGASSIZ ELEMENTARY		24	07	09	07	13
4240	ELLIS ELEMENTARY		23	05	06	06	13
4241	HIGGINSON ELEMENTARY		24	07	07	07	14
4270	J KENNEDY ELEMENTARY		25	07	08	07	13
4310	LONGFELLOW ELEMENTARY		17	05	06	05	09
4311	MANNING ELEMENTARY		26	07	09	08	17
4370	MENOFFLL ELEMENTARY		25	07	08	07	14
4371	FULLER ELEMENTARY		24	08	07	06	14
4430	PARKMAN ELEMENTARY		26	07	09	08	16
015A			24	06	07	07	14
4030	BEETHOVEN ELEMENTARY		25	07	07	07	14
4031	KILMER ELEMENTARY		28	07	08	08	15
4081	RATTS ELEMENTARY		26	06	07	07	13
4082	MOZART ELEMENTARY		26	08	08	07	16
4290	LEFF ELEMENTARY		25	07	09	08	16
4560	SUMNER ELEMENTARY		25	06	07	07	14

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BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
READING/LANGUAGE ARTS LEVEL 2

TECR100002

SCHOOL CODE	SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4561	PHILBRICK ELEMENTARY		23	05	07	08	17
4690	MATTAHUNT ELEMENTARY		21	05	07	07	13
4070	CHITTICK ELEMENTARY		28	08	09	0	16
4080	CONLEY ELEMENTARY		17	06	06	05	11
4151	TAYLOR ELEMENTARY		21	07	07	07	14
4192	F ROOSEVELT ELEMENTARY		25	06	08	07	16
421	GREW ELEMENTARY		23	07	07	07	14
4201	CHANNING ELEMENTARY		21	06	08	07	14
4670	P A SHAW ELEMENTARY		21	07	07	06	13
0158			23	06	07	07	14
4051	DICKERMAN ELEMENTARY		23	07	08	06	13
4130	S GREENWOOD ELEMENTARY		21	04	06	05	08
4131	ENOICOTT ELEMENTARY		23	07	07	07	14
4140	EVERETT ELEMENTARY		20	05	05	06	14
4150	FIFIELD ELEMENTARY		22	07	08	07	14
4250	HOLLAND ELEMENTARY		21	06	07	08	14
4340	MARSHALL ELEMENTARY		24	06	06	07	11
4350	MATHER ELEMENTARY		23	06	08	08	13
4390	KENNY ELEMENTARY		22	07	07	07	16
4391	OHFARN ELEMENTARY		25	07	07	07	15
4400	MURPHY ELEMENTARY		25	07	07	08	15
4550	STONE ELEMENTARY		25	07	07	07	16
4022	PERKINS ELEMENTARY		26	07	07	07	16

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BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 READING/LANGUAGE ARTS LEVEL 2

TECR100002

SCHOOL CODE	SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4052	WINTHRDP ELEMENTARY		24	06	09	08	16
4100	DEVER ELEMENTARY		22	07	07	07	14
4120	EMERSON ELEMENTARY		22	07	08	07	15
4121	MASON ELEMENTARY		25	05	07	08	15
4530	RUSSELL ELEMENTARY		25	07	07	07	16
4531	CLAP ELEMENTARY		26	08	06	09	17
4590	TYNAM ELEMENTARY		28	07	08	07	16
4592	PERRY ELEMENTARY		24	07	09	08	15
4630	CONDON ELEMENTARY		24	07	08	08	14
DISC			23	06	07	07	14
4280	KENT ELEMENTARY		22	05	08	07	16
4283	WPRESCOTT ELEMENTARY		24	09	09	07	15
4381	ELIOT ELEMENTARY		22	07	08	07	15
4640	BLACKSTONE ELEMENTARY		23	06	08	06	13
4650	QUINCY ELEMENTARY		23	06	07	08	14
4062	BRADLEY ELEMENTARY		29	05	07	08	14
4371	ALIGHIERI ELEMENTARY		20	06	06	07	13
4322	OTIS ELEMENTARY		21	06	07	07	15
4261	ADAMS ELEMENTARY		25	08	08	09	16
4541	P. KENNEDY ELEMENTARY		26	07	07	08	16
4543	DONNELL ELEMENTARY		25	06	07	07	15
DISC			23	07	08	07	14
4053	HERNANDEZ ELEMENTARY		26	06	06	07	13

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BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 READING/LANGUAGE ARTS LEVEL 2

TECR100002

SCHOOL CODE	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4061	GUILD ELEMENTARY		26	07	07	07	14
4113	HALE ELEMENTARY		24	07	07	07	15
4210	HALFY ELEMENTARY		28	07	07	08	16
4230	HENNIGAN ELEMENTARY		26	07	07	06	12
4271	CURLEY ELEMENTARY		20	06	08	08	14
4360	HCKAY ELEMENTARY		24	05	07	06	11
4410	OHRENBERGER ELEMENTARY		25	07	06	07	14
4580	TROTTER ELEMENTARY		23	06	07	07	15
4610	HORACE MANN SCHOOL		23	10	06	06	10
4620	JACKSON MANN ELEMENTARY		24	07	07	06	12
DISE			24	07	07	07	13
OISA			24	06	07	07	14
OISR			23	06	07	07	14
DISC			23	06	07	07	14
DISD			23	07	08	07	14
DISE			24	07	07	07	13
STOT	SYSTEM WIDE TOTALS		23	06	07	07	14

## SYSTEM SUMMARY ANALYSIS

### READING/LANGUAGE ARTS

#### LEVELS 3-8

#### DESCRIPTION OF INSTRUMENTS

Each test for Levels 3-7 is comprised of multiple choice items measuring selected objectives in the curriculum strands of Study Skills, Language Structure, Literal Comprehension, Interpretive Comprehension, Evaluative Comprehension, and Vocabulary. In addition there are Dictation (Gr. 3-5) and Writing portions (Gr. 3-7) that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The Level 8 test is a fifty-five item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

#### DESCRIPTION OF CHART

On the following page a chart is provided that identifies problematic reading and vocabulary items and corresponding objectives at each level. The items identified are those which fewer than 60% of the students answered correctly.

#### GENERAL TRENDS

Generally, performance is good on the Literal Comprehension, Vocabulary, and Study Skills objectives with approximately seventy to eighty percent of the students answering the items correctly. However, performance tends to decrease in the items that measure Interpretive and Evaluative Comprehension and Language Structure. In these domains there is a greater percentage of items answered incorrectly by students.

CURRICULUM REFERENCED TEST ANALYSIS  
1985 - 1986  
DEPARTMENT OF EDUCATIONAL TESTING  
READING/LANGUAGE ARTS Grades 3 - 8

LEVEL	ITEM #	% ANSWERING CORRECTLY	OBJECTIVE NUMBER	OBJECTIVE DESCRIPTION
3	25	51%	D.3	fact/opinion
	30	58%	C.4	inferring cause/effect
	49	49%	D.3	fact/opinion
	50	52%	D.3	fact/opinion
4	23	58%	C.5	main plot/subplot
	25	52%	D.3	fact/opinion
	27	57%	D.3	fact/opinion
	29	43%	B.3	details
	42	51%	C.1	fiction/non-fiction
	44	34%	C.5	main plot/subplot
5	21	48%	C.2	key points
	22	43%	C.3	inferring traits, motives
	23	56%	C.4	inferring cause/effect
	33	52%	C.1	fiction/non-fiction
	51	50%	C.4	inferring cause/effect
	52	56%	C.3	inferring traits, motives
	53	51%	D.2	predicting further outcome
	54	38%	B.2	main idea
	56	43%	E.2	synonyms
	58	42%	E.2	antonyms
	59	56%	E.2	antonyms
	60	58%	E.3	word meanings
	61	59%	E.3	word meanings
64	59%	E.4	homonyms	
6	3	41%	C.4	inferring cause/effect
	28	51%	E.2	antonyms
	35	50%	E.4	homonyms
	36	57%	B.4	identifying sequence
	43	51%	C.4	inferring cause/effect
7	3	56%	C.2	key points
	28	58%	E.2	antonyms
	37	56%	C.6	writer's purpose
	45	53%	D.7	irrelevant information
8 *	5	37%	N.A.	meaning of words in sentence
	6	35%	N.A.	writer's purpose
	10	59%	N.A.	fact/opinion
	11	59%	N.A.	sequence of events
	12	34%	N.A.	drawing conclusions
	18	50%	N.A.	writer's purpose
	19	52%	N.A.	meaning of words in sentence
	25	59%	N.A.	fact/opinion
	40	33%	N.A.	drawing conclusions
	45	58%	N.A.	main idea, supp. details
	50	57%	N.A.	drawing conclusions

\* Basic Skills Test

## READING/LANGUAGE ARTS - LEVEL 3

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (5 items), Evaluative Comprehension (9 items), Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing 10 items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score on the items of 80%. Generally, students appear to be mastering the objectives in Study Skills, Literal Comprehension, and Vocabulary and most of the items in Language Structure and Interpretive Comprehension. However, within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Language Structure, students are having difficulty with syllabication (item #20). Within Interpretive Comprehension, students are having difficulty with inferring cause and effect relationships (item # 30).

The most deficits as a strand can be found in the Evaluative Comprehension area. All three items that measure fact/opinion (item #'s 25, 49, and 50) were answered correctly by fewer than sixty percent of the students.



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 3

1985 - 1986

STUDY SKILLS	LANGUAGE STRUCTURE	LISTENING	VOCABULARY	READING
J.3 } J.3 } Putting words into alph. order J.3 } J.4 } J.4 } Unorganized info. into categories J.4 } J.5 } J.5 } Using parts of book to find info. J.5 }	K.1 } K.1 } Identifying types of sentences K.1 } K.2 } K.2 } Identifying comp. wds., pref., & suff. K.3 } K.3 } Identifying parts of speech K.4 } K.4 } Syllabication K.4 }	B.2 } B.2 } Main idea C.4 } C.4 } Inferring cause and effect relation. D.1 } D.1 } Drawing comparisons v. own experience D.2 } D.2 } Predicting further outcome D.3 } D.3 } Fact/opinion B.2 } B.2 } Main idea B.3 } B.3 } Identifying details D.1 } D.1 } Drawing comparisons v. own experience C.4 } C.4 } Inferring cause and effect relation.	E.2 } E.2 } Synonyms E.2 } E.2 } Antonyms E.3 } E.3 } Word meanings E.3 } E.5 } E.5 } Multiple meanings E.5 } E.4 } E.4 } Homonyms E.4 }	C.2 } C.2 } Identifying key points C.3 } C.3 } Inferring traits, feelings, & motives C.4 } C.4 } Inferring cause and effect relation. D.1 } D.1 } Drawing comparisons v. own experience D.2 } D.2 } Predicting further outcome B.2 } B.2 } Main idea B.3 } B.3 } Identifying details D.2 } D.2 } Predicting further outcome D.3 } D.3 } Fact/opinion D.3 }
1 2 3 4 5 6 7 8 9 0	1 1 1 1 1 1 1 1 1 2 1 2 3 4 5 6 7 8 9 0	2 2 2 2 2 2 2 2 2 3 1 2 3 4 5 6 7 8 9 0	3 3 3 3 3 3 3 3 3 4 1 2 3 4 5 6 7 8 9 0	4 4 4 4 4 4 4 4 4 5 1 2 3 4 5 6 7 8 9 0





## READING/LANGUAGE ARTS - LEVEL 4

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (9 items), Evaluative Comprehension (5 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing ten items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets have been submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score on the items of 72%. Generally, students appear to be mastering the objectives in Vocabulary and most of the objectives in Literal Comprehension, Study Skills, and Language Structure. In Literal Comprehension students had difficulty with an item addressing details in a passage (item #29). Within Study Skills students are having difficulty with alphabetical order and putting unorganized information into categories (item #'s 4 and 10). In Language Structure students do not appear to be mastering identifying tenses of sentences, prefixes, suffixes, and compound words (item #'s 11 and 19).

The most deficits as strands are found in the Interpretive and Evaluative Comprehension areas. In Interpretive Comprehension students are not mastering the objectives addressing the mainplot/subplot (item #'s 23 and 44). More than forty percent of the students did not correctly answer both items addressing fact/opinion in Evaluative Comprehension (item #'s 25 and 27).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 4

1985 - 1986

STUDY SKILLS										LANGUAGE STRUCTURE										LISTENING										VOCABULARY										READING									
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
J.3	J.3	J.3	J.3	J.5	J.7	J.4	J.4	J.4	J.4	K.6	K.6	K.6	K.4	K.4	K.4	K.2	K.2	K.2	K.2	B.3	C.3	C.5	C.6	C.3	C.3	D.3	B.3	B.3	D.1	E.2	E.2	E.2	E.2	E.3	E.3	E.5	E.5	E.4	E.4	B.2	C.1	C.4	C.5	D.4	B.2	B.3	C.4	C.4	D.2
Putting words into alph. order										Identifying tense of sentences										Inferring traits, feelings, & motives Main plot/subplot Writer's purpose Fact/opinion										Synonyms Antonyms Word meanings Multiple meanings Homonyms										Main idea Fiction/non-fiction Inferring cause and effect relation. Main plot/subplot Fact/opinion Main idea Details Inferring cause and effect relation. Predicting further outcomes									
Using parts of book to find info.										Syllabication										Inferring traits, feelings, & motives Main plot/subplot Writer's purpose Fact/opinion																													
Using reference sources to locate info.										Identifying comp. wds., pref., & suff.										Details Drawing comparisons v. own experience																													
Unorganized info. into categories																																																	





## READING/LANGUAGE ARTS - LEVEL 5

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of sixty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (14 items), Evaluative Comprehension (9 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The test was organized according to the following domains: Study Skills, Language Structure, Reading, Listening, and Vocabulary. Reading contains twenty-five items and the other domains contain ten items each.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score on the items of 67%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty with a main idea item (# 54) and within Interpretive Comprehension students had difficulty with key points in a passage (item # 21) and inferring traits and feelings of characters (item # 22).

The most deficits as strands are found in the areas of Vocabulary and Language Structure. There are two items in Vocabulary and three items in Language Structure which fewer than fifty percent of the students answered correctly. In the first domain students had difficulty with synonyms and antonyms (item #'s 56 and 58) and in the second domain students had difficulty with the items that tapped types of sentences, parts of speech, complete subject, and complete predicate (item #'s 14, 15, and 18).



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 5

1985 - 1986

STUDY SKILLS	LANGUAGE STRUCTURE										READING																													
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5					
J.1 } J.1 } J.1 }																																								
J.3 } J.3 } J.3 }																																								
J.7 } J.7 }																																								
J.5 } J.5 }																																								
K.1 } K.1 }																																								
K.1 } K.1 }																																								
K.3 } K.3 }																																								
K.3 } K.3 }																																								
K.5 } K.5 }																																								
K.5 } K.5 }																																								
C.2																																								
C.3																																								
C.4																																								
C.6																																								
D.4																																								
D.1																																								
D.2																																								
C.1																																								
C.6																																								
D.2																																								
B.2																																								
B.3																																								
C.1																																								
C.4																																								
D.1																																								
B.3 } B.3 }																																								
C.1																																								
B.3																																								
C.5																																								
B.2																																								
B.3																																								
D.2																																								
D.3																																								
D.4																																								

55



55

LISTENING										VOCABULARY											
B.2	Main idea	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
E.3	Details	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
B.4	Identifying the sequence																				
C.3	Inferring traits, feelings, & motives																				
C.3	Inferring casue and effect relation.																				
C.4	Inferring traits, feelings, & motives																				
C.3	Predicting further outcome																				
D.2	Main idea																				
B.2																					
B.2																					
E.2	Synonyms																				
E.2																					
E.2	Antonyms																				
E.2																					
E.3	Word meanings																				
E.3																					
E.5	Multiple meanings																				
E.5																					
E.4	Homonyms																				
E.4																					





951 RD LEVEL 5 TFCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	TOTAL	
4160	58	71	54	58	66	71	92	56	61	69	25	46	35	23	58	33	65	33	61	36	41	41	66	64	58	59	
4170	47	47	41	52	52	64	88	64	94	94	52	58	52	17	58	47	58	35	41	52	64	52	70	41	51	57	
4173	70	70	60	70	80	85	**	85	90	85	45	55	35	35	70	60	75	45	70	40	50	45	65	55	85	69	
4220	56	62	50	75	43	81	87	93	**	93	68	62	81	37	81	25	93	37	50	62	63	81	**	75	93	64	
4221	80	60	70	80	70	75	80	80	95	65	35	65	45	35	75	55	80	25	65	60	40	60	70	30	90	69	
4570	73	56	63	70	80	75	85	60	85	80	39	43	46	21	75	43	85	31	58	53	41	43	82	46	90	64	
4571	77	68	87	81	83	81	95	87	93	89	47	58	64	58	79	22	91	64	72	72	73	81	97	79	93	76	
4010	57	53	64	71	57	85	89	46	**	92	60	64	46	28	75	32	89	33	57	46	64	85	89	71	96	62	
4240	76	62	64	66	62	80	94	70	92	86	60	76	47	27	82	35	90	37	64	56	60	70	88	74	84	68	
4241	62	87	37	62	87	87	87	75	**	87	62	87	**	37	62	87	87	37	87	75	87	62	75	50	87	72	
4270	52	36	57	73	52	68	84	47	**	89	84	63	78	62	57	84	84	52	31	73	68	78	89	73	94	70	
4310	87	87	87	87	75	87	87	**	**	50	50	87	50	75	87	87	75	75	**	87	**	**	**	87	**	84	
4311	61	52	71	57	52	85	95	52	95	80	66	61	76	23	71	38	80	23	23	57	38	57	76	52	85	62	
4370	50	87	50	43	50	62	87	81	93	93	37	56	37	31	68	93	**	93	**	93	**	**	**	**	**	71	
4371	70	86	90	85	65	90	**	70	**	**	60	70	55	70	25	95	25	65	65	75	80	85	70	**	74		
4430	88	88	66	66	55	**	**	**	**	**	**	88	66	55	**	88	**	**	66	88	**	**	88	**	**	87	
DISA	67	64	65	69	66	79	91	69	91	85	50	60	55	35	72	44	84	43	61	60	61	67	83	65	88	68	
4030	80	60	73	66	60	80	86	66	93	93	40	60	66	26	73	26	93	46	40	73	66	60	93	40	86	66	
4031	76	84	92	92	69	92	**	84	**	92	69	69	76	69	61	23	**	53	76	69	38	69	84	51	**	76	
4081	57	61	46	61	50	80	96	69	92	92	57	57	53	50	73	34	92	69	88	84	**	80	**	69	84	75	
4082	56	50	56	75	43	75	93	75	93	93	75	43	50	43	81	**	**	**	31	56	**	43	93	87	87	63	
4290	66	75	63	69	69	91	94	80	92	96	42	57	53	39	66	44	83	41	67	64	63	75	87	66	92	69	
4560	71	68	60	64	68	84	93	75	86	88	57	53	62	51	75	33	82	22	48	57	51	51	80	66	88	69	
4561	40	50	60	55	50	**	60	85	85	65	60	45	45	70	50	80	35	60	45	40	55	90	60	95	61		
4690	60	51	62	65	60	78	92	75	86	87	46	40	56	33	69	42	84	43	53	65	45	59	80	56	80	63	
4070	61	64	64	73	64	67	82	47	76	76	52	64	38	35	61	32	76	14	47	52	64	52	64	58	70	63	
4080	63	54	59	68	68	63	81	59	81	81	63	31	50	18	68	40	72	31	54	68	77	59	77	31	68	63	
4151	73	69	76	77	73	84	87	81	95	91	36	54	51	30	66	48	91	44	54	70	70	77	93	73	93	71	
4190	53	50	46	51	48	78	91	82	91	89	29	50	55	42	69	37	76	32	35	50	60	60	73	60	83	65	
4192	70	70	81	59	62	77	88	74	88	88	33	22	25	51	81	40	88	40	44	62	59	55	81	37	92	66	
4200	75	87	75	75	68	81	87	93	**	81	93	68	93	18	93	37	81	62	75	68	93	81	**	81	93	77	
4201	60	73	60	78	73	65	91	69	91	91	60	47	47	52	56	43	82	52	47	56	47	73	95	60	95	68	
4670	57	73	78	68	78	89	94	94	89	94	47	57	26	26	89	21	94	10	42	36	63	68	78	78	**	69	
D158	64	64	64	67	63	79	91	75	89	89	48	51	52	38	70	41	85	40	53	61	63	64	84	62	87	67	
4051	70	94	70	52	76	70	88	82	88	**	82	47	70	23	76	47	82	35	64	41	70	44	88	52	88	75	
4130	68	59	62	68	56	75	87	50	**	96	21	59	43	34	75	65	93	50	43	56	56	65	87	50	87	68	
4131	70	70	70	80	70	80	**	75	90	95	30	45	35	20	75	40	95	40	70	50	90	90	95	40	**	64	
4140	65	61	50	53	50	50	**	80	80	84	84	34	50	15	50	69	50	88	38	61	46	34	46	76	46	61	58
4150	84	71	65	78	65	84	93	62	96	90	40	37	53	21	65	40	90	62	56	58	81	68	87	46	93	70	
4250	58	68	56	76	74	70	84	76	76	72	38	40	50	46	60	58	80	48	64	64	64	66	66	62	74	68	
4340	54	64	63	63	64	75	89	72	93	86	29	39	25	36	54	44	68	36	37	45	35	46	89	37	70	54	
4350	67	55	63	59	67	86	90	72	91	87	51	56	42	36	71	44	82	35	50	48	56	63	88	62	91	63	
4390	56	69	56	69	65	86	86	73	95	95	56	52	65	26	47	43	86	43	52	43	43	73	91	60	86	65	
4391	92	73	73	66	66	66	93	80	93	86	40	53	40	13	73	33	**	26	60	66	66	93	86	86	86	71	
4400	71	76	73	76	81	73	92	76	92	88	43	57	45	38	77	45	84	52	58	55	62	72	93	64	91	70	
4550	71	70	62	66	55	74	85	81	81	85	77	44	88	37	62	44	81	25	25	59	29	62	81	48	85	67	
4022	69	61	76	53	53	84	92	38	76	92	46	38	46	30	76	53	84	30	46	46	46	69	53	84	57		



951 PD LVL 5                   TECR5005                   11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	TOTAL
4052	64	71	71	71	64	78	92	71	92	78	28	78	35	50	71	57	**	50	71	92	64	64	92	35	92	74
4100	72	68	70	86	70	93	97	86	98	91	62	59	51	39	79	58	93	48	58	72	75	70	91	71	93	76
4120	71	71	76	71	66	71	90	28	95	95	57	52	57	61	80	42	85	28	52	38	42	61	**	38	95	65
4121	54	45	72	72	72	81	**	81	90	90	54	72	81	18	81	27	72	81	45	90	72	54	81	63	**	66
4530	61	72	63	80	63	86	94	75	91	86	91	91	88	75	83	58	86	80	86	80	75	91	88	72	88	77
4531	58	52	47	70	58	82	76	54	**	94	29	52	52	52	41	35	76	35	35	47	58	64	70	29	76	60
4590	51	48	48	58	51	79	96	82	93	96	82	68	55	27	86	27	82	34	55	37	68	68	82	65	82	63
4592	75	**	75	**	50	50	**	**	**	75	0	75	75	50	75	75	**	50	50	25	25	25	**	**	**	75
4630	56	69	67	64	55	87	86	76	84	86	73	46	50	40	76	35	83	47	66	52	72	55	84	53	76	66
DISC	65	66	65	69	65	79	90	73	91	88	51	53	49	38	70	47	84	45	55	56	59	65	85	56	85	67
4260	78	69	60	78	52	73	95	73	95	82	39	56	56	39	78	65	**	43	43	65	60	60	91	56	91	73
4280	67	61	74	61	67	93	96	90	96	96	90	96	93	87	96	58	37	48	61	70	77	70	93	67	90	76
4282	58	58	58	71	58	69	84	63	89	76	41	56	67	32	67	52	84	43	73	56	41	56	84	50	89	65
4381	75	50	62	56	50	68	87	87	93	68	37	43	13	18	75	50	87	43	43	50	50	37	87	37	87	61
4640	47	55	61	57	47	67	91	67	89	83	35	49	40	32	72	33	64	18	33	32	37	42	64	42	72	56
4656	79	76	66	72	73	81	93	76	91	94	48	59	38	37	75	39	88	47	61	68	74	72	87	67	90	70
4062	67	76	61	73	82	88	91	88	97	82	44	50	35	23	85	41	88	41	67	64	61	76	94	67	94	70
4321	72	61	44	83	50	66	94	88	88	88	55	88	61	61	72	33	88	55	72	72	61	77	**	55	88	66
4322	60	35	43	56	43	70	81	56	81	79	31	41	39	29	68	41	81	31	45	41	50	66	27	75	53	
4361	52	52	47	47	58	76	88	88	88	**	47	41	35	17	82	52	88	29	52	64	52	58	82	70	76	58
4541	66	52	80	76	66	80	85	80	95	**	71	76	60	57	80	42	95	47	66	61	61	57	95	52	95	66
4543	52	56	76	68	80	80	92	76	96	88	64	80	60	52	84	48	92	32	56	52	56	64	76	72	76	66
DISD	64	60	61	66	61	76	90	75	91	86	48	59	49	39	76	44	84	39	56	56	56	60	82	55	85	65
4053	50	59	59	59	59	90	90	77	90	**	59	90	54	40	86	27	90	27	45	50	45	54	77	54	90	66
4061	81	74	67	62	72	81	**	79	95	95	44	69	58	58	74	39	97	37	58	58	51	67	95	72	90	69
4113	80	57	84	61	65	73	80	73	88	92	61	50	53	42	76	42	84	38	57	46	38	69	84	53	92	72
4210	60	52	52	57	55	82	**	75	97	92	57	55	67	45	82	47	77	32	55	60	57	75	85	47	85	68
4230	68	70	67	71	68	75	90	74	91	89	39	54	49	33	75	40	83	46	58	62	54	67	85	60	90	68
4271	70	67	79	82	73	82	94	88	97	82	52	70	58	44	82	38	91	52	70	58	64	67	97	64	77	74
4360	72	81	81	75	81	87	73	81	93	90	84	75	63	60	96	60	90	57	69	69	66	81	96	84	84	76
4410	62	49	55	50	52	83	90	83	86	91	77	70	55	47	65	34	83	47	54	47	49	67	83	57	83	61
4580	63	60	58	61	64	88	90	74	91	78	53	61	42	31	67	48	75	46	64	63	55	68	81	58	84	63
4620	63	60	62	66	52	73	86	72	75	82	38	42	36	16	76	35	87	36	45	48	61	50	76	53	88	60
DISC	66	63	64	64	63	80	91	76	89	87	52	60	50	37	75	41	84	43	57	57	55	66	84	60	88	66
STUT	65	64	64	67	64	79	90	74	90	87	50	56	51	38	73	43	84	42	56	58	59	64	84	59	86	67
DISA	67	64	65	69	66	79	91	69	91	85	50	60	55	35	72	44	84	43	61	60	61	67	83	65	88	68
DISB	64	64	64	67	63	79	91	75	89	89	48	51	52	38	70	41	85	40	53	61	63	64	84	62	87	67
DISC	65	66	65	69	65	79	90	73	91	88	51	53	49	38	70	47	84	45	55	56	59	65	85	56	85	67
DISD	64	60	61	66	61	76	90	75	91	86	48	59	49	39	76	34	84	39	56	56	56	60	82	55	85	65
DISC	66	63	64	64	63	80	91	76	89	87	52	60	50	37	75	41	84	43	57	57	55	66	84	60	88	66

## READING/LANGUAGE ARTS - LEVEL 6

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (5 items), Interpretive Comprehension (7 items), Evaluative Comprehension (3 items), and Vocabulary (10 items). In addition there is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains: Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the other domains each had ten items.

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score on the items of 74%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty identifying a sequence of events based on a story (item # 36) and within Study Skills students had difficulty using parts of a book to find information (item # 14).

Greater deficits as strands were found in the areas of Interpretive Comprehension, Vocabulary, and Language Structure. There are two items in Interpretive Comprehension and in Vocabulary and three items in Language Structure which more than forty percent of the students answered incorrectly. In Interpretive Comprehension students had difficulty inferring cause and effect relationships (item # 3) and in Vocabulary the difficulties lay with antonyms and homonyms (item #'s 28 and 35). In Language Structure students had difficulty with identifying prefixes and root words, tenses, and syllabication. (item #'s 18, 21, and 24).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 6

1985 - 1986

LISTENING	STUDY SKILLS	LANGUAGE STRUCTURE	VOCABULARY	READING
1 2 3 4 5	1 1 1 1 1 1 6 7 8 9 0 1 2 3 4 5	1 1 1 1 2 2 2 2 2 2 6 7 8 9 0 1 2 3 4 5	2 2 2 2 3 3 3 3 3 3 6 7 8 9 0 1 2 3 4 5	3 3 3 3 4 4 4 4 4 4 6 7 8 9 0 1 2 3 4 5
B.2 Main idea B.3 Details C.4 Inferring cause and effect relation. C.8 Interpreting figurative language D.3 Fact/opinion	J.3 } Putting words into alph. order J.3 } J.3 } J.4 } Unorganized info. into categories J.4 } J.4 } J.4 } J.7 } Using reference sources to locate info. J.5 } J.5 } Using parts of book to find info.	K.2 } Identifying pref., root words K.2 } K.2 } K.6 } Tenses K.6 } K.6 } K.4 } Syllabication K.4 } K.4 }	E.2 } Synonyms E.2 } E.2 } Antonyms E.2 } E.3 } Word meanings E.3 } E.5 } Multiple meanings E.5 } E.4 } Homonyms E.4 }	B.4 } Identifying the sequence C.1 } Fiction/non-fiction C.3 } Inferring traits, feelings, & motives C.8 } Interpreting figurative language D.2 } Predicting further outcome B.2 } Main idea B.3 } Details C.4 } Inferring cause and effect relation. C.6 } Writer's purpose D.1 } Drawing comparisons w. own experience





## READING/LANGUAGE ARTS - LEVEL 7

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (4 items), Interpretive Comprehension (7 items), Evaluative Comprehension (4 items), and Vocabulary (10 items). In addition there is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains: Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the remainder of the domains contained ten items each.

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score on the items of 71%. Generally, students appear to be mastering the objectives in Literal Comprehension, Evaluative Comprehension, Vocabulary, Study Skills, and most of the items in Interpretive Comprehension. In this latter domain students are having difficulty with identifying key points and the writer's purpose in a given passage (item #'s 3 and 37).

The most deficits as a strand can be found in the Language Structure area. There are four items which fewer than fifty percent of the students answered correctly (item #'s 17, 18, 21, and 24). These items addressed identifying types of sentences, parts of speech, and complete subjects and predicates.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 7

1985 - 1986

LISTENING	STUDY SKILLS										LANGUAGE STRUCTURE										VOCABULARY										READING													
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
B.2 Main idea																																												
B.3 Details																																												
C.2 Identifying key points																																												
C.4 Inferring cause and effect relation.																																												
D.4 Point of view																																												
J.1 } J.1 } J.1 }																																												
J.7 } J.7 }																																												
J.3 } J.3 } J.3 }																																												
J.5 } J.5 }																																												
K.1 } K.1 } K.1 }																																												
K.3 } K.3 } K.3 }																																												
K.5 } K.5 } K.5 }																																												
K.6 } K.6 }																																												
E.2 } E.2 }																																												
E.2 } E.2 }																																												
E.3 } E.3 }																																												
E.5 } E.5 }																																												
E.4 } E.4 }																																												
B.4 } B.4 }																																												
C.6 } C.6 }																																												
C.7 } C.7 }																																												
C.8 } C.8 }																																												
D.3 } D.3 }																																												
B.3 } B.3 }																																												
C.1 } C.1 }																																												
C.9 } C.9 }																																												
D.2 } D.2 }																																												
D.7 } D.7 }																																												



## READING/LANGUAGE ARTS - LEVEL 8

### INSTRUMENT AND POPULATION DESCRIPTION

This is a fifty-five item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the Basic Skills test in Reading.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 71%. Since the test was developed outside the system, the test is not divided into domains as is the case with the locally developed tests; however, for analysis individual items were categorized into the following broad categories: Basic Word Meaning, Literal, Interpretive, and Evaluative Comprehension. Generally, students appear to have mastered the items that could be described as being in the domain of Literal Comprehension and most of the items within the other domains. However, there are isolated objectives which are not being mastered by more than fifty percent of the students. With Basic Word Meaning students are having difficulty with determining the meaning of words within sentences (item # 5). In Evaluative Comprehension the difficulty lies with the item that taps determining the writer's purpose (item # 6). In Interpretive Comprehension students are not mastering drawing implied conclusions.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits in each of the domains.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

BASIC SKILLS TEST - FORM 7

READING  
LEVEL 8

1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5

Identify meaning of commonly used wds. within sentence, no clues to meaning of the word are given

Identify meaning of written phrase, clause, sentence or paragraph  
Identify writer's purpose in a parag. or passage written to inform  
Demonstrate the ability to follow directions

Identify a statement as fact or opinion  
Recognize sequence of events or ideas in a written passage  
Draw conclusions implied in a paragraph or passage  
Predict an outcome implied in a paragraph or passage  
Identify the main idea, supporting details, & conclusion of a paragraph  
Predict an outcome implied in a paragraph or passage  
Draw conclusions implied in a paragraph or passage  
Identify cause/effect relationship implied in a paragraph or passage  
Identify writer's purpose in a parag. or passage written to persuade  
Identify meaning of word within a sentence that provides clues to the meaning of the word

Identify the main idea, supporting details, and conclusion of a paragraph  
Identify the meaning of a written phrase, clause, sentence or paragraph  
Identify a statement as fact or opinion  
Identify the main idea, supporting details, and conclusion of a paragraph  
Identify cause/effect relationship implied in a paragraph or passage  
Identify meaning of a written phrase, clause, sentence or paragraph  
Identify writer's purpose in a paragraph or passage written to inform  
Use the parts of a book

Identify cause/effect relationship implied in a paragraph or passage  
Recognize the sequence of events or ideas in a written passage  
Identify a statement as fact or opinion  
Draw conclusions implied in a paragraph or passage  
Locate information in a variety of sources

Identify cause/effect relationship implied in a paragraph or passage  
Draw conclusions implied in a paragraph or passage  
Identify the main idea, supporting details, and conclusion of a paragraph

Predict an outcome implied in a paragraph or passage  
Identify a statement as fact or opinion  
Identify main idea, supporting details, and conclusion of a paragraph  
Demonstrate the ability to follow directions

Identify the meaning of a written phrase, clause, sentence or paragraph  
Draw conclusions implied in a paragraph or passage  
Recognize the sequence of events or ideas in a written passage  
Identify main idea, supporting details, and conclusion in a paragraph  
Identify information on a chart, map or graph



981 RD LEVEL 8                   TECR5005                   11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	TOTAL
2130	75	59	57	60	53	95	86	92	56	40	77	73	70	83	77	67
2170	71	57	66	61	52	90	90	92	62	49	71	75	87	86	72	68
4570	60	39	52	52	39	86	69	73	73	39	52	73	60	73	60	63
2060	65	55	65	60	50	**	92	97	52	63	89	76	73	97	78	70
2070	63	43	46	50	48	82	70	79	45	47	58	57	70	78	71	64
2240	77	67	54	66	54	93	88	96	71	49	67	67	81	77	60	68
OISA	69	53	56	57	50	89	82	88	56	47	68	68	75	82	71	66
2110	75	59	57	46	53	79	81	95	53	40	77	69	69	87	67	69
2120	76	71	80	61	56	95	86	96	63	46	70	70	70	76	66	70
2140	79	71	66	60	63	90	83	90	64	56	76	75	80	82	71	73
2200	80	67	67	64	61	92	93	94	56	51	74	61	76	80	67	75
2950	71	65	55	45	64	89	87	80	57	62	69	74	73	81	60	72
OISB	76	67	64	61	62	90	86	89	59	54	73	70	75	81	66	72
2030	76	60	55	54	53	90	78	91	54	47	65	61	70	81	55	61
2080	64	55	50	44	44	81	83	83	50	49	49	55	64	64	61	59
2180	71	58	60	48	52	86	73	84	51	45	52	46	54	64	51	62
2090	75	63	58	63	58	91	88	96	61	47	67	75	70	75	76	68
2190	71	48	56	58	51	88	75	85	49	45	69	63	59	78	66	63
2260	84	48	46	51	61	96	96	98	48	40	82	69	86	78	73	65
OISC	73	57	56	54	53	88	80	89	53	46	63	60	65	74	61	64
2010	81	64	61	61	58	94	85	95	64	52	73	76	82	83	75	69
2040	75	52	54	57	61	87	88	91	61	43	67	65	73	77	72	66
2050	78	67	67	63	59	92	86	92	60	63	71	74	80	82	74	71
OISD	78	62	62	61	59	91	86	93	61	54	71	72	79	81	74	69
1010	93	94	90	80	77	96	96	96	84	85	82	90	90	89	87	87
1020	90	88	84	70	75	96	94	96	79	84	80	90	90	88	90	82
1240	72	50	52	52	41	87	72	85	56	54	67	64	68	71	56	64
2100	66	51	51	47	42	86	73	81	58	49	61	62	74	75	62	61
2270	77	48	59	40	51	90	69	81	43	54	80	54	65	70	61	60
2980	80	64	75	65	61	89	89	92	70	59	78	89	91	86	76	73
OISE	54	77	76	67	65	93	88	92	72	73	77	81	84	83	78	77
OISA	69	53	56	57	50	89	82	88	56	47	68	68	74	82	71	66
OISB	76	67	64	61	52	90	86	89	59	54	73	70	75	81	66	72
DISC	73	57	56	54	53	88	80	89	53	46	63	60	65	74	61	64
OISD	78	62	62	61	59	91	86	93	61	54	71	72	79	81	74	69
OISE	84	77	76	67	65	92	88	92	72	73	77	81	84	83	78	77
STOT	77	65	64	60	58	90	84	90	62	57	71	71	76	80	71	71



**HIGH SCHOOL ENGLISH**

## ENGLISH - BASIC

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-15 are school-developed and tap literal and interpretive objectives, items 16-25 are school-developed and address Vocabulary objectives, and items 26-35 are centrally developed and measure interpretive comprehension objectives (5 items), and evaluative comprehension objectives (5 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Basic English course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 53%. Of the five items measuring evaluative comprehension, there were two which fewer than fifty percent of the students answered correctly. Students are having difficulty comparing two views of the same issue (item # 26), and identifying related and unrelated supporting details (item # 3'). Of the five items measuring interpretive comprehension there were four which fewer than fifty percent of the students answered correctly. Students are having difficulty with fact and opinion (item # 30) and with figurative language (item #'s 33, 34, and 35).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL  
1985 - 1986

ENGLISH - BASIC

PART I	PART II	PART III										
1 - 15	16 - 25	2	2	2	2	3	3	3	3	3	3	
1	16	6	7	8	9	0	1	2	3	4	5	
School-developed portion- Objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion- Objectives drawn from category E of High School Curriculum Objectives	D.4 D.2 D.5 C.14 } C.14 }	Comparing two views-Of same issue Evaluating written material Distinguishing bet. clear & unclear mat. Fact/opinion Related/unrelated supporting details Figurative language									
		D.6 } D.6 }	Related/unrelated supporting details									
		C.10 } C.10 } C.10 }	Figurative language									

991 BAS ENG                      TETR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	TOTAL
1040	69	66	72	46	24	69	69	52	58	49	44	58	67	75	58	55	44	81	55	40	66	67	40	60	50	50	75	58	72	40	44	60	23	38	27	55
1110	61	73	67	72	69	77	63	46	68	75	47	65	81	73	56	40	32	67	40	68	81	81	89	90	50	56	52	63	42	27	55	44	43	28	60	
DI. A	65	70	69	60	48	73	65	48	63	63	46	62	75	74	57	47	38	73	47	55	60	75	62	75	72	50	65	55	67	41	35	57	34	41	28	58
1250	50	75	12	75	25	25	87	12	37	25	62	43	50	43	25	31	12	6	25	25	6	18	6	0	0	12	18	62	37	43	37	50	18	31	18	31
1100	79	74	67	81	91	77	46	77	65	72	56	37	82	5	51	48	89	50	51	81	50	62	44	39	67	67	81	41	77	44	50	41	31	31	27	58
DISB	72	74	55	79	77	66	55	63	59	62	58	39	75	13	45	44	72	40	45	68	40	52	36	31	52	55	67	45	68	44	47	43	28	31	25	52
1060	72	70	84	96	86	76	66	72	86	78	49	66	64	64	64	66	45	76	70	29	68	84	78	45	68	54	68	43	56	47	23	60	45	39	3	62
1120	54	58	25	29	37	37	41	33	37	37	33	41	54	62	54	37	66	54	33	62	50	50	25	70	54	54	50	50	70	41	41	50	16	29	12	44
2030	0	0	**	**	0	0	0	0	**	**	0	0	**	**	**	0	0	0	**	0	0	**	0	0	0	**	**	0	0	0	0	**	**	0	0	37
1160	32	75	67	75	46	46	71	85	64	64	78	42	75	35	67	57	46	75	78	75	96	85	**	78	89	50	67	46	64	50	35	57	32	28	17	61
DISC	56	68	66	75	63	58	61	65	69	65	52	53	65	56	63	56	50	70	64	4	71	76	71	59	70	53	64	45	61	46	30	57	35	33	9	57
1050	46	66	36	47	30	36	73	32	43	79	53	42	40	53	46	53	56	33	52	22	40	60	57	58	57	35	49	63	56	36	29	39	29	40	23	46
1070	27	77	13	80	19	30	78	27	34	68	57	28	63	74	28	36	21	30	31	19	19	28	22	37	39	24	21	45	21	27	25	30	30	65	24	37
DISD	40	70	28	58	27	34	75	30	40	75	54	37	48	60	40	47	44	32	45	21	33	49	45	51	51	31	39	57	44	33	8	36	29	48	23	43
1080	73	72	75	70	82	48	70	77	84	47	76	79	53	73	62	60	86	76	56	57	79	55	80	29	33	58	59	48	68	52	31	63	40	36	35	61
1210	62	43	62	50	62	50	75	62	62	62	75	93	81	81	75	62	62	56	62	62	68	81	56	75	62	56	50	56	68	50	12	50	31	25	62	60
1240	74	44	56	48	65	82	48	51	74	60	36	70	46	60	43	50	51	75	56	55	48	70	25	53	32	63	67	44	56	58	34	65	37	27	27	53
DISF	72	61	68	62	75	58	64	68	79	52	64	77	53	70	57	57	73	74	57	57	68	62	61	40	35	60	61	47	65	54	30	63	38	32	35	59
STOT	59	68	56	64	55	55	66	53	61	63	55	56	60	60	52	51	55	58	51	46	54	62	56	52	54	48	57	51	59	43	32	51	33	38	25	53

## ENGLISH - GENERAL

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-17 are school-developed and tap literal and interpretive objectives, items 18-27 are school-developed and address Vocabulary objectives, and items 28-40 are centrally developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (8 items), and evaluative comprehension objectives (3 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a General English course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 59%. Of the thirteen centrally-developed items there were nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with identifying types of logical order (items #'s 33 and 34). In interpretive comprehension students had difficulty with identifying points of view, writer's purpose, and figurative language (item #'s 29, 30, 38, and 39). In evaluative comprehension students have not mastered evaluating written material and distinguishing between related and unrelated ideas.

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL  
 1985 - 1986

ENGLISH - GENERAL

PART I	PART II	PART III
1 - 17	18 - 27	2 2 3 3 3 3 3 3 3 3 3 3 3 4 8 9 0 1 2 3 4 5 6 7 8 9 0
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives	D.2 Evaluating written material C.13 Identifying points of view in fiction C.3 Writer's purpose D.6 Related/unrelated supporting details D.6 } B.4 } Types of logical order B.4 } C. 4 } C.14 } Fact/opinion C.10 } C.10 } Figurative language C.10 } C.10 }

992 GEN ENG                      TCCR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	33	34	35	36	37	38	39	40	TOTAL	
1040	79	79	61	84	69	76	64	87	74	76	66	76	92	71	87	64	82	64	65	74	74	87	76	84	76	79	58	25	48	38	30	38	33	43	71	38	35	35	41	65	
1110	83	62	27	87	89	85	56	45	79	62	70	68	50	83	50	68	64	77	52	52	54	58	72	68	75	68	93	41	39	56	39	18	45	43	64	64	77	22	35	52	60
OISA	81	70	42	86	80	81	59	64	77	68	68	72	68	78	66	66	72	71	59	68	63	65	79	72	79	72	87	49	33	52	39	24	42	39	55	67	59	28	35	47	62
1250	79	72	46	94	79	74	51	81	63	46	76	80	66	74	61	48	35	71	46	46	85	72	94	96	83	36	38	46	36	37	45	38	54	31	62	53	51	27	22	48	59
1100	73	44	84	76	81	89	50	55	89	60	81	81	34	44	28	52	15	26	92	36	50	52	78	60	84	57	23	39	47	42	47	42	44	34	76	55	57	50	26	44	55
OISB	77	63	59	88	80	79	51	73	72	51	78	80	55	64	50	49	28	56	61	43	73	66	89	84	83	43	33	44	40	39	46	40	51	32	66	53	53	34	23	46	57
1360	67	52	65	60	72	60	47	65	85	62	57	42	60	45	37	47	45	35	45	62	25	55	45	62	37	27	42	52	57	45	35	40	42	50	72	77	75	60	52	57	53
1120	67	46	53	71	57	57	60	17	60	67	35	75	57	71	64	71	57	71	71	57	35	64	50	39	32	42	53	53	42	50	50	32	60	35	53	60	39	17	14	57	51
1160	76	58	72	78	69	64	76	61	47	93	83	76	61	68	26	30	86	64	87	69	47	72	50	43	79	46	90	54	38	34	41	45	49	31	72	69	72	45	32	71	61
OISC	72	54	66	71	68	61	65	53	60	79	66	66	60	62	36	43	68	57	72	65	39	65	48	48	58	40	69	53	44	40	46	41	49	37	68	70	66	43	34	64	57
1050	88	84	96	84	73	**	84	65	80	65	76	57	61	65	80	69	73	61	73	38	80	61	92	57	80	69	61	61	46	53	34	61	50	65	65	69	57	69	11	76	67
OISD	88	84	96	84	73	**	84	65	80	65	76	57	61	65	80	69	73	61	73	38	80	61	92	57	80	69	61	61	46	53	34	61	50	65	65	69	57	69	11	76	67
1080	61	9	74	83	52	60	44	66	23	43	30	42	46	26	84	70	77	79	78	38	85	90	84	82	90	35	50	61	54	45	41	32	38	43	72	62	69	45	27	59	56
1210	84	73	84	82	70	89	73	80	71	70	64	47	73	89	64	66	75	78	65	77	84	82	80	73	75	68	80	31	57	35	47	36	40	52	57	52	61	43	43	57	66
1240	70	82	50	61	77	76	97	81	63	65	76	61	91	36	67	65	61	66	37	61	50	87	65	31	62	80	82	43	42	53	31	40	31	48	73	67	50	35	26	60	60
OISE	69	49	68	75	65	72	69	75	48	57	54	50	68	44	74	67	71	75	66	55	73	87	77	63	77	58	68	48	51	45	39	36	36	47	69	61	61	41	30	59	60
OISA	81	70	42	86	80	81	59	64	77	68	68	72	68	78	66	66	72	71	59	68	63	65	79	72	79	72	87	49	33	52	39	24	42	39	55	67	59	28	35	47	62
OISB	77	63	59	88	80	79	51	73	72	51	78	80	55	64	50	49	28	56	61	43	73	66	89	84	83	43	33	44	40	39	46	40	51	32	66	53	53	34	23	46	57
OISC	72	54	66	71	68	61	65	53	60	79	66	66	60	62	36	43	68	57	72	65	39	65	48	48	58	40	69	53	44	40	46	41	49	37	68	70	66	43	34	64	57
OISO	88	84	96	84	73	**	84	65	80	65	76	57	61	65	80	69	73	61	73	38	80	61	92	57	80	69	61	61	46	53	34	61	50	65	65	69	57	69	11	76	67
OISE	69	49	68	75	65	72	69	75	48	57	54	50	68	44	74	67	71	75	66	55	73	87	77	63	77	58	68	48	51	45	39	36	36	47	69	61	61	41	30	59	60
STOT	74	57	63	79	71	73	64	67	61	63	64	63	63	58	60	58	62	66	66	56	64	74	73	64	74	53	64	49	44	44	42	37	43	41	66	63	60	40	30	57	59

## ENGLISH - SECONDARY I

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-29 are school-developed and address Vocabulary objectives, and items 30-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (7 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary I English course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Of the sixteen centrally-developed items there are nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 30 and 31). In interpretive comprehension students were unclear as to evaluating written material, distinguishing between clear and unclear material, and identifying a writer's bias or prejudice (items # s 32, 33, and 36). In evaluative comprehension students are not mastering the items related to fact/opinion (item # 40) and figurative language (item #'s 42, 43, and 44).



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM<sup>1</sup> REFERENCED FINAL

ENGLISH - SECONDARY I

1985 - 1986

PART I	PART II	PART III															
1 - 20	21 - 29	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	
		0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 9	<p>B.4 } Types of logical order</p> <p>B.4 }</p> <p>D.2 . Evaluating written material</p> <p>D.5 Disting. bet. clear &amp; unclear material</p> <p>D.6 Disting. bet. related &amp; unrel. details</p> <p>D.2 Evaluating written material</p> <p>D.3 Writer's bias or prejudice</p> <p>C.13 Identifying points of view</p> <p>D.7 Propaganda techniques</p> <p>D.8 Kinds of stereootyping</p> <p>C.14 Fact/opinion</p> <p>C.10 }</p> <p>C.10 }</p> <p>C.10 } Figurative language</p> <p>C.10 }</p> <p>C.10 }</p>															



## ENGLISH - SECONDARY II

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (6 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary II English course and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 61%. Of the fifteen centrally-developed items there were seven which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 31 and 32). In evaluative comprehension students were unable to identify a writer's bias or prejudice (item # 35). In interpretive comprehension students had difficulty with fact/opinion (item # 41) and with figurative language (item #'s 42, 44, and 45).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY II

1985 - 1986

PART I	PART II	PART III
1 - 20	21 - 30	3 3 3 3 3 2 3 3 3 4 4 4 4 4 4 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
School-developed portion - objectives drawn from Categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 10	<p>B.4 } Types of logical order</p> <p>B.4 }</p> <p>C.13. Identifying points of view</p> <p>D.2 Evaluating written material</p> <p>D.3 Writer's bias or prejudice</p> <p>D.6 Disting. bet. related &amp; unrel. details</p> <p>D.7 } Propaganda techniques</p> <p>D.7 }</p> <p>D.8 Kinds of stereotyping</p> <p>C.14 } Fact/opinion</p> <p>C.14 }</p> <p>C.10 } Figurative language</p> <p>C.10 }</p> <p>C.10 }</p> <p>C.10 }</p>



## ENGLISH - SECONDARY III

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary III English course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 60%. Of the literal comprehension items students had difficulty with types of logical order (item # 31). Of the ten interpretive comprehension items there were six items which fewer than fifty percent of the students answered correctly. These items addressed fact/opinion (items #'s 38 and 39) and figurative language (item #'s 44, 46, 47, and 48).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY IIT

1985 - 1986

PART I	PART II	PART III																																											
1 - 20	21 - 30	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5																									
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0																								
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 11	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; vertical-align: top;">B.4 } B.4 }</td> <td style="width: 80%; vertical-align: top;">Types of logical order</td> <td style="width: 10%;"></td> </tr> <tr> <td style="vertical-align: top;">D.2 D.5 D.6</td> <td style="vertical-align: top;">Evaluating written material Disting. bet. clear &amp; unclear material Disting. bet. related &amp; unrel. details</td> <td></td> </tr> <tr> <td style="vertical-align: top;">D.2 C.13</td> <td style="vertical-align: top;">Evaluating written material Identifying points of view</td> <td></td> </tr> <tr> <td style="vertical-align: top;">C.14 } C.14 }</td> <td style="vertical-align: top;">Fact/opinion</td> <td></td> </tr> <tr> <td style="vertical-align: top;">D.7</td> <td style="vertical-align: top;">Propaganda techniques</td> <td></td> </tr> <tr> <td style="vertical-align: top;">D.8 D.7 } D.7 }</td> <td style="vertical-align: top;">Kinds of stereotyping Propaganda techniques</td> <td></td> </tr> <tr> <td style="vertical-align: top;">C.10 } C.10 }</td> <td style="vertical-align: top;">Figurative language</td> <td></td> </tr> <tr> <td style="vertical-align: top;">C.10 C.10 } C.10 }</td> <td></td> <td></td> </tr> </table>																				B.4 } B.4 }	Types of logical order		D.2 D.5 D.6	Evaluating written material Disting. bet. clear & unclear material Disting. bet. related & unrel. details		D.2 C.13	Evaluating written material Identifying points of view		C.14 } C.14 }	Fact/opinion		D.7	Propaganda techniques		D.8 D.7 } D.7 }	Kinds of stereotyping Propaganda techniques		C.10 } C.10 }	Figurative language		C.10 C.10 } C.10 }		
B.4 } B.4 }	Types of logical order																																												
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D.2 C.13	Evaluating written material Identifying points of view																																												
C.14 } C.14 }	Fact/opinion																																												
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D.8 D.7 } D.7 }	Kinds of stereotyping Propaganda techniques																																												
C.10 } C.10 }	Figurative language																																												
C.10 C.10 } C.10 }																																													





## ENGLISH - SECONDARY IV

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary English IV course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 63%. Of the twenty centrally-developed items there were four items which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with logical order (item # 32). In interpretive comprehension students are not mastering the objectives of fact/opinion (item # 39) and figurative language (item #'s 45 and 48).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY IV

1985 - 1986

PART I	PART II	PART III																			
1 - 20	21 - 30	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 12	<p>B.4 } Types of logical order</p> <p>B.4 } Evaluating written material</p> <p>D.2 } Disting. bet. clear &amp; unclear material</p> <p>D.5 } Evaluating written material</p> <p>D.2 } Disting. bet. clear &amp; unclear material</p> <p>D.5 } Identifying points of view</p> <p>C.13 } Fact/opinion</p> <p>C.14 } Propaganda techniques</p> <p>C.14 } Types of stereotyping</p> <p>D.7 } Figurative language</p> <p>D.7 } </p> <p>D.8 } </p> <p>D.8 } </p> <p>C.10 } </p> <p>C.10 } </p> <p>C.10 } </p> <p>C.10 } </p> <p>C.10 } </p> <p>C.10 } </p>																			



**MATHEMATICS**  
**ELEMENTARY AND MIDDLE**

## MATHEMATICS - LEVEL 1

### INSTRUMENT AND POPULATION DESCRIPTION

The test is a fifty item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (10 items), Fractions and Money (10 items), Measurement/Geometry (10 items), and Computation (20 items).

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were reported.

### SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed only fairly on this test with a system-wide average score of 74%. On both the Numbers/Numeration and Fractions/Money subtests the average score was 14 out of a possible 20 points. On the Measurement/Geometry subtest the average score was 16 out of a possible 20 points. On the Computation subtest the average score was 30 out of a possible 40 points. These data suggest that there is no one area in which students are having difficulty, instead it is with selected objectives in each of the strands.

12/24/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 LEVEL 1

TECR99D02

SCHOOL CODE	SCHOOL NAME	----- MATHEMATICS -----				// //
		NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	
4160	GARDNER ELEMENTARY	08	08	09	16	/
4170	GARFIELD ELEMENTARY	06	06	07	13	/
4173	WINSHIP ELEMENTARY	07	07	07	15	/
4220	HAMILTON ELEMENTARY	07	06	08	14	/
4221	BALDWIN ELEMENTARY	08	08	09	17	/
4570	TUOHIN ELEMENTARY	07	07	08	15	/
4571	FARRAGUT ELEMENTARY	08	08	08	13	/
4010	AGASSIZ ELEMENTARY	07	07	08	15	/
4240	FLLIS ELEMENTARY	08	07	08	15	/
4241	HIGGINSON ELEMENTARY	07	08	09	17	/
4270	J KE:INFODY ELEMENTARY	08	07	08	17	/
4310	LONGFELLOW ELEMENTARY	06	06	08	14	/
4311	MANNING ELEMENTARY	08	08	09	17	/
4370	WENDELL ELEMENTARY	08	07	08	16	/
4371	FULLER ELEMENTARY	06	06	07	12	/
4430	PARKMAN ELEMENTARY	09	09	09	18	/
DISA		07	07	08	15	/
4030	BEETHOVEN ELEMENTARY	08	08	08	16	/
4031	KILMER ELEMENTARY	08	07	07	16	/
4081	BATES ELEMENTARY	07	08	08	14	/
4082	MOZART ELEMENTARY	07	05	07	15	/
4290	LEE ELEMENTARY	07	06	07	15	/
4560	SUMNER ELEMENTARY	07	07	08	15	/
4561	PHILBRICK ELEMENTARY	07	07	07	15	/

12/24/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 LEVEL I

TECR99002

SCHOOL COOF	SCHOOL NAME	MATHEMATICS				// //
		NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	
4690	MATTAHUNT ELEMENTARY	07	07	08	14	/
4070	CHITTICK ELEMENTARY	08	08	08	17	/
4080	CONLEY ELEMENTARY	07	06	07	14	/
4151	TAYLOR ELEMENTARY	06	07	08	14	/
4192	F ROOSEVELT ELEMENTARY	08	08	08	14	/
4200	GRFW ELEMENTARY	09	08	09	16	/
4201	CHANNING ELEMENTARY	08	07	08	15	/
4670	P A SHAW ELEMENTARY	07	07	08	15	/
0158		07	07	08	15	/
4051	DICKERMAN ELEMENTARY	07	06	07	15	/
4130	S GREENWOOD ELEMENTARY	07	07	08	15	/
4131	ENDICOTT ELEMENTARY	07	07	07	14	/
4140	FVERETT ELEMENTARY	07	07	08	15	/
4150	FIFIELD ELEMENTARY	07	07	08	16	/
4250	HOLLAND ELEMENTARY	07	06	07	13	/
4340	MARSHALL ELEMENTARY	07	08	08	15	/
4350	MATHER ELEMENTARY	06	07	08	14	/
4390	KENNY ELEMENTARY	08	08	09	17	/
4391	OHFARN ELEMENTARY	07	06	08	12	/
4400	MURPHY ELEMENTARY	06	07	06	12	/
4550	STONE ELEMENTARY	07	08	09	17	/
4022	PERKINS ELEMENTARY	08	08	08	15	/
4052	WINTHROP ELEMENTARY	09	08	09	18	/
4100	DEVFR ELEMENTARY	08	08	08	15	/

12/24/86

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
LEVEL 1

TECR99002

SCHOOL CODE	SCHOOL NAME	----- MATHEMATICS -----				// //
		NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	
4120	EMERSON ELEMENTARY	07	07	09	15	/
4121	MAGON ELEMENTARY	07	07	08	16	/
4530	RUSSELL ELEMENTARY	08	07	08	16	/
4531	CLAP ELEMENTARY	07	07	08	15	/
4590	TYMAN ELEMENTARY	08	07	08	16	/
4592	PERRY ELEMENTARY	07	07	08	13	/
4630	CONDOM ELEMENTARY	08	07	07	15	/
DISC		07	07	08	15	/
4280	KENT ELEMENTARY	08	08	09	17	/
4283	WPRESCOTT ELEMENTARY	08	08	08	16	/
4381	ELIOT ELEMENTARY	09	08	08	16	/
4640	BLACKSTONE ELEMENTARY	08	08	09	17	/
4650	QUINCY ELEMENTARY	08	08	09	16	/
4062	BRADLEY ELEMENTARY	08	08	09	17	/
4321	ALIGHTFRI ELEMENTARY	07	09	08	18	/
4322	OTIS ELEMENTARY	08	08	09	17	/
4361	ADAMS ELEMENTARY	14	10	11	19	/
4541	P KENNEDY ELEMENTARY	08	08	08	16	/
4543	DONNELL ELEMENTARY	08	08	09	18	/
DISD		08	08	09	17	/
4053	HERVAYOZ ELEMENTARY	07	07	08	14	/
4061	GUILD ELEMENTARY	09	09	09	18	/
4113	HALE ELEMENTARY	07	08	08	16	/
4210	HALFY ELEMENTARY	08	08	08	15	/



12/24/86

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
LEVEL 1

SCHOOL CNOF	SCHOOL NAME	----- MATHEMATICS -----				// //
		NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	
4230	HENNIGAN ELEMENTARY	07	06	08	14	/
4271	CURLEY FLEMENTARY	07	08	08	16	/
4360	MCKAY FLEMENTARY	08	07	07	14	/
4410	DHRFNBERGER ELEMENTARY	08	07	08	16	/
4580	TROTTER ELEMENTARY	07	07	08	15	/
4610	HORACE MANN SCHOOL	03	06	08	09	/
4620	JACKSON MANN ELEMENTARY	07	07	08	14	/
DTSE		07	07	08	15	/
DTSA		07	07	08	15	/
DTSN		07	07	08	15	/
DTSC		07	07	08	15	/
DTSO		08	08	09	17	/
DTSE		07	07	08	15	/
STOT	SYSTEM WIDE TOTALS	07	07	08	15	/

111

## MATHEMATICS - LEVEL 2

### INSTRUMENT AND POPULATION DESCRIPTION

The test is a forty-item multiple choice instrument measuring selected circled objectives in the curriculum strands of Numbers/Numeration (8 items), Computation (6 items), Decimals (4 items), Measurement (6 items), Geometry (6 items), Fractions (5 items), and Graphs (5 items). The test serves both as the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in grade 2 who were administered an on-level test and for whom valid scores were reported.

### SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed only fairly well on this test with a system-wide average score of 69%. In both Numbers/Numeration and Computation the average scores were 13 out of a possible 20 points. In Decimals the average score was 5 out of a possible 10 points. In both Measurement and Geometry the average scores were 10 out of a possible 15 points. Out of a possible 15 points in both Fractions and Graphs the average scores were 10 and 8 respectively. These data suggest that there is no one strand in which students are consistently performing poorly, instead there are difficulties with individual objectives across all strands.

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1984 AVERAGE SCORE REPORT  
LEVEL 2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS						
		NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4160	GARDNER ELEMENTARY	6	5	2	5	4	4	4
4170	GARFIELD ELEMENTARY	7	5	3	4	5	4	3
4173	WINSHIP ELEMENTARY	5	5	2	5	4	4	4
4220	HAMILTON ELEMENTARY	5	4	2	4	4	3	2
4221	BALDWIN ELEMENTARY	5	5	2	4	4	4	3
4570	TOBIN ELEMENTARY	6	5	2	4	5	4	3
4571	FARRAGUT ELEMENTARY	5	5	2	4	4	4	4
4010	AGASSIZ ELEMENTARY	5	5	2	5	4	4	3
4240	ELLIS ELEMENTARY	5	5	2	5	4	4	3
4241	HIGGINSON ELEMENTARY	6	5	2	5	5	4	3
4270	J KENNEDY ELEMENTARY	6	5	2	5	4	4	3
4310	LONGFELLOW ELEMENTARY	3	5	1	5	3	3	2
4311	HANNING ELEMENTARY	6	5	3	5	5	4	4
4370	MENDELL ELEMENTARY	4	5	2	5	3	4	3
4371	FULLER ELEMENTARY	5	5	2	4	4	4	3
4430	PARKMAN ELEMENTARY	7	5	3	5	5	4	4
DISA		5	5	2	4	4	4	3
4030	BEETHOVEN ELEMENTARY	5	5	2	4	5	4	3
4031	ETLHER ELEMENTARY	7	5	2	4	5	4	4
4081	BATES ELEMENTARY	5	5	2	5	5	4	4
4082	MOZART ELEMENTARY	7	5	3	5	5	4	4
4290	LEF ELEMENTARY	6	6	3	5	4	4	4
4560	SUMNER ELEMENTARY	6	5	2	4	4	4	4
4141	PHILBRICK ELEMENTARY	6	5	3	5	4	4	4

12/29/86

ROSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1984 AVERAGE SCORE REPORT  
LEVEL 2

TECR101D02

SCHOOL CODE	SCHOOL NAME	----- MATHEMATICS -----						
		NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4690	MATTAHUNT ELEMENTARY	4	5	2	4	4	3	3
4070	CHITTICK ELEMENTARY	7	5	3	5	5	4	4
4080	CONLEY ELEMENTARY	5	5	3	5	4	4	3
4151	TAYLOR ELEMENTARY	6	5	2	5	4	4	4
4192	F ROOSEVELT ELEMENTARY	6	5	2	5	4	4	4
4200	GREW ELEMENTARY	6	5	2	5	4	4	4
4201	CHANNING ELEMENTARY	5	5	2	5	4	4	4
4670	P A SHAW ELEMENTARY	4	5	2	5	3	4	3
DISP		6	5	2	5	4	4	3
4051	DICKERMAN ELEMENTARY	4	5	2	5	3	4	3
4130	S GREENWOOD ELEMENTARY	4	5	1	4	4	3	3
4131	ENDICOTT ELEMENTARY	5	5	2	5	4	4	3
4140	EVERETT ELEMENTARY	4	4	2	4	4	4	3
4150	FIFIELD ELEMENTARY	4	5	1	5	3	4	3
4250	HOLLAND ELEMENTARY	6	5	2	4	4	4	3
4340	MARSHALL ELEMENTARY	6	5	2	4	4	4	4
4350	MATHER ELEMENTARY	6	5	3	4	5	4	4
4390	KENNY ELEMENTARY	6	5	3	5	5	4	4
4391	OHEARN ELEMENTARY	5	5	2	4	4	4	3
4400	MURPHY ELEMENTARY	6	5	2	5	5	4	4
4550	STONE ELEMENTARY	6	5	3	5	5	4	4
4022	PERKINS ELEMENTARY	5	5	3	4	4	4	4
4052	WINTHROP ELEMENTARY	5	6	2	5	4	5	3
4100	DEVER ELEMENTARY	6	5	3	5	5	4	4

12/29/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 LEVEL 2

TEC101D2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS						
		NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4120	EMERSON ELEMENTARY	6	5	3	5	4	4	3
4121	MASON ELEMENTARY	5	5	2	4	4	4	4
4530	RUSSELL ELEMENTARY	6	5	2	5	4	4	4
4531	CLAF ELEMENTARY	7	5	3	5	5	4	4
4590	TYNAN ELEMENTARY	7	5	3	5	5	4	4
4592	FERRY ELEMENTARY	7	5	2	5	5	4	4
4630	HONDON ELEMENTARY	6	5	2	5	5	4	4
DISC		6	5	2	4	4	4	3
4280	KENT ELEMENTARY	5	5	2	5	4	4	4
4283	WRESCOTT ELEMENTARY	6	5	2	5	4	4	4
4381	ELIOT ELEMENTARY	4	5	2	5	4	4	3
4640	BLACKSTONE ELEMENTARY	5	5	2	4	4	4	4
4650	QUINCY ELEMENTARY	6	5	3	4	4	4	4
4062	BRADLEY ELEMENTARY	5	5	2	4	4	4	4
4121	ALIGHTERI ELEMENTARY	5	5	2	5	4	4	3
4322	OTIS ELEMENTARY	6	5	2	5	5	4	4
4361	ADAMS ELEMENTARY	3	6	1	5	3	3	3
4541	F. KENNEDY ELEMENTARY	6	5	3	5	5	4	4
4543	ODONNELL ELEMENTARY	5	5	3	4	4	4	4
DISD		5	5	2	5	4	4	4
4053	HERNANDEZ ELEMENTARY	6	5	3	5	4	4	4
4061	GUILD ELEMENTARY	6	5	3	5	5	4	4
4113	HALE ELEMENTARY	4	5	2	4	5	4	4
4210	HALEY ELEMENTARY	6	5	3	5	5	4	4

1/22/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 MATHEMATICS AND SCIENCE LEVEL 2

13 CR101001

SCHOOL CODE	SCHOOL NAME	NUMP./ NUMER. (OUT OF 8)	----- MATHEMATICS -----					FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
			COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)			
4230	HENNIGAN ELEMENTARY	4	5	1	4	3	3	3	
4271	CURLEY ELEMENTARY	5	5	3	5	4	4	4	
4360	MCKAY ELEMENTARY	6	5	2	5	5	4	4	
4410	OHRENBERGER ELEMENTARY	5	5	2	5	4	4	3	
4580	TROTTER ELEMENTARY	5	5	2	4	4	4	4	
4610	HORACE MANN SCHOOL	2	3	1	3	2	4	2	
4620	JACKSON MANN ELEMENTARY	4	5	2	4	3	4	3	
DISE		5	5	2	4	4	4	3	
DISA		5	5	2	4	4	4	3	
DISB		6	5	2	5	4	4	3	
DISC		6	5	2	4	4	4	3	
DISD		5	5	2	5	4	4	4	
DISE		5	5	2	4	4	4	3	
SI01	SYSTEM WIDE TOTALS	5	5	2	4	4	4	3	

## SYSTEM SUMMARY ANALYSIS

### MATHEMATICS

#### GRADES 3-8

#### DESCRIPTION OF INSTRUMENTS

Each test for Grades 3-7 is a forty-item, multiple choice test that addresses the circled objectives in each of the Mathematics curriculum strands (Numbers and Numeration, Computation, Fractions, Decimals and Percents, Measurement, Geometry, and Estimating/Graphs). The Level 3 test is a fifty-nine item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

#### DESCRIPTION OF CHART

On the following page a chart is provided that identifies certain items and corresponding objectives at each level. The items are those which fewer than 50% of the students answered correctly.

#### GENERAL TRENDS

Generally, performance is good on the subtests of Numbers/Numeration and Computation with approximately seventy to eighty percent of the students answering the items correctly. However, performance is markedly poor on the subtests of Fractions and Decimals. These deficits have a cumulative effect in that as the grade level of the test increases, the number of incorrect items increases. Only one of the forty items in Level 3 is identified, whereas, by Level 7, nineteen of the forty items (48%) were answered incorrectly by more than 50% of the students. Of these items the greatest preponderance of objectives tapped are the Fraction and Decimals objectives. Another problem area exists in the Measurement subtest, in particular, the objectives relating to English and metric linear measurements, units of capacity, and temperature.

CURRICULUM REFERENCED TEST ANALYSIS  
1985 - 1986  
DEPARTMENT OF EDUCATIONAL TESTING  
MATHEMATICS Grades 3 - 8

LEVEL	ITEM #	% ANSWERING CORRECTLY	OBJECTIVE NUMBER	OBJECTIVE DESCRIPTION
3	21	48%	C.7	solving simple word problems w. frac. arranging unit frac. in order of size solving word problems
	23	44%	C.2	
	29	47%	D.2	
4	19	37%	C.2	comparing size of two common fractions writing improper frac. as mixed numb. writing mixed numb. as improper frac. word prob. involv. dec. and money telling what time it will be identifying types of lines rounding off #'s
	20	47%	C.10	
	21	47%	C.9	
	25	45%	D.7	
	31	43%	E.1	
	33	46%	F.1	
	37	34%	G.1	
5	12	43%	C.13	dividing common fractions add. & sub. common frac. w. unlike denom. sub. common frac. from one-digit whole # mult. common frac. and whole number mult. mixed # by common fraction div. frac. by whole # & visa versa solv. simple proportion prob. div. dec. & mixed dec. of two digits add. & sub. English linear meas. add. & sub. English units of capacity finding area of rectangle or square rounding off mixed decimals
	14	41%	C.5	
	16	42%	C.9	
	17	43%	C.11	
	18	46%	C.12	
	19	46%	C.14	
	20	38%	C.17	
	23	37%	D.7	
	29	26%	E.7	
	30	46%	E.8	
	36	46%	F.12	
	37	44%	G.2	
	6	14	49%	
15		44%	C.8	
17		45	C.10	
19		43%	C.11	
20		47%	C.13	
22		31%	D.3	
26		29%	D.10	
28		46%	D.17	
30		33%	E.10	
32		46%	E.6	
38		38%	G.4	
39		38%	G.8	
7		11	41%	D.14
	13	46%	C.14	
	14	46%	C.6	
	15	36%	E.9	
	16	41%	C.8	
	17	46%	C.9	
	21	30%	D.2	
	25	38%	D.12	
	26	37%	D.9	
	28	28%	D.16	
	29	41%	E.1	
	31	22%	E.10	
	32	33%	F.3	
	33	36%	F.13	
34	33%	F.15		
35	42%	F.16		
37	37%	G.3		
8 *	9	41%	N.A.	'compute by using time compute by using temperature est. weight/mass, cap., time, temp. est. weight/mass, cap., time, temp. perm. of tri., sq., rect. area of tri., sq., rect. using ratio and prop. using simple formulas finding % of # in situations changing frac. to dec.
	12	44%	N.A.	
	18	48%	N.A.	
	19	39%	N.A.	
	23	41%	N.A.	
	24	42%	N.A.	
	47	33%	N.A.	
	48	44%	N.A.	
	53	49%	N.A.	
	54	49%	N.A.	

\* Basic Skills Test



## MATHEMATICS - LEVEL 3

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (7 items), Computation (10 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (4 items), Geometry (3 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average of 76%. Generally, students seem to be mastering the objectives in the subtests of Numbers/Numeration, Measurement, Geometry, and Estimating/Graphs and most of the items tapped in Computation, Fractions, and Decimals/Percents. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation, students are having difficulty with multiplying one or two digits by 10 or 100 adding zeros. Within the Fraction domain students are having difficulty with word problems and arranging unit fractions in order of size. In Decimals/Percents the difficulty lies in solving word problems.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

1985 - 1986

MATHEMATICS - LEVEL 3

NUMBERS AND NUMERATION	COMPUTATION	FRACTIONS	DECIMALS AND PERCENTS	MEASUREMENT	GEOMETRY	ESTIMATING/ GRAPHS
1 2 3 4 5 6 7	1 1 1 1 1 1 1 1 8 9 0 1 2 3 4 5 6 7	1 1 2 2 2 2 8 9 0 1 2 3	2 2 2 2 2 2 4 5 6 7 8 9	3 3 3 3 0 1 2 3	3 3 3 4 5 6	3 3 3 4 7 8 9 0
<p>A.1 Nos. from 0 to 9,999</p> <p>B.6 Multiplying 3-digit nos. by 1-digit nos.</p> <p>A.5 Writing nos. that come before or after a given no.</p> <p>A.8 Identifying odd and even nos.</p> <p>A.3 Identifying place value to the thousand place</p> <p>A.7 Skip counting by twos, threes, etc.</p> <p>A.2 Identifying other ways of writing a given no.</p>	<p>B.1 Memorizing multiplication facts</p> <p>B.3 Adding nos. with up to three digits written vertically</p> <p>B.5 Subtracting 3-digit nos. written vertically</p> <p>B.7 Multiplying three 1-digit nos. written horizontally</p> <p>B.2 Memorizing division facts</p> <p>B.16 Solving word problems</p> <p>B.4 Adding two 1-, 2-, 3-digit nos. written vert. or horiz.</p> <p>B.6 Multiplying 3-digit nos. by 1-digit nos. written vert.</p> <p>B.11 Multiplying 1- and 2-digit nos. by 10 or 100 add zeroes</p> <p>B.16 Solving word problems</p>	<p>C.3 Identifying fractions equal to one whole</p> <p>C.4 Identifying equivalent fractions using drawings</p> <p>C.1 Writing fractions up to eighths for shaded drawings</p> <p>C.7 Solving simple word problems involving fractions</p> <p>C.1 Writing fractions up to eighths for shaded drawings</p> <p>C.2 Arranging unit fractions in order of size; drawings</p>	<p>D.1 Writing nos. for dollars and cents, written words</p> <p>D.3 Smallest no. of coins needed to make an amt. of money</p> <p>D.4 Adding and subtracting dollars and cents</p> <p>D.2 Computing the value of a collection of coins; pictures</p> <p>D.4 Adding and subtracting dollars and cents</p> <p>D.5 Solving word problems</p>	<p>E.1 Telling time from a clock face</p> <p>E.6 Finding a specific day or date on a calendar</p> <p>E.4 Using a chart of time equivalencies with abbreviations</p> <p>F.12 Reading a Fahrenheit thermometer</p>	<p>F.1 Identifying point where two sts. intersect on a map</p> <p>F.6 Finding the perimeter of a square or rectangle</p> <p>F.9 Identifying six geometric solids</p>	<p>G.1 Rounding off numbers to the nearest ten or hundred</p> <p>G.1 Reading and constructing picture or bar graphs</p> <p>G.2</p>





## MATHEMATICS - LEVEL 4

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (4 items), Computation (11 items), Fractions (6 items), Decimals (4 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score of 72%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Decimals, Measurement, Geometry and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals students are having difficulty with word problems involving decimals and money. Within the Measurement domain students are not mastering the objective of telling what time it will be a specified number of hours and minutes hence. In Geometry the difficulty lies with identifying parallel, perpendicular, and intersecting lines on a street map. In Estimating/Graphs only 34% of the students are able to round off numbers to the nearest ten, hundred, or thousand.

The most severe deficits as a strand lie in Fractions where of six items, there are four that fewer than 60% of the students answered correctly. The objectives measured by these items are renaming equivalent fractions to higher denominators, comparing the size of fractions, writing mixed numbers as improper fractions, and its inverse.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

MATHEMATICS - LEVEL 4

1985 - 1986

NUMBERS AND NUMERATION	COMPUTATION	FRACTIONS	DECIMALS	MEASUREMENT	GEOMETRY	ESTIMATING/ GRAPHS
1 2 3 4	5 6 7 8 9 0 1 1 1 1 1 1 2 3 4 5	1 1 1 1 2 2 3 4 5 6 7	2 2 2 2 3 4 5	2 2 2 2 3 3 6 7 8 9 0 1	3 3 3 3 3 4 5 6	3 3 3 4 7 8 9 0
<p>A.5 Skip counting by twos, threes, etc.</p> <p>A.6 Identifying any number as odd or even</p> <p>A.1 Writing numerals to the millions place</p> <p>A.3 Identifying place value to the millions place</p>	<p>B.3 Adding three -digit numbers written vertically</p> <p>B.5 Subtracting two 4-digit nos. with regrouping; vertically</p> <p>B.1 Memorizing multiplication facts through 12 x 12</p> <p>B.2 Memorizing division facts through 144 ÷ 12</p> <p>B.6 Subtracting a 2-digit from a 3-digit no.</p> <p>B.4 Adding two 3- and 4-digit nos. written vert. or horiz.</p> <p>B.7 Multiplying 3-digit nos. by 2-digit nos.; vert.</p> <p>B.8 Multiplying a 2-digit no. by a 1-digit no.; vert. or horiz.</p> <p>B.20 Solving one and two-step word problems</p> <p>B.10 Dividing 4-digit by 1 digit nos.</p> <p>B.20 Solving one and two-step word problems</p>	<p>C.3 Identifying fractions equal to one whole</p> <p>C.5 Renaming equivalent fractions to higher denominators</p> <p>C.7 Adding and subtracting two mixed nos. with like denominators</p> <p>C.4 Comparing the size of two common fractions using or</p> <p>C.10 Writing improper fractions as mixed numbers</p> <p>C.9 Writing mixed numbers as improper fractions</p>	<p>D.1 Writing nos. for dollars and cents written in words</p> <p>D.5 Writing one quarter, one half and three quarters in decimals</p> <p>D.3 Given four sets of coins, identifying which has the most</p> <p>D.7 Solving word problems involving decimals and money</p>	<p>E.4 Doing one-step conversions between seconds and minutes, etc.</p> <p>E.3 Memorizing basic equivalencies of units of time</p> <p>E.17 Identifying the appropriate unit of measurement</p> <p>E.10 Identifying the appropriate measuring instrument</p> <p>E.10 Doing one-step conversions between inches, feet, etc.</p> <p>E.1 Telling what time it will be; no. of hrs. and mins. hence</p>	<p>F.5 Identifying nine two-dimensional figures</p> <p>F.1 Identifying parallel, perpendicular, and intersecting lines</p> <p>F.5 Identifying where these shapes appear in the real world</p> <p>F.9 Finding the perimeter of a rectangle and a square</p> <p>F.13 Recognizing seven geometric solids given drawings and list</p>	<p>G.1 Rounding nos. off to the nearest ten, hundred or thousand</p> <p>G.2 Estimating answers to word problems by rounding off</p> <p>G.4 Using picture and bar graphs to answer ques. and solve prob.</p>







## MATHEMATICS - LEVEL 5

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (2 items), Computation (6 items), Fractions (12 items), Decimals/Percents (5 items), Measurement (7 items), Geometry (4 items), and Estimating/Graphs (4 items). The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, performance on this test was fair with a system-wide average score of 65%. Generally, students appear to be mastering the objectives measured in the Numbers/Numeration and Computation subtests and most of the objectives tapped in Decimals/Percents, Measurement, Geometry, and Estimating/Graphs. However, within those subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals/Percents students are having difficulty with dividing decimals and mixed decimals. Within the Measurement domain students are not mastering the objectives involving English units of measurement. In Geometry the difficulty lies with finding the area of a rectangle or a square. In Estimating/Graphs only 44% of the students were able to round off mixed decimals to the nearest whole number.

The most severe deficits as a strand lie in Fractions where of twelve items, there are ten that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying of fractions and mixed fractions and solving word problems involving fractions.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL  
1985 1986

MATHEMATICS - LEVEL 5

NUMBERS AND NUMERATION	COMPUTATION	FRACTIONS	DECIMALS AND PERCENTS	MEASUREMENT	GEOMETRY	ESTIMATING/GRAPHS
1 2	3 4 5 6 7 8	1 1 1 1 1 1 1 1 2 9 0 1 2 3 4 5 6 7 8 9 0	2 2 2 2 2 1 2 3 4 5	2 2 2 2 3 3 3 6 7 8 9 0 1 2	3 3 3 3 3 4 5 6	3 3 3 4 7 8 9 0
A.1 Writing numerals to the hundred millions place A.3 Identifying place value to the hundred millions place	B.4 Multiplying 4-digit multiplicands by 1-digit multipliers B.6 Dividing 3-digit numbers by 2-digit numbers with remainder B.9 Finding the average of a set of 2-digit numbers B.1 Adding columns of four 4-digit nos. or three 5-digit nos. B.16 Solving one and two-step word problems B.15 Finding the missing info. needed to solve a word problem	C.2 Shading in a fractional part of a whole unit C.6 Identifying fractions equivalent to one half, one third, etc. C.10 Multiplying common fractions with cancellation C.13 Dividing common fractions C.18 Solving one and two-step word problems C.5 Adding and subtracting common fractions with unlike denoms. C.8 Adding and subtracting mixed nos. with like denominators C.9 Subtracting a common fraction from a one-digit whole no. C.11 Multiplying a common fraction and a whole number C.12 Multiplying a mixed no. by a common fraction C.14 Dividing fractions by whole numbers and vice-versa C.17 Solving simple proportion probs. in fraction and ration form	D.5 Adding and subtracting decimals and mixed decimals D.6 Multiplying simple decimals and mixed decimals D.7 Dividing decimals and mixed decimals of two digits D.10 Solving one and two-step word problems D.9 Applying the complementarity of percents to 100%	E.1 Calculating elapsed time given two points in time E.3 Telling the no. of days in ea. month and order of the months E.6 Adding and subtracting English linear measurements E.7 Adding and subtracting metric linear measurements E.8 Adding and subtracting English units of capacity E.14 Identifying the appropriate measuring instrument for a task E.13 Memorizing the boiling and freezing points of water; Celsius	F.1 Identifying terms dealing with lines given a map or drawing F.7 Identifying where these shapes appear in the real world F.11 Finding the perimeter of polygons F.12 Finding the area of a rectangle or square	G.2 Rounding off mixed decimals to the nearest whole number G.5 Using picture, bar and line graphs to answer questions G.3 Estimating answers to word problems by rounding off G.1 Rounding off whole numbers





## MATHEMATICS - LEVEL 6

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (4 items), Computation (5 items), Fractions (10 items), Decimals/Percents (9 items), Measurement (4 items), Geometry (4 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 57%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation, but there are isolated objectives in the strands of Decimals/Percents, Measurement, Geometry, and Estimating/Graphs that a significant percentage of students are not mastering. Within the Decimals/Fractions strand, students are having difficulty with arranging decimals in order of size, changing common fractions with terminating decimals, and finding the percent of a whole number. Within Measurement students are not mastering the objectives concerned with renaming improper English and Metric linear measures. In Geometry the difficulty lies with finding perimeters and identifying terms dealing with lines. In Estimating/Graphs only 38% of the students are able to obtain information from a table or schedule or from bar, line, or circle graphs.

The most severe deficits as a strand lie in Fractions where of 10 items, there are eight that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying common and mixed fractions.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

MATHEMATICS - LEVEL 6

1985 - 1986

A.5	Arranging integers in order	1	
A.8	Identifying nos. divisible by 2,3,4, etc. and odd or even	2	
A.3	Identifying place value to the billions place	3	
A.11	Writing exponents in words and vice-versa	4	
B.3	Multiplying 4-digit nos. by 3-digit nos., vert. or horiz.	5	
B.4	Dividing 4-digit nos. by 2-digit nos.	5	
B.7	Finding the average of a set of 2-digit nos.; word prob.	7	
D.9	Writing fractions and mixed nos.	8	
B.10	Solving computations with 2 exponents to the power	9	
C.15	Solving one and two-step word problems	9	1
B.17	Solving one and two-step word problems	0	1
C.5	Add and subtract common fractions with unlike denoms.	1	1
C.6	Finding a fractional part of a large number	1	1
C.7	Adding mixed nos. with like denoms; regrouping	2	1
C.8	Subtracting mixed nos. with like denoms.; regrouping	3	1
C.9	Add and subtract mixed nos. with unlike denoms; no regroup	4	1
C.10	Multiplying 2 or 3 common or mixed fractions, or whole no.	5	1
C.10		6	1
C.11	Dividing common or mixed fractions or whole nos.	7	1
C.13	Solving ration and proportion problems	8	1
D.1	Writing mixed decimals in words to the ten thousandths	9	1
D.3	Arranging decimals in order of size	0	2
D.6	Add and subtract decimals and mixed decimals w/diff. nos.	1	2
D.7	Multiplying decimals with 2-digit multipliers	2	2
D.8	Dividing decimals with 1-digit divisors	2	2
D.10	Changing common fractions with terminating decimals	3	2
D.12	Changing decimals to the hundredths place to percents	4	2
D.17	Finding the percent of a whole number	5	2
E.2	Renaming improper measures of time with two measures	6	2
E.10	Knowing an approximate Celsius temperature reading	7	2
E.6	Renaming improper English and metric linear measures	8	3
E.6		9	3
F.6	Identifying ten two-dimensional figures	0	3
F.11	Finding the perimeter of a square, rectangle or triangle	1	3
F.1	Identifying terms dealing with lines given map or drawing	2	3
F.14	Identifying center, diameter, radius, chord & circumference	3	3
G.1	Rounding off whole numbers to any place	4	3
G.4	Identifying probability in word problems	5	3
G.8	Getting information from a table or sched e	6	3
G.5	Using picture, bar, line and circle graphs	7	3
		8	4
		9	4
		0	4



## MATHEMATICS - LEVEL 7

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (5 items), Computation (6 items), Fractions (7 items), Decimals/Percents (9 items), Measurement (3 items), Geometry (5 items), and Estimating/Graphs (5 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 54%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Estimating/Graphs. However, within these subtests there are isolated objectives on which students are doing poorly. These objectives involve identifying the missing information needed to solve word problems, estimating answers to word problems by rounding off, and getting distance information from a scale drawing.

In the strands of Fractions, Decimals/Percents, Measurement, and Geometry there appear to be severe deficits. In Fractions out of seven items, there are six in which students performed very poorly. The objectives covered by these items include subtracting, multiplying, and dividing common fractions or mixed or whole numbers, solving ratio and proportion problems, and solving one and two-step word problems involving fractions. In Decimals/Percents performance on all nine items was poor. The objectives measured were writing fractions as decimals and its inverse, finding a fractional part of a whole number, identifying decimal place value, and adding and subtracting decimals and mixed decimals and whole numbers. In Measurement most students are unable to calculate elapsed time given two points in time and do not know approximate Celsius temperature reading. In Geometry performance on all five items was poor. The objectives measured were identifying the perimeter and area of figures, and identifying geometric terminology.



BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

MATHEMATICS - LEVEL 7

1985 - 1986

A.1	Writing numerals to the hundred trillions place	1
A.3	Identifying place value to the trillions place	2
A.5	Arranging any integers in order	3
A.8	Identifying nos. divisible by 2, 3, 4, etc. & odd and even	4
B.10	Solving probs. with 2 or 3 exponents up to the 5th power	5
A.11	Expressing exponents in words and vice-versa	6
B.1	Adding nos. with up to 7 digits; vert or horiz	7
B.2	Subtracting nos. with up to 8 digits; vert. or horiz.	8
B.3	Multiplying 5-digit by 3-digit nos.; vert. or horiz.	9
D.10	Writing fractions and mixed fractions as decimals	0
D.14	Changing common fractions to percents	1
B.16	Identifying the missing info. needed to solve word prob.	1
C.14	Solving one and two-step word probs. with fractions	2
C.6	Finding a fractional part of a large number	3
E.9	Knowledge of boiling & freezing points of water & body temp	4
C.8	Subtracting mixed nos. with unlike denoms.; regrouping	5
C.9	Multiplying 2 or 3 common fractions or mixed or whole nos.	6
C.10	Dividing common fractions or mixed or whole nos.	7
C.12	Solving ratio and proportion problems	8
D.1	Writing mixed decimals to the millionth place as nos.	9
D.2	Identifying decimal place value to the millionths place	0
D.6	Add and subtract decs. & mixed decs. & whole numbers	1
F.8	Identifying polygons with up to twelve sides	2
D.8	Dividing decs., mixed decs. and whole nos. w/2-dig. divis.	2
D.12	Changing decimals to the thousandths place and mixed to %	3
D.9	Dividing by 10, 100 or 1000 by moving the decimal point	4
D.11	Changing any common fraction to a decimal	5
D.16	Finding the % of a whole no. or mixed decimal	6
E.1	Calculating elapsed time given two points in time	7
E.4	Interpreting and writing dates in numerical form	8
E.10	Knowing an approximate Celsius temperature reading	9
F.3	Identifying a ray, vertex, angle & bisector of an angle	0
F.13	Finding the perimeter of any figure given a word problem	1
F.15	Finding the area of any triangle, parallelogram or trapez.	2
F.16	Identifying center, diameter, radius, chord, arc, etc.	3
G.2	Rounding off decimals or mixed decimals to any place	3
G.3	Estimating answers to word probs. by rounding off	4
G.4	Identifying probability in word problems	5
G.6	Using picture, bar, line, & circle graphs with multiples	6
G.10	Getting distance info. on a map or scale drawing	7
		8
		9
		0
		1
		2
		3
		4



## MATHEMATICS - LEVEL 8

### INSTRUMENT AND POPULATION DESCRIPTION

This is a fifty-nine item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the State Basic Skills Test in Mathematics.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Since the test was developed outside the system, the test is not divided into domains as is the case with locally developed tests; however, for analysis individual items were categorized according to the domains in the curriculum guide. Generally, students appear to have mastered the items that could be described as being in the strands of Numbers/Numeration and Fractions and most of the items tapped in the other strands of Computation, Decimals/Percents, Geometry, Measurement, and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation students are having difficulty with simple formulas. Within the Decimals/Percents students are not mastering using ratio and proportion, using simple interest and discount, and changing a fraction to a decimal. In Geometry the difficulty lies with finding the perimeter and area of various figures (i.e., triangle, square, and rectangle). In Measurement students are unable in large percentages to compute using numbers involving time and temperature. In Estimating/Graphs the difficulty lies with estimating the length, weight/mass, capacity, area, and volume.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits in each of the domains.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

BASIC SKILLS TEST - FORM 7

MATHEMATICS - LEVEL 8

1985 - 1986

1 2 3 4 5 6 7 8 9 0 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5

Recognize no. symbols, whole nos., frac., decimals, & powers of 10

Choose an appropriate unit of measurement in US customary system  
 Choose an appropriate unit of measurement in the metric system  
 Choose an appropriate measurement instrument involving cust. & metric  
 Use a map to compute highway distances  
 Convert common measurements within the same system  
 Compute by using time  
 Relate total cost and cost per unit  
 Compute by using temperature  
 Round off numbers to a specified place  
 Approximate the answer to a computation problem

Read a scale drawing  
 Estimate length, wt./mass., capacity, time, temp., area & volume

Estimate money  
 Find the volume of a cube or other rectangular solid  
 Find the perimeter of a triangle, square, and rectangle  
 Find the area of a triangle, square, and rectangle  
 Identify right angles & parallel, perpendicular, & intersecting lines  
 like those in a street map  
 Identify odd and even numbers

Recognize the shape of a cube, cylinder, or sphere  
 Identify the radius, diameter & center of a circle  
 Recognize the shape of a square, rectangle, triangle or parallelogram  
 Add, subtract, multiply, and divide whole numbers

Interpret a line graph  
 Add, subtract, multiply, and divide whole numbers  
 Add and subtract mixed numbers  
 Multiply whole numbers or money by fractions  
 Read a table

Find & use averages (mean & median) for a group of numbers  
 Understand probabilities like weather forecasting or lotteries  
 Use ratio and proportion  
 Use simple formulas

Find a percent of a no. in a situation, i.e.; simple interest, discounts  
 Find a percent of a no. in situation, i.e.; simple int., discounts  
 Use ratio and proportion  
 Find a percent of a no. in a situation, i.e.; simple int., discounts  
 Change a fraction to a decimal  
 Interpret a bar graph  
 Add, subtract, multiply and divide decimal nos. like money

Interpret a circle graph



982 MATH LEVEL B                      TECH5005                      11/07/06

PERCENTAGE OF CORRECT ANSWERS PER ITEM

NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	TOTAL
2130	60	75	62	61	53	53	30	42	65	54	55	53	47	48	71	70	81	60	68	64
2170	53	80	85	72	51	55	28	41	64	55	61	53	53	57	80	84	87	73	79	67
4570	47	60	65	47	34	47	30	30	56	60	47	43	30	39	52	69	78	69	69	57
2060	48	81	86	64	48	51	21	35	67	43	59	45	48	32	70	72	78	48	86	61
2070	51	65	69	48	39	39	19	34	56	46	56	45	45	39	63	61	68	54	61	57
2240	53	85	91	64	50	56	17	50	77	49	54	61	43	56	78	82	89	64	80	69
DISA	54	74	79	60	47	49	24	39	63	51	56	51	47	47	71	72	79	64	71	63
2110	50	75	77	56	38	45	31	47	65	50	56	61	50	43	61	72	75	54	63	64
2170	52	76	72	68	43	53	17	35	70	54	58	50	33	46	66	68	78	63	60	59
2140	71	77	62	69	58	64	34	45	78	60	66	61	66	52	81	82	82	66	68	71
2200	53	78	77	45	57	67	22	30	57	43	51	64	44	32	75	83	85	64	76	61
2950	55	83	90	77	60	59	20	33	80	55	67	59	51	43	79	82	86	65	83	69
DISB	57	79	81	66	33	59	24	36	72	53	61	59	50	44	74	79	82	64	72	66
2030	50	80	81	62	54	59	11	21	64	50	56	47	51	48	72	70	79	58	69	65
2080	51	66	80	62	47	53	23	32	45	38	25	25	20	27	53	57	56	32	56	54
2180	54	69	73	56	48	55	31	34	53	45	35	42	22	31	48	59	60	52	52	57
2090	55	81	82	65	37	47	25	29	54	42	43	47	39	37	75	75	76	62	70	62
2190	49	72	81	66	50	62	24	29	63	55	53	52	44	47	69	70	84	67	70	63
2260	56	83	83	50	41	50	9	20	50	56	52	50	50	41	77	71	83	62	67	59
DISC	52	75	79	61	48	55	22	28	57	49	45	44	38	39	65	67	73	56	64	61
2010	85	83	83	80	60	64	51	52	88	77	80	77	74	69	80	89	87	83	76	76
2040	58	76	78	59	45	67	25	28	50	57	65	55	56	4	73	68	80	53	76	63
2050	76	84	88	79	70	82	49	56	82	62	63	68	58	75	86	88	87	81	80	78
DISD	75	81	84	74	60	72	43	47	76	66	69	68	63	65	81	83	85	74	78	73
1010	81	93	93	85	80	84	64	87	88	75	63	76	60	61	88	81	74	61	80	83
1020	72	91	94	90	77	81	54	70	89	62	53	77	53	58	91	85	83	66	86	75
1240	45	76	82	58	45	50	20	39	64	45	51	46	44	43	76	79	77	62	60	61
2100	57	63	76	56	46	53	18	31	53	46	52	49	45	36	72	61	71	54	59	57
2270	50	72	84	50	35	47	23	12	43	26	39	45	34	41	63	63	67	56	58	54
2980	61	80	87	76	45	62	24	41	74	58	63	47	56	54	84	82	87	76	78	68
DISE	68	85	89	77	66	72	45	62	78	60	56	65	52	53	84	78	77	63	76	73
DISA	54	74	79	60	47	49	24	39	63	51	56	51	47	47	71	72	79	64	71	63
DISB	57	79	81	66	53	59	24	36	72	53	61	59	50	44	74	79	82	64	72	66
DISC	52	75	79	61	48	55	22	28	57	49	45	44	38	39	65	67	73	56	64	61
DISD	75	81	84	74	60	72	43	47	76	66	69	68	63	65	81	83	85	74	78	73
DISE	68	85	89	77	66	72	45	62	78	60	56	65	52	53	84	78	77	63	76	73
STOT	61	79	83	68	56	62	33	44	69	56	56	57	49	49	75	75	78	63	72	67

HIGH SCHOOL MATHEMATICS

## GENERAL MATHEMATICS

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Numbers/Numeration (3 items), Computation (8 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (5 items), Geometry (10 items), Estimating/Graphs (2 items).

The population includes all high school students (with the exception of the exam schools) who took the General Mathematics course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students appear to be mastering the objectives in the Estimating/Graphs domain and most of the items in the Numbers/Numeration domain. However, in the Computation domain, out of eight items there were four items which fewer than 50% of the students answered correctly. The objectives measured by these items were: finding the average of whole numbers and decimals; knowing the order of operations; writing number sentences for word sentences; and solving a simple equation with one variable and one operation. In Fractions the difficulty lies with multiplying fractions and solving one and two-step problems involving fractions. Within the Measurement domain students are having difficulty with performing two-step conversions between units of time, and performing two-step conversions within English and metric measures.

The most severe deficits as strands lie in the domains of Decimals/Percents and Geometry. All six items measuring objectives in Decimals/Percents were answered correctly by fewer than fifty percent of the students. The objectives covered were changing fractions to decimals and decimals to fractions, finding the percent of a given number, and solving one and two-step word problems involving decimals and percents. Of the ten Geometry items there were seven that were answered correctly by fewer than fifty percent of the students. The objectives tapped were identifying various types of triangles, parts of geometric figures, types of geometric solids, the area of a given figure, and the circumference of a circle.



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

GENERAL MATHEMATICS

1985 - 1986

B.2	Subtract numbers with up to seven digits	1	
B.4	Divide five-digit by three-digit nos. with remainders	2	
B.7	Find the average of whole nos. and decimals; word problems	3	
B.17	Solving one-, two-, or three-step word problems	4	
C.3	Arranging fractions in order of size	5	
C.7	Add 2 or 3 mixed nos. with unlike denominators; regrouping	6	
E.2	Doing two-step conversions between units of time	7	
E.12	Identify the appropriate unit of measurement; Engl. or metr.	8	
F.13	Find the perimeter of any figure, given a word problem	9	
A.10	Express a no. up to 100 as a product of prime factors	0	1
A.4	Identify a 10-digit no. from its expanded exponential not.	1	1
A.13	Finding the square roots of perfect squares	1	1
B.9	Knowing the order of operations	2	3
B.12	Writing open no. sentences for word sentences	3	4
B.13	Solving a simple equation with one variable & one operation	4	5
B.16	Identifying missing info needed to solve a word problem	5	6
C.9	Multiply 2 or 3 common frac., mixed nos, find frac. of money	6	7
C.10	Divide common fractions, mixed nos. or whole nos.	7	8
C.12	Solve ratio and proportion problems	8	9
D.11	Change any common fraction to a decimal	9	0
C.14	Solve 1- and 2-step word problems involving fractions	0	1
D.12	Change decimals to the 1,000 place and mixed dec. to %	1	2
D.14	Change common fractions to percents; w/terminating decimals	2	3
D.16	Finding the percent of a whole no. or mixed decimal	2	3
D.17	Finding what percent one number is of another; word problem	2	3
D.19	Solving 1- & 2-step word probs. involving decimals & perc.	2	3
E.6	Doing 2-step conversions within English & metric measures	2	3
E.8	Doing 2-step conversions within English & metric weight	2	3
E.9	Knowledge of degrees in Fahrenheit to do simple word problem	2	3
G.3	Estimating answers to word problems by rounding off	2	3
F.6	Find a missing angle in a triangle and quadrilateral	2	3
F.8	Identifying polygons with up to twelve sides	2	3
F.12	Identifying an isosceles, scalene and equilateral triangle	2	3
F.15	Find the area of a triangle, parallelogram or trapezoid	2	3
F.16	Identify center, diameter, radius, chord, arc, etc; circle	2	3
F.17	Finding the circumference of a circle	2	3
F.18	Finding the area of a circle	2	3
F.19	Identifying seven geometric solids	2	3
F.21	Find the volume of a rectangular solid or cube; word prob.	2	3
G.4	Identifying probability in word problems	2	3

417 GENERAL MATH      TECR5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PLR ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	90	75	46	59	56	34	28	96	84	53	65	53	37	6	37	78	25	34	62	15	21	46	46	37	21	37	40	12	46	59	28	43	25	46	25	37	15	46	53	62	44
1110	88	72	47	76	46	52	39	89	71	55	66	50	40	21	42	85	30	47	44	15	43	59	44	40	44	30	55	27	57	63	40	60	24	52	44	42	8	40	52	59	49
DISA	89	73	47	71	49	46	35	92	75	54	66	51	39	16	40	83	28	43	50	15	36	55	45	39	37	32	50	22	54	62	36	55	24	50	38	40	10	42	52	60	48
1250	96	54	52	74	34	50	15	90	82	35	49	34	17	21	32	90	27	51	48	5	48	34	35	43	45	36	44	16	61	67	18	35	18	37	14	27	22	8	36	63	42
1100	90	79	45	81	57	78	28	96	93	70	76	46	26	15	40	89	53	81	48	25	45	54	59	46	43	31	42	14	76	71	53	68	31	35	20	32	21	32	50	75	53
DISB	93	65	49	77	44	62	20	93	87	50	61	39	21	18	36	89	38	64	48	14	46	42	45	44	44	34	43	15	67	69	33	49	24	36	16	29	22	18	42	68	46
1060	91	82	44	83	57	57	33	91	83	67	71	48	58	33	42	94	33	58	58	30	58	32	50	46	48	50	46	35	69	42	60	39	44	42	57	39	37	50	78	55	
1120	93	90	51	78	71	61	40	88	86	61	70	45	36	11	43	91	41	63	41	18	43	41	50	46	58	38	56	21	60	76	33	48	31	50	28	30	28	35	66	73	52
1160	90	70	55	77	49	55	43	91	73	54	62	49	48	19	40	91	29	44	57	19	44	47	41	39	41	28	47	24	63	62	47	50	42	36	27	48	24	27	42	66	49
DISC	91	79	42	79	58	57	39	90	80	60	66	47	47	21	41	92	34	54	53	22	48	41	46	43	48	37	49	26	64	72	41	52	38	42	32	45	29	32	51	71	51
1050	86	81	60	81	68	68	42	84	81	63	57	65	28	15	55	84	36	52	57	23	44	63	44	57	50	55	52	18	60	73	36	47	31	39	21	42	26	26	65	60	52
1070	89	87	46	84	50	57	28	95	93	67	51	32	32	57	65	93	31	62	48	18	43	70	60	42	40	46	53	14	82	78	40	48	31	39	23	43	26	51	57	78	54
DISE	88	85	51	83	56	61	33	91	89	65	53	45	31	42	61	90	33	58	51	20	44	67	54	48	44	50	52	15	74	76	39	48	31	39	22	43	26	42	60	71	53
1080	91	74	40	67	45	56	40	81	81	55	56	58	30	17	44	86	30	48	42	19	52	44	34	49	41	24	40	22	53	68	40	46	31	46	42	50	25	26	44	66	38
1190	90	89	39	84	56	69	48	93	87	71	75	53	48	18	43	91	42	76	51	20	53	42	71	59	48	41	66	25	72	85	41	61	48	58	29	49	25	42	71	58	58
1210	89	73	45	77	45	46	40	85	73	72	65	60	48	29	52	89	34	49	54	33	42	52	53	50	42	36	42	24	76	61	42	62	53	44	49	45	25	44	54	81	53
1240	89	84	46	81	46	42	36	92	81	42	57	35	27	25	42	90	18	39	56	14	34	46	35	35	56	32	40	15	70	72	40	39	28	39	38	31	28	31	48	76	47
DISE	90	79	42	75	48	55	41	87	81	59	62	53	36	21	45	88	31	53	49	20	47	45	46	49	46	32	47	21	64	72	41	51	38	47	39	45	25	33	53	75	51
DISA	89	73	47	71	49	46	35	92	75	54	66	51	39	16	40	83	28	43	50	15	36	55	45	39	37	32	50	22	54	62	36	55	24	50	38	40	10	42	52	60	48
DISB	93	65	49	77	44	62	20	93	87	50	61	39	21	18	36	89	38	64	48	14	46	42	45	44	44	34	43	15	67	69	33	49	24	36	16	29	22	18	42	68	46
DISC	91	79	42	79	58	57	39	90	80	60	66	47	47	21	41	92	34	54	53	22	48	41	46	43	48	37	49	26	64	72	41	52	38	42	32	45	29	32	51	71	51
DISD	88	85	51	83	56	61	33	91	89	65	53	45	31	42	61	90	33	58	51	20	44	67	54	48	44	50	52	15	74	76	39	48	31	39	22	43	26	42	60	71	53
DISL	90	79	42	75	48	55	41	87	81	59	62	53	36	21	45	88	31	53	49	20	47	45	46	49	46	32	47	21	64	72	41	51	38	47	39	45	25	33	53	75	51
SIJH	90	77	44	77	50	56	36	89	82	58	62	49	36	22	44	89	33	54	50	19	46	47	47	46	45	35	48	21	65	71	39	51	34	44	33	42	24	33	52	72	50



## BASIC MATHEMATICS I

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (7 items), Computation (4 items), Fractions (8 items), Decimals/Percents (7 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (3 items).

The population includes all high school students (with the exception of the exam schools) who were enrolled in the Basic Mathematics course and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 44%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Estimating/Graphs items; in the latter domain students had difficulty rounding off mixed decimals to the nearest whole number.

However, for all other domains there are many items in which students are performing very poorly. In Numbers/Numeration students had difficulty identifying place value to the hundred millions place, arranging integers in order, and finding the square root of perfect squares. In the Fractions domain, out of eight items, there are six that fewer than 50% of the students answered correctly. The objectives measured by these items are adding, subtracting, multiplying, and dividing common fractions and whole numbers. In the Decimals/Percents domain, out of seven items, there are five that fewer than 50% of the students answered correctly. Students had difficulty with multiplying and dividing simple and mixed decimals and identifying decimal place value to the thousandths place. In both Measurement and Geometry, all items were answered incorrectly by more than 50% of the students. In Measurement many students are unable to calculate elapsed time given two points in time; to add and subtract English linear measurement and units of weight with regrouping; and identify the appropriate unit of measurement in English or metric. In the Geometry domain, many students are unable to find the perimeter or area for various geometric shapes; and identify terms dealing with lines given a map or isolated drawings.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

BASIC MATHEMATICS I

1985 - 1986

A.3	Identifying place value to the hundred millions place	1
A.4	Arranging integers in order (under ten)	2
A.6	Identifying numbers divisible by 2, 3, 4, 5, and 10	3
A.8	Identify the prime factors of nos. between one and fifty	4
A.11	Finding the square root of perfect squares	5
B.2	Add 3 nos. w/different nos. of digits, written vert. or horiz.	6
B.6	Divide 3-digit nos. by 2-digit nos. with remainders	7
B.9	Find the average of a set of 2-digit nos. (no remainders)	8
B.10	Multiply and divide in parenthesis before add or subtract	9
C.2	Shading in a fractional part of a whole unit	10
C.4	Identify fractions equal to one-half, one-third, one-fourth, etc.	11
C.3	Add & subtract common fractions w/unlike denominators	11
C.6	Add & subtract mixed nos. w/like denoms, no regrouping	12
C.7	Subtract a common fraction from a 1-digit whole number	13
C.8	Multiply common fractions w/cancellation "of" substitutes x sign	14
C.9	Multiply a common fraction & a whole no. "of" for x sign	15
A.7	Identify prime and composite nos. between one and fifty	16
C.11	Divide common fractions, answers in simplest terms	17
D.5	Add & subtract decimals & mixed decimals, w/unequal nos of place	18
D.6	Multiply simple deci. & mixed deci. w/1-digit multiplrs & multcd	19
D.	Divide decis. & mixed decis. of 2-digits by 1-digit divisors	20
D.8	Writing mixed fractions w/10ths and 100ths as mixed decimals	22
D.2	Identifying decimal place value to the thousandths place	23
D.9	Applying the complementarity of percents to 100%	24
E.1	Calculate elapsed time given 2 pts. in time in digital or conven	25
E.3	Tell the no. of days in ea. month & order of the months	26
E.6	Add & subtract English linear measurements w/regrouping	27
D.1	Write mixed decis. to the 1000th place written in words as nos.	28
E.10	Add & subtract English units of weight with regrouping	29
E.12	Knowledge of degrees in Fahrenheit & boiling & freezing points	30
E.15	Identify the appropriate unit of measurement English or metric	31
F.1	Identify terms dealing w/lines given a map or isolated drawings	33
A.9	Expressing exponents in words and vice-versa	33
G.2	Rounding off mixed decimals to the nearest whole number	34
F.9	Finding the perimeter of polygons	35
F.10	Find the area of a rectangle or square, given the formula	36
F.11	Find the area of a right triangle, given formula, ans. sq. unit	37
F.12	Identifying the diameter of a circle	38
G.3	Estimating answers to word problems by rounding off	39
G.5	Use picture, bar & line graphs to answer ques. & solve problems	40

415 BASIC MATH I      TCCR5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCALE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL			
1100	61	58	64	38	48	93	64	58	70	35	80	38	48	54	51	58	51	70	58	6	38	41	70	35	16	9	61	22	6	54	38	74	29	35	29	45	41	45	70	47				
DISB	61	58	64	38	48	93	64	58	70	35	80	38	48	54	51	58	51	70	58	6	38	41	70	35	16	9	61	22	6	54	38	74	29	35	29	45	41	45	70	47				
106J	**	50	83	66	83	**	66	66	66	33	83	33	**	**	33	66	83	66	83	33	0	66	33	83	33	83	16	50	16	50	66	66	**	50	33	66	66	50	83	**	62			
DISC	**	50	83	66	83	**	66	66	66	33	83	33	**	**	33	66	83	66	83	33	0	66	33	83	33	83	16	50	16	50	66	66	**	50	33	66	66	50	83	**	62			
105J	31	43	25	73	25	60	40	63	33	35	31	33	40	26	33	26	56	25	36	31	35	21	21	26	48	21	26	48	30	38	30	33	26	41	35	50	50	26	56	46	37			
1070	39	45	61	80	32	79	54	56	38	44	46	26	46	30	29	34	40	27	54	32	25	42	31	43	39	21	40	51	40	30	44	29	32	42	38	52	36	36	48	82	42			
DISD	36	44	46	77	29	71	48	59	36	40	40	29	43	29	31	31	47	26	47	32	29	33	27	36	43	21	35	50	36	33	38	31	30	41	37	51	41	32	52	68	40			
1190	72	44	62	34	58	**	89	58	72	44	79	37	79	51	51	51	68	72	82	65	0	44	48	79	51	24	34	41	48	20	34	58	89	48	34	24	27	34	65	82	54			
1210	62	71	51	60	68	88	71	65	88	37	65	37	48	37	34	51	60	37	82	31	2	54	20	48	42	31	8	54	14	45	20	54	74	40	48	8	62	57	51	40	48			
DISL	67	59	56	48	64	93	79	62	81	40	71	37	62	43	42	51	64	53	82	46	1	50	32	62	46	28	20	48	29	34	26	56	81	43	42	15	46	46	57	59	51			
DISA																																												
DISB	61	58	64	38	48	93	64	58	70	35	80	38	48	54	51	58	51	70	58	6	38	41	70	35	16	9	61	22	6	54	38	74	29	35	29	45	41	45	70	47				
DISC	**	50	83	66	83	**	66	66	66	33	83	33	**	**	33	66	83	66	83	33	0	66	33	83	33	83	16	50	16	50	66	66	**	50	33	66	66	50	83	**	62			
DISD	36	44	46	77	29	71	48	59	36	40	40	29	43	29	31	31	47	26	47	32	29	33	27	36	43	21	35	50	36	33	38	31	30	41	37	51	41	32	52	68	40			
DISF	67	59	56	48	64	93	79	62	81	40	71	37	62	43	42	51	64	53	82	46	1	50	32	62	46	28	20	48	29	34	26	56	81	43	42	15	46	46	57	59	51			
STUT	48	47	52	65	42	80	59	57	53	39	53	37	50	37	36	38	53	37	60	39	18	39	30	48	42	24	27	51	32	30	38	39	50	40	38	39	44	37	53	67	44			

## BASIC MATHEMATICS II

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Computation (7 items), Fractions (7 items), Decimals/Percents (10 items), Measurement (3 items), Geometry (8 items), and Estimating/Graphs (5 items).

The population includes all high school students (with the exception of the exam schools) who took the Basic Mathematics II course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Decimals/Percents items; in the latter domain students had difficulty changing the percents for simple common fractions to fractions and solving one- and two-step word problems involving decimals and percents.

However, for all other domains there are many items in which students are performing poorly. In Fractions students had difficulty subtracting mixed numbers with like denominators with regrouping, solving ratio and proportion problems in practical situations, and solving one- and two-step problems involving fractions. In the Measurement domain, fewer than 50% of the students answered each of the items correctly. The objectives measured by these items were calculating elapsed time given two points in time, renaming English and metric linear measurement, and knowledge of degrees in Fahrenheit and boiling and freezing points. Half of the items in Geometry were answered incorrectly by more than 50% of the students. The objectives tapped were finding the area of a triangle or parallelogram, identifying the parts of a circle, finding the circumference of a circle, and finding the volume of a rectangular solid or cube given the formula. In Estimating/Graphs students did poorly on the items that measured rounding decimals, estimating answers to word problems, and identifying probability in word problems.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL BASIC MATHEMATICS II  
1985 - 1986

B.1	Add numbers w/up to six digits, written vertically or horiz.	1
B.4	Divide 4-digit nos. by 2-digit nos., with or without remainders	2
E.1	Calculate elapsed time given 2 pts. in time; digital or convent.	3
G.2	Rounding decis. & mixed decis. to nearest whole 10th, money/cent	4
C.5	Add & subtract common fractions w/unlike denominators	5
C.8	Subtract mixed nos. with like denominators, with regrouping	6
D.2	Identify decimal place value to the ten-thousandths place	7
D.7	Multiply decimals & whole nos. w/up to two-digit multipliers	8
F.2	Identify right, acute, & obtuse angles, given drawings & list	9
F.7	Identify where shapes appear in the real world	0
G.3	Estimate answers to word probs. by rounding, incl. area & volume	1
B.17	Solve 1- & 2-step word problems involving computation	1
C.9	Add & subtract mixed nos. w/unlike denoms; no regrouping	2
C.10	Multiply 2 or 3 common fracs., mixed nos., or whole nos.	3
C.11	Divide common fractions, mixed numbers or whole numbers	4
C.13	Solve ratio and proportion problems in practical situations	5
C.15	Solve 1- & 2-step word problems involving fractions	6
D.8	Divide decis. & whole nos. w/1-digit divisors, w/o remainders	7
D.10	Changing common fractions to (terminating) decimals	8
D.13	Change a whole-no. percent of 2 digits to its deci. equivalent	9
D.14	Change common fractions to percents (only terminating decimals)	0
F.11	Find the perimeter of a square, rectangle or triangle/word prob.	1
F.13	Find area of triangle or parallelogram, give formula, ans. sq. unit	2
B.9	Multiply and divide in parentheses before add or subtract	2
B.13	Use letters as place holders in simple open number sentence	2
B.14	Evaluate an expression w/1 variable, given value of variable	2
B.16	Find the missing info needed to solve a word problem	2
D.16	Tell what % of a figure is shaded, give ans. as common fraction	2
D.15	Change the percent for simple common fractions to fractions	2
D.17	Find the percent of a whole number (only whole number percents)	3
D.18	Solve 1 & 2 step word probs. involving decimals & percents	3
E.6	Rename "improper" English & metric linear meas. w/2 measures	3
E.9	Knowledge of degrees in Fahrenheit & boiling & freezing points	3
F.14	Identify center, diameter, chord, radius, & circumference of circle	3
F.15	Find circumference of a circle, given formula & value of #	4
F.16	Identify 7 geometric solids & everyday objects with these shapes	5
F.18	Find volume of a rectangular solid or cube, given formula	6
G.4	Identifying probability in word problems	7
G.5	Use picture, bar, line & circle graphs to ans. ques. & problems	8
G.6	Graph ordered pairs, and giving the coordinates of plotted pts.	9

416 BASIC MATH II        TECR5005        11/07/06  
 PERCENTAGE OF CORRECT ANSWERS PLR ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	92	64	35	38	61	30	35	58	51	82	38	66	79	60	64	51	38	46	48	76	33	48	46	46	82	33	74	17	25	58	43	35	35	51	48	69	46	17	76	43	51
1110	76	42	42	23	34	21	31	63	50	57	36	60	71	55	42	36	34	23	42	57	21	52	26	23	76	28	65	21	10	36	42	28	36	36	23	55	34	7	50	28	40
DISA	84	53	38	31	48	25	33	61	50	70	37	63	75	61	53	44	36	35	45	67	27	50	36	35	79	31	70	19	18	48	42	32	36	44	36	62	40	12	63	36	46
1250	82	39	32	27	45	17	35	64	43	71	52	67	72	54	54	43	27	57	42	76	23	63	28	53	78	32	69	27	30	46	41	47	31	30	32	67	30	26	60	32	46
1100	90	52	37	17	45	35	35	67	47	82	35	75	72	72	70	35	27	50	50	67	50	60	45	65	92	32	72	25	25	60	57	37	20	25	40	75	42	22	75	42	50
DISB	84	44	34	23	45	23	35	65	45	75	46	69	72	61	60	40	27	54	45	73	32	61	34	57	83	32	70	26	28	51	46	44	27	28	35	69	34	24	65	36	48
1060	84	64	52	56	68	32	48	56	64	56	52	64	88	68	56	24	24	56	20	84	28	56	32	64	92	32	68	32	28	56	64	44	52	52	36	76	44	24	60	40	52
1120	78	42	47	52	71	28	47	66	66	73	61	57	80	45	54	45	40	59	57	76	50	83	50	54	78	54	66	30	23	71	57	57	76	50	35	73	57	40	64	50	57
1160	82	61	44	21	42	46	21	51	59	61	53	59	72	63	44	44	48	61	42	59	46	78	48	59	82	63	72	31	34	44	23	48	53	46	34	65	46	44	59	61	52
DISC	81	55	47	40	58	36	36	57	63	64	56	59	78	57	50	40	40	59	42	71	43	75	45	58	83	53	69	31	28	57	44	50	61	49	35	71	50	38	61	52	54
1050	87	57	50	42	67	42	53	71	50	69	45	73	69	67	49	53	43	54	73	79	61	65	31	87	84	47	80	35	49	57	57	47	47	45	26	68	52	23	73	50	57
1070	83	62	64	56	70	45	58	75	61	89	50	84	85	72	75	65	43	69	70	88	66	74	40	80	88	39	81	37	57	69	52	64	38	51	39	76	52	31	77	55	63
DISD	85	60	59	51	69	44	56	73	57	81	48	80	79	70	65	60	43	63	71	84	64	71	37	83	86	42	81	36	54	64	54	58	42	48	34	73	52	28	76	53	61
1080	89	52	41	39	73	30	44	59	60	81	48	76	84	66	55	44	34	57	61	68	54	65	50	68	84	40	71	26	32	57	40	42	48	62	44	74	44	23	76	59	56
1190	79	71	43	23	57	33	33	67	59	85	56	78	86	76	62	49	47	58	41	82	66	78	37	73	88	31	71	43	34	64	40	51	52	46	32	74	61	23	71	56	57
1210	84	60	50	48	65	25	46	70	71	79	42	70	74	58	60	55	42	51	60	80	53	77	36	69	83	47	81	34	37	72	51	60	63	46	34	82	46	37	78	58	58
1240	88	44	51	26	55	22	17	55	42	71	28	73	82	77	62	44	22	46	51	77	40	64	37	73	93	62	82	13	17	57	33	57	60	37	35	64	26	28	73	48	51
DISE	86	56	44	38	67	29	41	63	61	80	46	75	82	66	58	48	37	55	57	74	55	70	43	69	85	42	74	30	33	62	43	49	53	53	39	75	46	27	76	57	56
DISA	84	53	38	31	48	25	33	61	50	70	37	63	75	61	53	44	36	35	45	67	27	50	36	35	79	31	70	19	18	48	42	32	36	44	36	62	40	12	63	36	46
DISB	84	44	34	23	45	23	35	65	45	75	46	69	72	61	60	40	27	54	45	73	32	61	34	57	83	32	70	26	28	51	46	44	27	28	35	69	34	24	65	36	48
DISC	81	55	47	40	58	36	36	57	63	64	56	59	78	57	50	40	40	59	42	71	43	75	45	58	83	53	69	31	28	57	44	50	61	49	35	71	50	38	61	52	54
DISD	85	60	59	51	69	44	56	73	57	81	48	80	79	70	64	60	43	63	71	84	64	71	36	83	86	42	81	36	54	64	54	58	42	48	34	73	52	28	76	53	61
DISE	86	56	44	38	67	29	41	63	61	80	46	75	82	66	58	48	37	55	57	74	55	70	43	69	85	42	74	30	33	62	43	49	53	53	39	75	46	27	76	57	56
STDT	85	55	46	38	62	31	42	64	58	77	47	72	79	65	56	48	37	55	56	75	51	68	41	67	84	42	74	30	34	59	45	49	48	48	37	73	45	27	72	52	55



## GEOMETRY

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Early Structure: Lines/Planes/Angles (2 items), Triangles (3 items), Quadrilaterals/Regular Polygons (5 items), Similarity (9 items), Area (6 items), Pythagorean Theorem (7 items), Circles/Spheres (5 items), and Solids (3 items).

The population includes all high school students (with the exception of the exam schools) who took the Geometry course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 45%. Generally, students appear to be mastering the domains of Early Structure: Lines/Planes/Angles, Triangles, and Quadrilaterals/Regular Polygons. However, in the remaining domains there appear to be serious deficits. In Similarity students are having difficulty with converting measurements on a triangle into proportions, determining whether or not two triangles are similar, finding measurements in pairs of similar triangles, finding the three geometric means in a right triangle, and calculating the areas of similar figures. Of the six items in the Area domain, there are five items which fewer than 50% of the students answered correctly. Of the seven items tapping the Pythagorean Theorem, there are six items which fewer than 50% of the students answered correctly. Performance in the Circles/Spheres and Solids domains is also poor. Students had difficulty performing calculations involving arcs, angles, area, circumference, surface areas, and volumes.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

GEOMETRY

1985 - 1986

G.2	Finding missing measurements in quadrilaterals	1	
G.4	Proving assertions about quadrilaterals	2	
E.13	Calculating angles of triangles	3	
B.7	Calculate angle measurements using info on congruent angles	4	
B.8	Write short proofs with postulates & theorems of congr. angles	5	
E.10	Calculating values using the midline theorem	6	
C.6	Prove two given triangles congruent, using SAS, ASA, OR SSS	7	
G.6	Find measurements involving the diagonals of quadrilaterals	8	
G.8	Demonstrate visually basic info about angles of polygons	9	
G.9	Solve problems involving angles of regular polygons	0	1
H.1	Express relationship between parallel lines & transversal	1	1
H.2	Using the relationships to calculate measurements	2	1
H.4	Converting measurements on a triangle into proportions	3	1
H.5	Finding missing measurements on a triangle; using proportions	4	1
H.7	Determining whether two given triangles are similar	5	1
H.8	Finding missing measurements in pairs of similar triangles	6	1
H.14	Calculate measurements on a triangle with angle bisectors	7	1
H.15	Finding the 3 geometric means in a right triangle	8	1
H.16	Calculating areas of similar figures	9	1
I.1	Calculate areas of triangles & quads using basic & Heron's form	0	2
I.2	Find missing dimensions of quadrilaterals given the area	1	2
I.3	Find areas of triangles with common dimensions	2	2
I.4	Finding areas of complex polygonal regions	3	2
I.5	Finding areas of regular polygons	4	2
J.1	Stating the Pythagorean theorem in terms of areas	5	2
J.5	Determining whether a given triangle is a right triangle	6	2
J.4	Finding the missing sides of right triangles	7	2
J.6	Finding missing dimensions of the 30-60 right triangle and the	8	2
J.6	the isosceles right triangle	9	2
J.9	Finding an altitude of a given triangle	0	3
J.13	Solving problems involving the Pythagorean theorem	1	3
K.5	Perform calculations involving circles, chords, and tangents	2	3
K.6	Perform calculations involving arcs	3	3
K.9	Calculate measures of angles, both sides intersect a circle	4	3
K.16	Perform calculations involving the area of a circle	5	3
K.15	Perform calculations involving the circumference of a circle	6	3
L.1	Calculate the surface area and volume of a given prism	7	3
L.4	Calculate the surface area & volume of a given cylinder	8	3
L.2	Calculate the surface area and volume of a given pyramid	9	4

425 GEOMETRY TUCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	64	34	39	59	26	62	28	73	56	52	70	59	45	63	39	45	53	42	23	43	45	51	42	50	38	50	35	45	38	57	35	35	54	53	47	19	43	34	38	44	46
1110	69	40	53	50	37	50	38	73	58	53	77	67	41	54	38	48	62	36	34	48	62	44	49	30	48	36	24	52	54	64	52	44	44	50	40	40	48	33	38	45	48
DISA	66	36	55	28	57	33	73	57	52	73	60	43	59	39	46	57	39	28	45	53	47	45	41	42	43	30	48	45	60	42	39	49	52	44	28	45	33	38	44	47	
1250	70	13	40	56	16	45	47	83	60	35	64	71	48	78	29	51	74	48	25	29	39	48	24	22	34	42	25	25	41	45	27	36	42	45	33	19	37	44	20	45	41
1100	37	18	10	22	22	45	31	77	29	33	72	35	16	54	25	16	31	43	27	37	35	37	25	14	50	39	8	43	47	43	25	29	39	25	20	12	37	33	35	54	33
DISB	59	14	30	45	18	45	41	81	50	34	66	59	37	70	27	39	60	46	25	31	37	44	24	19	39	41	19	31	43	44	26	33	41	38	29	16	37	40	25	47	39
1060	97	53	66	71	25	58	46	76	64	48	79	66	28	74	46	53	71	30	33	43	69	69	61	66	53	35	56	56	58	46	46	41	56	71	53	41	48	53	53	69	56
1120	61	27	13	27	27	77	36	97	52	45	79	65	22	75	29	29	50	18	18	25	61	50	20	20	27	40	45	52	47	54	31	25	40	34	27	27	35	31	4	36	39
1160	43	11	22	45	29	59	29	63	38	43	65	34	18	61	34	34	47	13	18	25	36	31	34	25	22	27	31	36	36	38	11	29	34	15	9	9	25	31	13	25	31
DISC	66	29	33	47	27	66	37	79	51	45	74	55	22	70	36	38	55	20	22	30	55	49	37	36	33	34	44	48	47	46	29	31	43	39	29	25	36	38	22	42	42
1050	66	55	51	67	40	62	67	79	53	63	76	66	51	64	58	53	67	51	50	51	56	72	60	65	46	58	33	69	58	64	59	61	68	59	57	44	50	46	35	50	58
1070	58	12	37	34	14	57	23	75	42	53	74	43	39	39	25	32	50	25	21	23	34	29	30	17	19	40	20	25	35	42	23	26	58	37	24	7	9	30	13	25	33
DISD	62	35	45	52	28	60	47	77	48	59	75	56	45	53	43	44	59	39	37	38	46	53	46	43	34	50	27	49	48	54	43	45	64	49	42	27	32	39	25	39	46
1060	72	24	43	46	25	62	51	77	50	56	78	58	25	62	25	31	48	26	37	30	52	35	27	33	27	46	24	33	34	41	24	26	59	46	37	15	37	30	19	26	40
1190	42	26	42	63	15	52	52	84	42	63	73	42	5	57	26	36	63	10	10	36	52	31	15	36	10	31	10	52	31	36	15	31	68	47	15	15	15	57	9	47	36
1210	68	33	61	74	13	71	31	83	58	58	86	64	61	77	33	59	76	33	41	44	53	50	39	39	47	39	26	53	69	75	52	48	52	51	53	35	60	46	60	39	53
1240	87	13	60	83	46	72	47	86	72	63	93	86	72	80	61	30	83	19	36	65	60	64	54	56	79	31	53	42	58	65	38	52	58	58	47	41	68	60	54	57	60
DISE	72	24	53	65	25	67	43	92	58	54	84	66	48	71	37	53	67	26	37	44	54	47	37	40	45	39	31	43	52	58	36	40	57	51	44	28	51	44	40	39	49
DISA	66	36	46	55	28	57	33	73	57	52	73	60	43	59	39	46	57	39	28	45	53	47	45	41	42	43	30	48	46	60	42	39	49	52	44	28	45	33	38	44	47
DISB	59	14	30	45	18	45	41	81	50	34	66	59	37	70	27	39	60	46	25	31	37	44	24	19	39	41	19	31	43	44	26	33	41	38	29	16	37	40	25	47	39
DISC	66	29	33	47	27	66	37	79	51	45	74	55	22	70	36	38	55	20	22	30	55	49	37	36	33	34	44	48	47	46	29	31	43	39	29	25	36	38	22	42	42
DISD	62	35	45	52	28	60	47	77	48	59	75	56	45	53	43	44	59	39	37	38	46	53	46	43	34	50	27	49	48	54	43	45	64	49	42	27	32	39	25	39	46
DISL	72	24	53	65	25	67	43	82	58	59	84	66	48	71	37	53	67	26	37	44	54	47	37	40	45	39	31	43	52	58	36	40	57	51	44	28	51	44	40	39	49
STUT	66	28	44	55	25	60	41	79	53	52	76	60	41	65	37	46	61	33	32	39	50	48	38	37	40	41	30	44	48	54	36	39	52	47	39	26	42	40	32	42	45

## ALGEBRA I - GENERAL

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Structure of Real Number System (1 item), Algebraic Structure (2 items), Equations/Inequalities (3 items), Exponents (1 item), Polynomials (3 items), Special Products/Factoring (3 items), Rational Expressions (8 items), Graphs of Linear Equations/Inequalities (7 items), Irrational Numbers (5 items), Relations/Functions (4 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/General course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. Generally, students appear to be mastering the domains of Algebraic Structure and Exponents and most of the items in Polynomials and Special Products/Factoring. However, of the thirty-one items in the remaining domains, there are twenty-eight items which fewer than 50% of the students answered correctly. Essentially, students do not know the domains of Equations/Inequalities, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ALGEBRA I GENERAL

1985 - 1986

A.7	Simplify using the laws of order of operations	1	
B.4	Find the union and the intersection of sets of numbers	1	
B.7	Evaluate numerical & algebraic expressions involving ( )	2	
C.1	Translating English phrases into algebraic phrases	3	
C.5	Solve an equation with one variable contained in 2 or more terms	4	
C.10	Graph the solution set of a linear inequality on the no. line	5	
D.2	Evaluating terms involving exponents	6	
E.4	Add and subtract polynomials	7	
E.5	Multiply polynomials	8	
E.5		9	
F.4	Identify and factor special types of polynomials	0	1
F.6	Identify and factor general trinomials	1	1
F.7	Combining several types of factoring	2	1
G.3	Writing rational expressions in the simplest form	3	1
G.10	Find the lowest common denom of fractions with polynomial denoms	4	1
G.5	Add and subtract fractions with monomial denominators	5	1
G.11	Add and subtract rational expressions with polynomial denoms	6	1
G.12	Multiply and divide rational expressions containing polynomials	7	1
G.12		8	1
G.13	Solving open sentences containing rational expressions	9	1
G.14	Solving fractional equations and checking answers	0	2
H.3	Finding the slope of a line given two points	1	2
H.4	Writing the equations of a line given the slope and one point	2	2
H.6	Write the equation of a line given 2 points on the line	3	2
H.2	List ordered pairs that satisfy a given linear equation	4	2
H.7	Graphing the line $Ax + By = C$ by plotting points	5	2
H.9	Graphing a linear equation using the slope-intersect method	6	2
H.10	Solving a system of equations using addition or subtraction	7	2
I.3	Simplifying radicals with numerical radicands	8	2
I.4	Simplify radicals w/radicands containing algebraic expressions	9	3
I.5	Multiplying radicals with the same indices	0	1
I.6	Combining radicals by addition and/or subtraction	1	3
I.7	Rationalizing expressions w/simple radical denominators	2	3
J.1	Identify the domain and range of sets of several ordered pairs	3	3
J.1		4	5
J.3	Evaluating functions using functional notation (f(x))	5	3
J.5	Determine if a relation is a function, use the vert. line test	6	3
K.2	Solving quadratic equations by factoring	7	3
K.2		8	3
K.4	Solving quadratic equations by using the quadratic formula	9	4

420 ALG I - GEN      TECR5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	35	63	59	27	52	28	60	66	69	31	69	68	12	64	41	30	35	25	34	37	36	27	41	32	33	31	24	46	29	27	29	49	18	39	20	43	48	30	31	21	39
1110	39	87	78	42	75	37	75	71	74	68	81	81	0	78	59	25	28	41	37	52	54	17	35	35	45	52	67	48	40	68	40	59	35	57	73	54	75	42	51	57	53
DISA	37	73	67	34	62	32	67	69	71	46	74	74	7	70	48	28	32	32	36	43	44	23	38	33	38	40	42	47	34	44	34	53	25	46	42	48	59	35	39	36	45
1250	37	62	45	39	36	50	36	42	54	18	60	61	38	46	43	29	47	23	18	29	26	45	50	50	36	30	28	44	32	34	32	47	38	33	55	44	49	38	20	36	39
1100	28	70	36	21	45	33	50	49	57	15	57	52	7	57	35	29	31	21	42	43	22	17	26	29	29	19	31	52	15	22	8	42	19	36	29	33	35	21	22	21	33
DISB	34	64	42	34	39	45	40	43	55	17	53	58	29	44	41	29	39	22	24	33	27	37	43	44	34	27	28	45	28	31	26	45	33	34	48	41	45	33	21	31	37
1060	13	76	44	52	32	26	50	50	52	46	73	69	14	60	32	13	19	32	34	30	38	26	22	31	28	5	36	42	15	26	23	30	13	46	51	43	38	22	32	40	36
1120	15	35	35	42	28	38	28	36	43	10	31	64	8	35	42	8	17	19	31	10	15	31	15	36	14	12	24	26	31	28	31	29	36	36	26	40	21	17	31	21	27
1160	45	82	65	38	66	43	52	60	66	43	64	75	23	51	54	49	40	45	50	28	41	34	33	35	36	24	33	48	31	42	32	47	23	40	36	48	31	30	40	36	44
DISC	27	68	50	44	45	36	45	50	56	35	59	71	16	50	44	27	27	34	40	24	33	31	25	34	28	18	32	40	26	33	29	37	23	41	39	44	31	24	35	37	37
1070	26	68	43	23	54	26	50	60	64	26	60	68	9	42	34	29	20	15	25	26	29	16	24	34	38	15	33	57	19	32	17	52	18	36	37	44	34	32	34	26	35
DISD	26	68	43	23	54	26	50	60	64	26	60	68	9	42	34	29	20	15	25	26	29	16	24	34	38	15	33	57	19	32	17	52	18	36	37	44	34	32	34	26	35
1080	43	83	79	54	68	30	69	77	77	42	79	85	8	55	34	27	37	41	50	46	46	19	47	43	42	19	35	57	30	26	22	55	37	25	46	41	56	47	51	31	47
1190	19	60	39	42	42	21	63	49	68	42	66	74	7	60	25	31	17	26	24	22	20	32	15	38	17	11	16	49	36	50	9	33	14	31	40	48	27	23	39	23	34
1210	46	83	54	33	61	42	65	60	63	31	58	64	21	57	45	22	37	29	39	52	49	19	41	42	41	23	39	58	36	41	50	65	54	56	58	63	44	57	55	26	47
1240	17	83	34	26	54	39	52	68	70	32	73	67	3	57	31	25	23	13	26	29	33	16	24	27	30	8	31	53	33	45	16	57	22	29	44	46	51	37	34	28	37
DIS E	34	79	55	38	58	34	64	65	70	37	69	73	10	57	39	26	30	29	37	40	39	21	34	38	34	16	32	55	33	39	26	54	34	36	48	50	46	43	46	27	42
DISA	37	73	67	34	62	32	67	69	71	46	74	74	7	70	48	28	32	32	36	43	44	23	38	33	38	40	42	47	34	44	34	53	25	46	42	48	59	35	39	36	45
DISB	34	64	42	34	39	45	40	43	55	17	59	58	29	49	41	29	39	22	24	33	27	37	43	44	34	27	28	46	28	31	26	45	33	34	48	41	45	33	21	31	31
DISC	27	68	50	44	45	36	45	50	56	35	59	71	16	50	44	27	27	34	40	24	33	31	25	34	28	18	32	40	26	33	29	37	23	41	39	44	31	24	35	34	37
DISD	26	68	43	23	54	26	50	60	64	26	60	68	9	42	34	29	20	15	25	26	29	16	24	34	38	15	33	57	19	32	17	52	18	36	37	44	34	32	34	26	35
DIS E	34	79	55	38	58	34	64	65	70	37	69	73	10	57	35	26	30	29	37	40	39	21	34	38	34	16	32	55	33	39	26	54	34	36	48	50	46	43	46	27	42
STUT	32	72	53	36	53	35	55	59	64	34	65	70	14	55	39	27	30	28	34	35	36	25	33	37	34	22	33	50	29	37	27	49	29	38	44	46	44	36	38	30	40



## ALGEBRA I - COLLEGE

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Equations/Inequalities (2 items), Exponents (1 item), Polynomials (1 item), Special Products/Factoring (4 items), Rational Expressions (11 items), Graphs of Linear Equations/Inequalities (9 items), Irrational Numbers (6 items), Relations/Functions (3 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/College course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance on this test is very poor with a system-wide average score of 40%. It should be noted, however, that there are no schools included from either Area A or Area C. Generally, students appear to be mastering the objectives in Equations/Inequalities, Exponents, and Polynomials. However, of the thirty-six items in the remaining domains, there are thirty-three items which fewer than 50% of the students answered correctly. Essentially, according to the results of this test, students are not mastering the objectives in Special Products/Factoring, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL ALGEBRA I COLLEGE  
 1985 - 1986

E.3	Simplifying polynomials by combining similar terms	1	
D.5	Multiplying expressions involving exponents	2	
C.5	Solve an equation with 1 variable contained in 2 or more terms	3	
C.7	Solve a linear inequality with one variable	4	
F.3	Identifying and factoring a monomial factor in a polynomial	5	
F.6	Identifying and factoring general trinomials	6	
F.10	Solving polynomial equations by factoring	7	
G.4	Writing rational expressions in the simplest form	8	
F.8	Combining several types of factoring	9	
G.6	Add and subtract fractions with monomial denominators	0	1
G.9	Divide fractions w/monomial numerators and denominators	1	1
G.10	Using multiplication of (-1) to change signs of rational expr.	1	1
G.11	Find the lowest common denom of fractions w/polynomial denoms	2	1
G.12	Add and subtract rational expressions with polynomial denoms	3	1
G.13	Multiply and divide rational expressions containing polynomials	4	1
G.18	Solve inequalities containing radical expressions & check answe	5	1
G.17	Solving fractional equations and checking answers	6	1
G.19	Applying rational expressions in solving word problems	7	1
H.2	List ordered pairs that satisfy a given linear equation	8	1
H.3	Finding the slope of a line given two points	9	1
H.4	Write the equation of a line given the slope and one point	0	2
H.7	Graphing the line $Ax + By = C$ by plotting points	1	2
H.5	Write the equation of a line given the slope & y-axis intercept	2	2
G.20	Solving problems involving ratios	2	3
H.10	Solve a system of equations using addition or subtraction	3	2
H.11	Solve a system of equations using substitution	4	2
H.14	Region on a coordinate system for solution of $Ax + By > C$	5	2
I.1	Find the roots of numbers that have rational roots	6	2
I.5	Simplify radicals w/radicands containing algebraic expressions	7	2
I.6	Multiplying radicals with the same indices	8	2
I.8	Combining radicals by addition and/or subtraction	9	3
I.9	Rationalizing expressions with radical denominators	0	3
I.10	Solving and checking equations w/radical expressions	1	3
J.1	Identify the domain and range of sets of several ordered pairs	2	3
K.3	Solving quadratic equations by completing the square	3	3
J.5	Determine if a relation is a function, use the vert. line test	4	3
K.4	Solving quadratic equations by using the quadratic formula	5	3
K.6	Identify roots of quadratic equations real/not real	6	3
J.2	Drawing a graph representing a relation	7	3
H.16	Solve geometric word problems involving two linear equations	8	4
		9	0
		0	4





421 ALG I - CUL      TCR5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL			
1250	35	5	7	57	5	35	5	85	0	27	2	5	7	10	10	0	57	15	50	15	22	10	12	17	25	27	12	57	50	12	30	27	2	20	12	42	10	7	35	37	22			
DISB	35	5	7	57	5	35	5	85	0	27	2	5	7	10	10	0	57	15	50	15	22	10	12	17	25	27	12	57	50	12	30	27	2	20	12	42	10	7	35	37	22			
1050	68	87	71	57	92	76	50	61	64	68	72	12	49	53	61	42	38	45	33	61	51	23	58	43	66	75	48	44	55	43	54	43	23	42	44	45	28	33	52	36	52			
DISD	68	87	71	57	92	76	50	61	64	68	72	12	49	53	61	42	38	45	33	61	51	23	58	43	66	75	48	44	55	43	54	43	23	42	44	45	28	33	52	36	52			
1190	59	77	40	44	31	86	31	50	50	72	63	4	9	13	45	36	18	19	31	27	27	18	45	36	54	59	22	27	45	31	50	27	4	22	68	4	13	40	45	54	37			
1210	56	73	63	35	63	43	22	42	33	12	28	10	26	42	19	40	17	43	28	31	36	28	54	36	24	50	35	24	22	28	50	33	19	35	33	38	21	29	50	40	35			
DISF	56	74	60	37	54	55	25	44	37	29	37	8	21	34	26	39	17	36	29	30	34	25	51	36	32	53	31	25	29	29	50	31	15	31	43	29	18	32	49	44	36			
DISA																																												
DISB	35	5	7	57	5	35	5	85	0	27	2	5	7	10	10	0	57	15	50	15	22	10	12	17	25	27	12	57	50	12	30	27	2	20	12	42	10	7	35	37	22			
DISC																																												
DISD	68	87	71	57	92	76	50	61	64	68	72	12	49	53	61	42	38	45	33	61	51	23	58	43	66	75	48	44	55	43	54	43	23	42	44	45	28	33	52	36	52			
DISF	56	74	60	37	54	55	25	44	37	29	37	8	21	34	26	39	17	36	29	30	34	25	51	36	32	53	31	25	29	29	50	31	15	31	43	29	18	32	49	44	36			
STOT	57	67	55	50	62	61	32	59	42	46	46	9	31	38	38	33	34	36	35	41	39	21	47	35	46	58	35	39	44	32	48	35	16	34	37	38	21	28	48	39	40			

## ALGEBRA II - TRIGONOMETRY

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Real Numbers/Properties/Operations (2 items), Equations and Inequalities Involving One Variable (3 items), Linear Equations (3 items), Polynomials/Factoring (3 items), Relations/Functions/Transformations (1 items), Fractional Expressions/Equations (3 items), Exponents/Powers/Roots (3 items), Complex Numbers (2 items), Quadratic Equations/Functions (4 items), Systems of Equations/Inequalities (3 items), Polynomial Functions (3 items), Equations of Second Degree (4 items), Exponential/Logarithmic Functions (3 items), Sequence/Series (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra II/Trigonometry course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance was poor on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives tapped in the domains of Real Numbers: Their Properties/Operations, Equations/Inequations Involving One Variable, Relations/Functions/Transformations, Systems of Equality/Inequality, and Sequence/Series. Within the domains of Linear Equations, Polynomials/Factoring, Fractional Expressions/Equations, Exponents/Powers/Roots, Complex Numbers, and Quadratic Equations/Functions, most of the items are being mastered.

The most severe deficits as strands lie in the domains of Polynomial Functions, Equations of Second Degree, and Exponential/Logarithmic Functions. Of the ten items in those domains, there are seven items which fewer than 50% of the students answered correctly.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ALGEBRA II/TRIGONOMETRY

1985 - 1986

A.6	Simplify expressions involving absolute value	1	
A.5	Simplifying algebraic expressions	2	
B.5	Solve linear inequalities in 1 var. & graph solution on no. line	3	
B.2	Solving first-degree equations in one variable	4	
B.3	Express English sentences in math equations & solve them	5	
C.1	Locating points on the Cartesian plane	6	
C.9	Change a linear equat. to the y form & identify slope & y interc	7	
C.12	Equation of a line passing thru a point w/parallel & perpendicul	8	
D.3	Add, subtract and multiply polynomials	9	
D.7	Factoring a binomial difference between sq/sum or sq/cube	0	1
D.11	Solving inequalities by factoring	1	1
E.7	Evaluate a function for a given value of x	2	1
F.1	Multiply & divide rational expressions by simplifying	3	1
F.3	Simplifying complex expressions	4	1
F.8	Solve problems involving direct and indirect variations	5	1
G.6	Converting radical & exponential forms of an expression	6	1
G.1	Laws of exponents in simplification of algebraic expressions	7	1
G.5	Operations of +, -, x, ÷ on radical expressions	8	1
H.1	Simplifying expressions containing complex numbers	9	1
H.2	Add, subtract, multiply & divide complex numbers	0	2
I.2	Solve quadratic equations by factoring & use the quad. formula	1	2
I.2		2	2
I.4	Value of the discriminant and state the nature of the roots	2	2
I.10	Find the x intercept (s) of the graph of a quadratic function	3	2
J.3	Solving a system of linear equations by addition	4	2
J.1	Solving a system of linear equations graphically	5	2
J.4	Use pairs of linear equations in 2 variables to solve problems	6	2
K.3	Use Remainder Thm. to find the remain. when polynom. is ÷ by x-r	7	2
K.7	Write a polynomial P(x), given the zeroes of the polynomial	8	2
K.8	List possible rational roots of polynom. use synthetic division	9	2
L.1	Find distance between 2 pts. in a plane, use distance formula	0	3
L.3	Use equation of circle to find center & radius of a circle	1	3
L.6	Graph a hyperbola, show center, vertexes, foci & asymptotes	2	3
L.5	Graph a ellipse, show center, vertexes, & foci of the ellipse	3	3
M.3	Solving simple logarithmic equations	4	3
M.4	Use properties of logarithms to rewrite & simplify expressions	5	3
M.6	Solving exponential and logarithmic equations	6	3
N.5	Sequence as arithmetic & find $a_n, n, d,$ or nth term use $a_n = a_1 + (n-1)d$	7	3
N.3	List n terms of any series, given the general term	8	3
N.8	Finding the sum of n terms of a geometric series	9	4

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 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL		
1340	53	49	31	72	60	73	43	30	71	60	36	60	60	15	43	20	43	39	52	33	72	47	37	27	65	43	59	36	24	27	56	34	26	11	24	28	46	59	59	28	44		
2070	**	**	**	0	0	**	0	**	0	0	0	0	**	0	0	0	0	**	0	0	**	**	0	0	**	**	0	0	0	0	**	0	0	0	0	0	**	0	0	**	35		
DISA	54	50	32	71	60	74	42	31	70	60	35	60	61	15	42	20	42	40	51	32	72	48	37	37	65	44	58	35	24	27	57	34	25	11	24	28	47	58	58	30	44		
1233	**	**	**	**	**	0	**	0	**	**	0	0	**	0	**	0	**	0	**	0	0	**	**	**	0	**	**	**	0	**	0	**	**	0	0	0	**	**	0	0	0	57	
1100	67	67	45	51	61	70	54	29	74	51	38	61	35	29	54	25	48	41	35	19	51	58	29	58	51	48	51	25	12	70	45	48	38	19	19	22	45	25	54	29	44		
DISB	68	68	46	53	62	68	56	28	75	53	37	59	37	28	56	25	50	40	37	18	50	59	31	59	50	50	53	28	12	71	43	50	40	18	18	21	46	28	53	28	44		
1060	55	77	0	11	33	44	11	0	11	33	22	44	33	0	44	11	33	33	22	0	44	33	22	11	55	33	44	11	11	22	66	22	11	11	11	0	11	22	11	0	24		
1160	**	**	80	80	40	**	80	**	**	**	**	40	40	40	**	20	40	**	80	60	0	80	0	40	20	80	80	80	40	60	40	60	20	80	20	60	60	80	60	60	63		
DISC	71	85	28	35	35	64	35	35	42	57	50	42	35	14	64	14	35	57	42	21	28	50	14	21	42	50	57	35	21	35	57	35	14	35	14	21	28	42	28	21	38		
1350	78	84	74	89	74	81	75	43	91	78	60	90	80	80	59	63	63	77	79	63	79	83	56	78	85	72	90	66	67	49	83	71	61	45	75	74	57	75	80	60	72		
4260	**	**	0	**	**	**	**	0	**	**	0	**	0	**	0	**	**	**	**	0	**	0	0	0	0	0	0	0	0	**	0	**	**	0	**	0	**	0	**	0	0	0	50
1070	87	75	53	82	63	78	70	31	82	43	21	65	63	56	78	17	48	68	78	82	53	56	70	41	75	51	82	41	53	68	68	87	48	31	68	97	**	75	85	70	64		
DISD	81	81	67	87	71	80	74	39	88	67	47	81	75	72	65	48	59	74	79	69	71	73	60	65	81	64	87	57	65	56	77	76	57	40	73	81	72	75	81	69	70		
1380	68	56	44	80	64	76	68	36	84	68	12	60	76	16	36	28	44	64	80	28	56	60	32	60	60	28	80	56	12	20	48	24	32	28	32	28	52	56	40	32	48		
1190	61	69	38	84	76	76	46	7	76	61	15	61	84	30	53	38	61	84	61	15	61	48	38	46	76	0	84	23	0	7	76	30	53	46	38	46	53	84	46	61	50		
1210	72	62	56	75	70	75	75	50	74	62	19	75	67	43	54	38	61	66	72	38	61	59	38	54	66	51	40	25	41	41	35	35	48	22	48	29	36	24	37	61	52		
DISE	70	62	51	78	70	76	70	41	77	64	17	70	72	35	50	36	57	68	73	33	60	58	37	55	66	39	56	33	29	32	44	32	45	27	43	31	55	40	39	54	51		
DISA	54	50	32	71	60	74	42	31	70	60	35	60	61	15	42	20	42	40	51	32	72	48	37	37	65	44	58	35	24	27	57	34	25	11	24	28	47	58	58	30	44		
DISB	68	68	46	53	62	68	56	28	75	53	37	59	37	28	56	25	50	40	37	18	50	59	31	59	50	50	53	28	12	71	43	50	40	18	18	21	46	28	53	28	44		
DISC	71	85	28	35	35	64	35	35	42	57	50	42	35	14	64	14	35	57	42	21	28	50	14	21	42	50	57	35	21	35	57	35	14	35	14	21	28	42	28	21	38		
DISD	81	81	67	87	71	80	74	39	88	67	47	81	75	72	65	48	59	74	79	69	71	73	60	65	81	64	87	57	65	56	77	76	57	40	73	81	72	75	81	69	70		
DISE	70	62	51	78	70	76	70	41	77	64	17	70	72	35	50	36	57	68	73	33	60	58	37	55	66	39	56	33	29	32	44	32	45	27	43	31	55	40	39	54	51		
STGT	70	68	51	75	66	76	63	36	78	63	35	70	66	43	55	35	53	61	66	44	64	61	44	54	69	51	67	42	39	43	59	50	43	28	46	47	57	55	59	51	55		

## CALCULUS

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty multiple choice items and five essays measuring the curriculum strands of Elementary Functions (9 multiple choice items), Differential Calculus (10 multiple choice items and 3 essays), Integral Calculus (11 multiple choice items and 2 essays).

The population includes all high school students (with the exception of the exam schools) who took a Calculus course and for whom valid answer sheets were turned in. In this report the valid data is only for one high school in Area A.

### STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with an average score of 62%. Generally, students appear to be mastering the objectives in the Elementary Functions domain and in the Integral Calculus domain, although in the latter domain of eleven items there are two that fewer than 50% of the students answered correctly. Those two items measure approximate areas by upper and lower (Riemann) sums and the definition of the definite integral as the limit of sum. Within the Differential Calculus domain of the ten items there are four that fewer than 50% of the students answered correctly. Those items measure understanding the derivative, applying techniques, applying Rolle's theorem, and recognizing the relation between continuity and differentiability.

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL      CALCULUS  
 1985 - 1986

A.1	Recognizing, analyzing, applying the properties and drawing the graph of elementary functions	1
A.2	Relation between the domain & range of functions & composition	2
A.3	Handling functions involving sums, products, quotients, etc.	3
A.6	Analyze restrictions in domain and equations of asymptotes	4
A.7	Recognize even & odd functions; understand concepts of period	5
A.8	Using trigonometric identities	6
A.9	Understand relation between functions: $a^x$ and $\log_a x$ & graphs	7
A.10	Concept of calculus is that of limit, the law of limits	8
A.12	Stating the definition of continuity, theorem of continuity	9
B.1	Understanding the derivative	0
B.2	Use the rules of differentiation of constant, power, sum, etc.	1
B.3	Stating & applying the chain rule for composite functions	1
C.10	Approximate areas by Upper & Lower (Riemann) sums & Trap. rule	2
B.5	Making a survey of the functions studied	3
B.15	Applying techniques, curve tracing, concavity, maxima-minima	4
B.9	Expressing derivatives of higher order	5
B.10	Understand, state and apply Rolle's theorem	6
B.11	Understand the concepts of increasing and decreasing functions	7
B.12	Recognize the relation between continuity & differentiability	8
B.13	Stating and applying l'Hopital's rule	9
C.1	Recognize the behavior of the graph of $f(x)$ and $f(x) + k$	0
C.2	Recognize the function given the derivative	1
C.3	Recognize that if $F$ has a deriv. $f$ , $F$ is an antiderivative of $f$	2
C.4	Understanding indefinite integrals	2
C.5	Recognize expressions like $\frac{dy}{dx} = f(x)$ as differential equation.	3
C.6	Applying techniques of integration	4
C.8	Understanding the concept of definite integral as an area	5
C.9	State the definition of the definite integral as limit of sum	6
C.11	Stating and applying the Fundamental Theorems of Calculus	7
C.13	Apply integration to find the average val. of func. interval	8
B.1	See above descriptions	9
B.2, B.11, B.15	See above descriptions	0
B.4	Differentiate implicitly defined functions	3
B.7	"Geometric" derivation of $\lim_{\theta \rightarrow 0} \frac{\sin \theta}{\theta} = 1$	3
B.8		Differentiate exponential functions
C.2, C.5, C.6	See above descriptions	4
C.6, C.8, C.13	See above descriptions	5

444 CALCULUS                      TFCR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 10% PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
1040	76	69	53	92	84	53	92	61	53	30	61	69	30	69	23	53	38	69	30	53	76	69	69	84	61	84	76	30	69	69	62
DISA	76	69	53	92	84	53	92	61	53	30	61	69	30	69	23	53	38	69	30	53	76	69	69	84	61	84	76	30	69	69	62
DISA	76	69	53	92	84	53	92	61	53	30	61	69	30	69	23	53	38	69	30	53	76	69	69	84	61	84	76	30	69	69	62
DISB																															
DISC																															
DISD																															
DIS E																															
STUT	76	69	53	92	84	53	92	61	53	30	61	69	30	69	23	53	38	69	30	53	76	69	69	84	61	84	76	30	69	69	62

## ADVANCED MATHEMATICS

### INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of twenty multiple choice items and five essays measuring the curriculum strands of Relations/Functions (1 item), Composition/Inverses (1 item), Trigonometric/Circular Functions (5 multiple choice items and 1 essay), Conic Sections (3 multiple choice items and 1 essay), Graphs of Polar Equations (1 multiple choice item and 1 essay), Limits of Functions (1 multiple choice item and 1 essay), Polynomial Functions (1 item), Exponential/Logarithmic Functions (1 item), Sequence/Series/Limits (1 item), Permutations/Combinations (1 item), Binomial Theory (1 item), Math Induction (1 essay), Probability (1 item), Vectors (2 items), and Complex Numbers (2 items).

The population includes all high school students (with the exception of the exam schools) who took an Advanced Mathematics course and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with an average score of 47%. Generally, students appear to be mastering the domains of Composition/Inverses, Trigonometric/Circular Functions, Graphs of Polar Equations/Parametric Equations, and Exponential/Log Functions. However, of the thirteen items in the remaining domains, there are eleven items which fewer than 50% of the students answered correctly. Essentially, according to the results of this test, students are not mastering the objectives in the domains of Relations/Functions, Conic Sections, Limits of Functions, Polynomial Functions, Sequence/Series/Limits, Binomial Theory, Probability, Vectors, and Complex Numbers.



1985 - 1986

B.5	Recognize effect on graph of a relation when $f(x)$ is replaced by $f(x+h)$ ; $f(x) + k$ ; $f(x+h) + k$ ; $cf(x)$ , $f(cx)$ , $[f(x)]$ , $f([x])$	1
C.1	Find composite of functions, state domain & range, draw their graphs recognize the relation of corresponding points $(a,b) \rightarrow (b,a)$	2
D.2	Apply formulas for arc length & area of a circular sector, in terms of radius & central angle, with $r=1$ , the special, important case	3
D.2		4
D.7	Understand & apply the concepts of amplitude, period, & phase shift; in graphing, what portion of graph only needs to be plotted	5
D.13	Evaluate expressions involving inverse circular functions; draw graphs of inverse functions	6
E.4	Recognize equation of a hyperbola; state its domain; identify transverse & conjugate axes, vertices, foci, eccentricity, of asymptotes	7
E.6	Analyze coefficients of general quadratic, including degenerate cases	8
G.4	Use without proof the limit theorems, the concepts of left-hand & right-hand limits & draw the correct conclusion to exist. of limit	9
H.5	Use the factor & remainder theorem in probs. & locate multiple zeros	1
I.4	Recognize logarithm function as inverse of strictly increasing (one-to-one) function, the exponential function	1
J.8	Recognize convergence & divergence of sequences & series, & find the limit if it exists	2
K.4	Solve probs. involving permutations, permutations w/repetitions, & circular permutations	3
L.3	Able to write any term or entire expansion of $(a+b)^n$ , use binomial coefficients in the form $C(n,r)$ or $\binom{n}{r}$	4
N.3	Solve probs. by applying the binomial probability function	5
O.4	Give direction vector, a vector equation & parametric equations of a line, given two points	6
O.6	Define the dot (inner) product, & from the definition, develop the properties of the dot product	7
P.3	Find product of 2 or more complex nos. & recognize role of addition identities of trigonometric functions; compute powers of complex #	8
P.5	Use the theorem for n negative and find roots of complex numbers	9
F.2	Use the relations $x=r\cos\theta$ & $y=r\sin\theta$ to translate equations from one system to the other	2
D.13	Evaluate expressions involving inverse circular functions; take note of symbols used, $\sin x$ , $\cos x$ , $\tan x$ , & $\text{Arc sin } a \dots$ etc.	2
E.7	Rewrite equation of conic in standard form, identify the curve, state its characters, sketch the graph	2
F.3	Recognize polar equations for the straight line, circle, cardioid; make a table of values, draw graphs, & find points of intersection	3
M.5	Use mathematical induction to prove statements where direct and indirect proofs fail	4
G.5	Understand notion of limiting position of a secant to a curve and definition of the slope of a curve at a point	5

441 AOV MATH TELCR5005 11/07/60  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL	
1040	45	80	65	75	70	85	45	80	80	10	60	70	90	60	60	55	70	60	90	70	66	
1110	5	35	75	75	70	60	5	15	35	5	80	45	75	40	50	15	80	35	15	70	44	
OISA	25	57	70	75	70	72	25	47	57	7	70	57	82	50	55	35	75	47	52	70	55	
1100	35	23	64	64	58	41	58	58	52	64	64	64	64	58	70	47	58	47	41	41	54	
OISB	35	23	64	64	58	41	58	58	52	64	64	64	64	58	70	47	58	47	41	41	54	
2030	0	0	0	0	0	0	0	0	0	0	0	0	0	**	**	0	0	0	0	0	**	15
1160	20	80	70	20	30	0	30	20	10	10	10	10	10	10	0	0	10	0	0	50	19	
OISC	18	72	63	18	27	0	27	18	9	9	9	9	9	18	9	0	9	0	0	54	19	
1050	64	92	85	78	0	57	0	50	50	7	78	0	**	7	28	7	35	35	50	28	42	
OISD	64	92	85	78	0	57	0	50	50	7	78	0	**	7	28	7	35	35	50	28	42	
OISA	25	57	70	75	70	72	25	47	57	7	70	57	82	50	55	35	75	47	52	70	55	
OISB	35	23	64	64	58	41	58	58	52	64	64	64	64	58	70	47	58	47	41	41	54	
OISC	18	72	63	18	27	0	27	18	9	9	9	9	9	18	9	0	9	0	0	54	19	
OISD	64	92	85	78	0	57	0	50	50	7	78	0	**	7	28	7	35	35	50	28	42	
OISE																						
STOT	32	58	70	65	50	53	28	46	48	19	62	42	71	40	47	28	56	39	42	54	47	

**SCIENCE**  
**ELEMENTARY AND MIDDLE**

SCIENCE  
GRADES KII, 1, AND 2

INSTRUMENT AND POPULATION DESCRIPTION

Each of the tests is a twenty-five item multiple choice test measuring selected circled objectives in the curriculum strands of Science Skills/Processes, Science/Society, Life Science, Human Biology/Health, Physical Science, Earth Science, and Astronomy.

The population includes all students enrolled in Kindergarten II, Grade 1, or Grade 2 who took an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed well on all the tests with system-wide average scores of 84% for Kindergarten II, 88% for Grade 1, and 84% for Grade 2.

12/23/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE - LEVEL K11

1FCK97D02

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/	20
4170	GARFIELD ELEMENTARY	/	19
4173	WINSHIP ELEMENTARY	/	21
4220	HAMILTON ELEMENTARY	/	22
4221	BALDWIN ELEMENTARY	/	20
4570	TOBIN ELEMENTARY	/	21
4571	FARRAGUT ELEMENTARY	/	20
4010	AGASSIZ ELEMENTARY	/	22
4240	ELLIS ELEMENTARY	/	21
4241	HIGGINSON ELEMENTARY	/	20
4270	J KENNEDY ELEMENTARY	/	21
4310	LONGFELLOW ELEMENTARY	/	23
4311	MANNING ELEMENTARY	/	22
4370	MENDELL ELEMENTARY	/	20
4371	FULLER ELEMENTARY	/	21
4430	PARKMAN ELEMENTARY	/	22
D15A		/	21
4030	BEETHOVEN ELEMENTARY	/	20
4031	KILMER ELEMENTARY	/	22
4081	BATES ELEMENTARY	/	19
4082	MOZART ELEMENTARY	/	20
4290	LEE ELEMENTARY	/	18
4560	SUMNER ELEMENTARY	/	19
4561	PHILBRICK ELEMENTARY	/	23

12/23/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE - LEVEL KIT

TECR97D03

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/	22
4070	CHITTICK ELEMENTARY	/	19
4080	CONLEY ELEMENTARY	/	23
4151	TAYLOR ELEMENTARY	/	19
4190	E GREENWOOD ELEMENTARY	/	23
4192	F ROOSEVELT ELEMENTARY	/	22
4200	GREW ELEMENTARY	/	20
4201	CHANNING ELEMENTARY	/	22
4670	P A SHAW ELEMENTARY	/	17
DISB		/	20
4051	DICKERMAN ELEMENTARY	/	22
4130	S GREENWOOD ELEMENTARY	/	19
4131	ENDICOTT ELEMENTARY	/	24
4140	EVERETT ELEMENTARY	/	21
4150	FIFIELD ELEMENTARY	/	19
4250	HOLLAND ELEMENTARY	/	21
4340	MARSHALL ELEMENTARY	/	
4350	MATHER ELEMENTARY	/	19
4390	KENNY ELEMENTARY	/	23
4391	OHEARN ELEMENTARY	/	21
4400	MURPHY ELEMENTARY	/	
4550	STONE ELEMENTARY	/	21
4022	PERKINS ELEMENTARY	/	21
4052	WINTHROP ELEMENTARY	/	19

12/23/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE - LEVEL K11

11CR97002

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4100	DEVER ELEMENTARY	/	21
4120	EMERSON ELEMENTARY	/	18
4121	MASON ELEMENTARY	/	21
4530	RUSSELL ELEMENTARY	/	22
4531	CLAP ELEMENTARY	/	21
4590	TYNAN ELEMENTARY	/	23
4592	PERRY ELEMENTARY	/	22
4630	CONDON ELEMENTARY	/	20
DISC		/	21
4280	KENT ELEMENTARY	/	21
4283	WPRESCOTT ELEMENTARY	/	22
4381	ELIOT ELEMENTARY	/	21
4640	BLACKSTONE ELEMENTARY	/	20
4650	QUINCY ELEMENTARY	/	21
4062	BRADLEY ELEMENTARY	/	20
4321	ALIGHIERI ELEMENTARY	/	22
4322	OTIS ELEMENTARY	/	21
4361	ADAMS ELEMENTARY	/	21
4541	P KENNEDY ELEMENTARY	/	20
4543	ODONNELL ELEMENTARY	/	20
DISD		/	21
4061	GUILD ELEMENTARY	/	22
4113	HALE ELEMENTARY	/	21
4210	HALEY ELEMENTARY	/	

12/23/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE - LEVEL KII

TECR97D02

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	// //	
4271	CURLEY ELEMENTARY	/	22
4360	MCKAY ELEMENTARY	/	21
4410	OHRENBERGER ELEMENTARY	/	21
4580	TROTTER ELEMENTARY	/	23
4610	HORACE MANN SCHOOL	/	22
4620	JACKSON MANN ELEMENTARY	/	16
DISE		/	21
DISA		/	22
DISB		/	21
DISC		/	20
DISD		/	21
DISE		/	21
STOT	SYSTEM WIDE TOTAL	/	22
		/	21



12/24/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 1

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/	23
4170	GARFIELD ELEMENTARY	/	21
4173	WINSHIP ELEMENTARY	/	21
4220	HAMILTON ELEMENTARY	/	22
4221	BALDWIN ELEMENTARY	/	23
4570	TOBIN ELEMENTARY	/	23
4571	FARRAGUT ELEMENTARY	/	23
4010	AGASSIZ ELEMENTARY	/	22
4240	FLLIS ELEMENTARY	/	21
4241	HIGGINSON ELEMENTARY	/	23
4270	J KENNEDY ELEMENTARY	/	23
4310	LONGFELLOW ELEMENTARY	/	21
4311	MANNING ELEMENTARY	/	23
4370	WENDELL ELEMENTARY	/	21
4371	FULLER ELEMENTARY	/	22
4430	PARKMAN ELEMENTARY	/	24
DISA		/	22
4030	BEETHOVEN ELEMENTARY	/	23
4031	KILMER ELEMENTARY	/	22
4081	BATES ELEMENTARY	/	22
4082	MOZART ELEMENTARY	/	22
4290	LEE ELEMENTARY	/	23
4560	SUMNER ELEMENTARY	/	23
4561	PHILBRICK ELEMENTARY	/	22

12/24/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 1

TECR99002

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/	22
4070	CHITTICK ELEMENTARY	/	22
4080	CONLEY ELEMENTARY	/	22
4151	TAYLOR ELEMENTARY	/	23
4192	F ROOSEVELT ELEMENTARY	/	21
4200	GREW ELEMENTARY	/	23
4201	CHANNING ELEMENTARY	/	23
4670	P A SHAW ELEMENTARY	/	23
DISB		/	22
4051	DICKERMAN ELEMENTARY	/	21
4130	S GREENWOOD ELEMENTARY	/	22
4131	INDICOTT ELEMENTARY	/	21
4140	EVERETT ELEMENTARY	/	22
4150	FIFIELD ELEMENTARY	/	23
4250	HOLLAND ELEMENTARY	/	23
4340	MARSHALL ELEMENTARY	/	21
4350	MATHER ELEMENTARY	/	23
4370	KENNY ELEMENTARY	/	23
4391	OHFARN ELEMENTARY	/	23
4400	MURPHY ELEMENTARY	/	21
4550	STONE ELEMENTARY	/	22
4072	PERKINS ELEMENTARY	/	22
4052	WINTHROP ELEMENTARY	/	25
4100	DEVER ELEMENTARY	/	22

12/24/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL I

TECR99002

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4120	EMERSON ELEMENTARY	/	22
4121	MASON ELEMENTARY	/	22
4530	RUSSELL ELEMENTARY	/	22
4531	CLAP ELEMENTARY	/	22
4590	TYNAN ELEMENTARY	/	22
4592	PERRY ELEMENTARY	/	22
4630	CONDON ELEMENTARY	/	22
DISC		/	22
4280	KENT ELEMENTARY	/	23
4283	WPRESCOTT ELEMENTARY	/	23
4381	FLIOT ELEMENTARY	/	22
4640	BLACKSTONE ELEMENTARY	/	22
4650	QUINCY ELEMENTARY	/	22
4062	BRADLEY ELEMENTARY	/	23
4321	ALIGHIERI ELEMENTARY	/	23
4322	OTIS ELEMENTARY	/	22
4361	ADAMS ELEMENTARY	/	23
4541	P KENNEDY ELEMENTARY	/	23
4543	DDONNELL ELEMENTARY	/	23
DISD		/	23
4053	HERNANDEZ ELEMENTARY	/	22
4061	GUILD ELEMENTARY	/	24
4113	HALE ELEMENTARY	/	22
4210	HALFY ELEMENTARY	/	23

12/24/86

BOSTON PUBLIC SCHOOLS  
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
SCIENCE LEVEL 1  
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TECR99002

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	/	22
4271	CURLEY FLEMENTARY	/	22
4360	MCKAY FLEMENTARY	/	20
4410	OHRENBERGER ELEMENTARY	/	23
4580	FROTTER ELEMENTARY	/	22
4610	HORACE MANN SCHOOL	/	19
4620	JACKSON MANN ELEMENTARY	/	21
DISE		/	22
DISA		/	22
DISB		/	22
DISC		/	23
DISD		/	22
DISE		/	22
STOT	SYSTEM WIDE TOTAL	/	22

2.0

12/29/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 2

TECR101D07

SCHOOL CODE	SCHOOL NAME	// SCIENCE // (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/ 19
4070	CHITTICK ELEMENTARY	/ 23
4080	CONLEY ELEMENTARY	/ 15
4151	TAYLOR ELEMENTARY	/ 21
4192	F ROOSEVELT ELEMENTARY	/ 20
4200	GREW ELEMENTARY	/ 22
4201	CHANNING ELEMENTARY	/ 20
4670	P A SHAW ELEMENTARY	/ 21
DISP		/ 21
4051	DICKERMAN ELEMENTARY	/ 21
4130	S GREENWOOD ELEMENTARY	/ 19
4131	ENDICOTT ELEMENTARY	/ 21
4140	EVERETT ELEMENTARY	/ 18
4150	FIFIELD ELEMENTARY	/ 20
4250	HOLLAND ELEMENTARY	/ 21
4340	MARSHALL ELEMENTARY	/ 22
4350	HATHER ELEMENTARY	/ 21
4390	KENNY ELEMENTARY	/ 22
4391	OHEARN ELEMENTARY	/ 20
4400	MURPHY ELEMENTARY	/ 21
4550	STONE ELEMENTARY	/ 22
4022	FERKINS ELEMENTARY	/ 20
4052	WINTHROP ELEMENTARY	/ 23
4100	DEVER ELEMENTARY	/ 20

12/29/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 2

11/11/1987

SCHOOL CODE	SCHOOL NAME	// SCIENCE // (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/ 20
4170	GARFIELD ELEMENTARY	/ 21
4173	WINSHIP ELEMENTARY	/ 19
4220	HAMILTON ELEMENTARY	/ 21
4221	DALDWIN ELEMENTARY	/ 19
4570	TOBIN ELEMENTARY	/ 20
4571	FARRAGUT ELEMENTARY	/ 22
4010	AGASSIZ ELEMENTARY	/ 21
4240	FILIS ELEMENTARY	/ 21
4241	HIGGINSON ELEMENTARY	/ 21
4270	J KENNEDY ELEMENTARY	/ 22
4310	LONGFELLOW ELEMENTARY	/ 20
4311	MANNING ELEMENTARY	/ 21
4370	MENDELL ELEMENTARY	/ 21
4371	FULLER ELEMENTARY	/ 21
4430	PARKMAN ELEMENTARY	/ 22
DISA		/ 21
4030	BEETHOVEN ELEMENTARY	/ 19
4031	KILMER ELEMENTARY	/ 21
4081	HATES ELEMENTARY	/ 22
4082	MOZART ELEMENTARY	/ 22
4290	LEF ELEMENTARY	/ 23
4560	SUMNER ELEMENTARY	/ 21
4561	PHILBRICK ELEMENTARY	/ 20

12/29/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 2

TECR101000

SCHOOL CODE	SCHOOL NAME	// SCIENCE // (OUT OF 25 ITEMS)
4120	EMERSON ELEMENTARY	/ 22
4121	MASON ELEMENTARY	/ 20
4530	RUSSELL ELEMENTARY	/ 20
4531	CLAP ELEMENTARY	/ 23
4590	TYNAN ELEMENTARY	/ 23
4592	FERRY ELEMENTARY	/ 23
4630	CONDON ELEMENTARY	/ 21
DISC		/ 21
4280	KENT ELEMENTARY	/ 20
4283	WRESCOTT ELEMENTARY	/ 22
4381	ELIOT ELEMENTARY	/ 21
4640	BLACKSTONE ELEMENTARY	/ 20
4650	QUINCY ELEMENTARY	/ 21
4062	BRADLEY ELEMENTARY	/ 22
4321	ALIGHIERI ELEMENTARY	/ 20
4322	OTIS ELEMENTARY	/ 21
4361	ADAMS ELEMENTARY	/ 22
4541	F KENNEDY ELEMENTARY	/ 23
4543	ODONNELL ELEMENTARY	/ 21
DISD		/ 21
4053	HERNANDEZ ELEMENTARY	/ 21
4061	GUILD ELEMENTARY	/ 20
4113	HALE ELEMENTARY	/ 20
4210	HALEY ELEMENTARY	/ 21

12/29/86

BOSTON PUBLIC SCHOOLS  
 CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT  
 SCIENCE LEVEL 2

111R101D01

SCHOOL CODE	SCHOOL NAME	// SCIENCE // (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	/ 22
4271	CURLEY ELEMENTARY	/ 21
4360	MCKAY ELEMENTARY	/ 22
4410	OHRENBERGER ELEMENTARY	/ 21
4580	TROTTER ELEMENTARY	/ 20
4610	HORACE MANN SCHOOL	/
4620	JACKSON MANN ELEMENTARY	/ 19
DISE		/ 21
DISA		/ 21
DISB		/ 21
DISC		/ 21
DISD		/ 21
DISF		/ 21
SIOT	SYSTEM WIDE TOTAL	/ 21



## SCIENCE - LEVEL 3

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (5 items), Science/Society (1 item), Life Sciences (15 items), Human Biology/Health (5 items), Physical Science (7 items), Earth Science (3 items), and Astronomy (4 items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 70%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Science/Society, and Astronomy and most of the objectives in Life Sciences and Human Biology/Health. However, within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Life Sciences students had difficulty describing the stages in the life cycles of plants (item # 12) and in Human Biology/Health the difficulty was in determining the function of the digestive, respiratory, and the circulatory systems of the human body (item # 24).

In Physical Science and in Earth Science there were two items in each that fewer than fifty percent of the students answered correctly. In Physical Science both items had to do with magnetism and the north and south poles (item #'s 30 and 33). In Earth Science one item addressed the stages of the water cycle (item # 34) and the other addressed geology (item # 36).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 3  
1985 - 1986

B.6	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	1	
B.3	Measure length to the nearest half inch (Correlate w/Math Objs.)	2	
B.5	Measure time to the nearest minute (Correlate w/Math Objs.)	3	
B.2	Identify the appropriate measuring tool & measure unit for a task	4	
B.10	Record info. in the form of sketches, picture & bar graphs, etc.	5	
C.4	Name several important scientific inventors & their contributions	6	
D.7	Classify animals according to certain criteria	7	
D.1	Three essential characters of living things: breath, eat, reproduce	8	
D.11	Given animal; how it moves, communicates, & how its young are born	9	
D.1	Three essential characters of living things: breath, eat, reproduce	0	1
D.2	Group plants into major types & describe characters of each group	1	1
D.5	Describe the stages in the life cycle of plants	2	1
D.15	Animals breathe oxygen, breathe out carbon dioxide; plants do oppos.	3	1
D.7	Classify animals according to certain criteria	4	1
D.5	Describe the stages in the life cycle of plants	5	1
D.17	Fossils as evidence of plants & animals that are now extinct	6	1
D.9	Animals that lay eggs & those that bear their young w/o eggs	7	1
D.16	Different environments limits no. of plants & animals who survive	8	1
D.14	Describe a simple food chain	9	1
D.12	Difference between domestic animals and wild animals	0	2
D.16	Different environments limits no. of plants & animals who survive	1	2
E.4	Describe some difference between people at diff. life stages	2	2
E.1	Skeleton & muscles hold our bodies upright & move them around	3	2
E.3	Function of 3 systems in body: digestion, respiration, circulation	4	2
E.5	Timing of emergence of baby teeth & of permanent teeth	5	2
E.7	Difference between traits you inherit & those we develop	6	2
F.1	Examples of three forms of matter: solid, liquid & gas	7	2
F.2	Different forms water can take: liquid, solid & gas	8	2
F.5	Way things expand when they are heated or cooled	9	2
F.11	Magnets are strongest at poles & 2 poles are labeled north & south	0	3
F.10	Objects to which magnets do and do not stick	1	3
F.6	Sun is a major source of energy on Earth	2	3
F.12	2 north/south poles repel, 2 different poles attract	3	3
G.4	Explain the stages of the water cycle	4	3
G.1	When air is heated it expands & rises, when cooled, contracts & sinks	5	3
G.12	Rocks are broken up into sand & dirt, mixed w/organic matter-soil	6	3
H.2	Sketch solar system, show 9 planets & their orbits show Sun & Earth	7	3
H.1	How distance affects the size of stars and planets	8	3
H.5	Rotation of Earth on its axis & orbit of Earth around the sun	9	3
H.4	The moon and other planets shine only w/sunlight reflect on surface	0	4

933 SCI LEVL 3 TLECR5005 11/07/36  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4160	54	81	97	94	**	91	72	91	97	81	94	70	51	91	86	91	83	97	70	94	**	70	**	51	89	72	72	56	67	35	91	91	45	40	64	81	64	56	48	91	77
4170	47	78	95	95	**	56	86	95	95	91	95	65	69	95	82	86	78	95	39	86	95	52	**	26	78	65	52	47	60	52	95	91	82	56	56	4	69	73	86	82	74
4173	55	80	95	90	**	70	95	90	95	95	90	25	50	70	95	95	70	90	45	80	**	90	95	45	80	55	50	35	70	30	95	95	55	30	70	20	80	55	30	90	71
4220	88	**	96	96	**	88	84	80	96	92	96	69	57	76	69	80	84	88	42	92	96	84	**	19	61	53	42	65	76	57	96	80	50	73	38	23	69	46	50	69	73
4221	95	87	91	91	95	87	79	87	**	91	95	79	45	95	70	91	79	83	41	83	**	66	95	29	83	75	45	29	19	20	79	95	70	29	62	16	29	66	91	87	73
4570	64	79	92	92	97	84	69	97	94	97	89	33	43	76	66	74	74	94	61	87	92	64	97	56	71	66	43	48	25	41	82	89	56	35	92	25	89	71	48	84	71
4571	56	68	96	87	96	71	84	90	93	93	93	43	71	93	81	78	68	90	43	90	93	53	93	53	59	71	84	59	68	56	90	90	90	56	65	28	78	84	34	90	75
4010	77	96	98	86	**	83	83	83	94	90	90	77	47	88	66	77	60	88	83	84	92	56	90	47	69	43	45	52	49	33	71	77	47	62	69	50	64	56	64	83	72
4240	60	77	90	75	92	60	70	77	95	80	82	27	55	75	47	85	70	82	20	77	87	52	92	40	67	47	52	20	45	25	80	65	42	12	70	32	60	37	35	75	61
4241	60	95	86	95	95	95	91	**	95	**	95	86	95	86	95	95	91	95	95	91	**	73	**	73	73	91	86	65	56	47	91	91	39	78	73	56	52	47	73	91	82
4270	75	90	93	78	**	63	78	90	96	96	**	60	66	90	81	87	72	90	51	93	**	72	93	57	66	57	60	45	57	57	90	90	42	54	54	30	69	72	60	78	74
4310	65	89	86	93	**	72	75	82	89	93	**	37	65	79	79	65	72	89	51	**	**	48	**	44	86	62	48	75	51	31	96	82	44	31	72	48	5	58	72	75	71
4311	70	79	83	87	95	41	91	87	**	83	87	50	58	87	79	87	79	83	62	95	**	62	91	50	79	75	45	66	66	50	95	91	70	45	58	45	70	41	66	95	74
4370	53	78	87	90	96	71	68	84	**	81	96	40	62	93	59	62	81	47	43	90	87	68	90	56	81	62	50	56	56	53	81	78	59	46	75	68	12	75	75	81	71
4371	89	87	95	93	**	89	92	**	**	92	98	39	89	90	89	85	89	95	60	98	96	81	98	40	93	75	46	81	37	25	90	93	75	64	78	14	78	65	60	85	78
4430	**	90	**	93	93	93	93	87	96	93	**	41	83	83	93	80	90	90	74	87	96	87	90	74	93	77	87	90	35	35	80	80	38	87	93	61	45	45	64	87	80
DISA	70	85	93	89	97	77	61	53	96	69	94	52	63	86	76	82	77	90	56	90	95	67	95	47	77	64	56	57	53	39	86	86	53	50	70	38	63	60	59	84	73
4030	36	68	89	78	**	89	73	89	89	78	94	31	36	73	78	57	63	89	52	**	**	36	89	10	84	63	42	52	63	15	94	68	42	21	31	0	10	26	31	73	60
4031	40	68	**	63	**	50	54	72	**	86	95	18	27	77	50	59	40	77	45	81	81	40	81	31	63	36	27	45	63	18	81	77	13	18	72	22	18	50	54	72	57
4081	54	84	**	90	**	81	84	96	96	96	96	60	78	81	90	69	81	84	81	90	**	81	**	57	78	72	51	72	72	51	87	87	66	60	63	48	90	57	60	84	78
4082	61	47	95	90	95	95	**	90	90	95	**	9	85	90	61	61	71	90	71	90	**	**	**	38	80	66	90	52	80	4	95	80	33	33	52	19	19	28	0	90	69
4290	51	68	86	84	95	55	77	73	**	82	91	26	33	73	75	51	66	82	48	91	**	51	**	22	93	44	64	66	51	26	84	71	22	37	42	8	46	40	28	84	62
4560	59	77	91	94	98	87	89	92	91	92	94	56	64	87	87	89	82	94	64	91	96	80	94	63	92	85	68	61	75	56	92	78	75	57	59	12	64	50	80	87	78
4561	87	87	95	91	**	70	87	95	91	87	95	50	58	83	79	54	83	87	62	87	95	75	87	66	87	70	41	62	58	12	83	75	29	41	70	25	50	54	66	83	71
4690	50	73	79	86	89	58	77	81	91	87	96	17	46	77	72	66	82	77	39	75	93	70	91	58	80	58	38	53	40	31	90	87	34	55	61	22	36	30	33	80	64
4070	83	94	92	89	98	83	90	81	92	87	96	78	78	92	98	83	90	78	61	96	98	72	94	67	85	78	80	76	72	49	85	87	65	43	78	65	27	72	78	80	80
4080	84	92	96	76	**	64	96	96	92	**	92	56	76	76	76	76	80	96	72	**	96	84	96	52	88	88	72	80	72	60	96	92	80	48	84	32	88	52	72	82	80
4151	47	63	95	93	95	93	95	97	97	94	95	63	52	93	87	80	88	93	59	68	95	69	93	61	87	66	62	75	66	50	84	90	65	61	76	52	58	77	75	86	78
4190	72	71	89	76	91	84	71	83	96	81	91	62	77	76	76	88	81	91	69	93	93	71	86	64	86	72	54	52	66	42	77	86	79	55	67	64	66	64	76	88	76
4192	75	79	93	82	93	62	89	93	**	96	96	34	55	93	82	82	37	89	13	86	96	44	96	51	82	51	44	75	41	27	75	**	34	48	65	58	51	58	17	75	69
4200	43	69	**	69	**	65	91	91	95	86	**	13	34	65	78	73	73	**	39	**	**	65	**	39	82	78	34	47	34	39	86	95	73	60	56	8	30	21	..	73	66
4201	60	77	87	97	97	85	80	92	92	97	92	32	70	70	70	55	72	80	42	92	92	57	85	55	65	80	60	50	40	27	87	72	40	45	62	25	37	37	32	72	66
4670	73	94	94	78	**	84	68	73	**	**	84	36	68	73	78	84	57	83	57	78	89	47	**	42	78	57	57	89	26	36	**	89	73	31	63	47	36	63	47	63	70
0158	60	75	91	85	96	76	83	87	94	90	94	43	59	81	79	72	76	88	55	89	95	67	93	53	83	67	56	63	58	37	87	84	53	48	64	34	48	51	55	81	71
4251	69	80	82	82	93	41	76	80	97	82	91	17	45	95	67	78	58	82	30	86	95	36	82	43	69	47	30	41	41	23	73	47	23	50	76	54	34	76	54	86	63
4130	80	82	93	82	97	84	82	93	**	93	93	51	62	93	71	77	77	88	35	91	97	71	91	42	88	68	53	62	53	42	84	40	48	53	71	22	55	51	64	77	72
4131	70	76	86	90	96	53	96	90	96	76	86	10	46	63	76	76	60	73	16	80	96	43	93	36	76	50	23	50	40	26	86	66	56	56	30	23	43	30	36	86	61
4140	73	**	**	96	96	80	88	92	**	84	92	38	53	69	80	61	80	88	53	84	96	73	96	57	80	61	50	38	65	61	84	76	50	53	80	34	46	38	73	73	72
4150	33	61	82	71	94	47	66	73	89	78	82	14	59	64	66	71	56	75	33	82	85	35	82	49	66	35	38	24	42	36	75	73	45	31	45	8	43	31	31	64	56
4250	46	70	96	80	93	64	72	89	96	88	91	44	59	79	71	55	78	85	47	85	94	56	93	48	77	60	43	52	59	46	86	72	44	44	70	37	50	57	61	79	68
4340	55	75	87	87	95	55	78	78	92</																																

933 SCI LEVEL 3      TCR5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4052	40	90	90	**	**	90	90	85	95	95	95	60	20	85	75	**	80	90	85	85	95	85	90	80	95	65	50	85	35	40	85	95	20	65	85	5	30	45	20	90	72
4100	62	83	93	95	**	83	90	93	97	90	90	79	67	90	72	65	97	95	58	79	95	81	93	18	97	58	55	46	51	44	83	90	67	72	58	76	65	48	60	86	75
4120	57	95	95	71	**	95	90	**	95	95	95	71	80	85	90	85	61	**	95	85	**	33	**	47	90	**	85	71	33	90	95	**	85	76	90	85	95	95	85	85	84
4121	38	88	94	88	**	**	94	94	94	**	**	5	83	88	88	44	77	83	27	88	94	61	**	27	94	77	22	55	66	27	83	88	22	11	44	5	16	16	38	83	65
4530	70	75	95	76	95	55	55	84	89	80	90	36	40	70	56	75	61	80	40	75	90	44	97	35	78	30	43	38	33	23	81	81	41	38	44	12	55	58	58	73	61
4531	95	**	95	**	**	90	85	65	**	95	95	70	60	75	80	80	75	90	50	90	95	80	95	50	**	65	75	90	90	45	**	85	70	75	70	50	75	75	70	90	80
4590	71	76	88	69	86	66	74	84	89	81	84	47	50	72	71	62	69	71	50	81	96	52	88	35	67	52	44	47	32	27	83	64	23	50	59	33	59	44	57	92	63
4592	81	90	90	81	**	**	90	90	**	**	**	0	18	**	**	90	**	**	45	**	**	63	**	27	**	81	**	90	72	9	90	81	90	81	90	0	54	0	36	90	76
4630	70	91	99	81	97	85	79	90	95	94	98	51	64	77	78	82	78	91	64	93	98	70	**	40	93	59	64	52	63	51	91	81	55	55	77	58	68	47	86	85	76
01SC	59	78	91	82	95	66	76	85	94	87	92	41	57	78	71	67	72	84	45	84	95	59	92	42	80	53	49	51	49	38	84	76	45	48	60	31	50	50	57	81	67
4260	59	81	89	75	94	75	78	89	94	83	**	43	21	72	67	64	81	86	54	89	97	64	97	59	94	51	45	35	45	40	91	75	37	35	51	40	54	70	54	81	68
4280	77	87	90	87	96	83	87	93	96	96	96	61	74	77	83	74	87	93	64	96	**	67	**	83	87	77	64	80	67	9	**	90	48	38	57	6	87	64	25	93	76
4283	66	89	93	81	98	72	84	86	94	83	93	35	62	84	79	74	84	88	52	88	94	61	93	38	84	42	44	40	37	25	77	74	37	35	42	6	44	54	40	83	66
4381	75	86	91	80	97	77	77	86	94	88	97	63	75	83	86	77	88	88	47	86	94	55	91	36	83	63	55	61	38	36	86	55	69	25	41	19	22	22	58	77	68
4640	61	82	88	90	99	72	83	80	94	81	87	61	55	76	69	64	80	86	56	84	93	66	86	53	75	54	49	54	44	36	77	83	49	65	58	66	54	51	58	80	70
4650	47	86	86	71	75	50	63	76	95	78	89	47	82	78	73	60	71	76	60	89	89	50	89	41	54	47	41	34	56	34	84	76	45	43	52	23	58	58	54	83	64
4062	88	96	**	96	**	85	**	96	**	92	96	96	59	96	77	88	81	**	88	88	96	92	92	96	92	89	92	66	85	66	96	85	96	**	**	92	81	96	92	90	90
4321	75	87	84	90	96	72	84	93	**	90	96	27	66	84	72	57	54	87	36	90	96	54	**	30	81	57	27	39	60	15	81	72	21	12	39	15	21	45	36	87	63
4322	58	76	96	76	**	56	68	78	94	88	94	43	39	92	72	62	68	84	33	96	94	47	90	33	72	52	39	58	50	21	74	82	31	35	43	9	60	47	52	86	64
4361	66	85	**	80	**	80	61	95	90	95	90	14	61	76	80	57	47	90	28	**	**	38	95	19	66	23	14	52	23	95	**	19	38	61	14	76	66	52	80	64	
4541	52	79	97	76	97	55	73	85	97	85	**	26	73	79	85	61	64	94	35	85	97	44	**	61	88	55	52	58	38	17	88	76	23	20	47	5	32	38	50	82	64
4543	45	72	77	75	97	22	75	81	86	93	90	29	47	84	65	45	45	81	54	84	97	56	90	15	68	59	29	40	22	15	79	75	27	36	34	13	15	40	43	79	57
01SO	62	83	90	82	97	65	78	85	94	86	93	47	58	81	75	65	73	87	51	88	95	58	92	46	78	55	46	50	47	29	83	78	42	42	51	29	49	52	51	82	67
4053	25	81	93	75	96	59	40	81	93	93	**	40	40	75	53	50	59	81	40	84	**	40	96	40	78	28	75	75	55	9	96	78	18	40	46	15	21	68	50	87	62
4061	**	80	**	**	**	71	**	95	**	95	**	42	42	85	90	85	57	**	95	**	85	**	47	90	52	71	42	33	52	80	85	28	33	47	4	76	42	80	90	74	
4113	35	60	85	95	95	85	80	80	90	90	95	80	60	85	45	75	95	90	85	90	95	80	90	30	75	70	40	75	80	55	90	80	65	65	55	60	50	80	70	90	74
4210	61	80	**	85	97	83	73	85	95	**	**	69	59	88	85	92	80	95	64	92	97	76	**	50	83	73	61	83	45	78	97	95	85	54	83	2	95	57	54	69	78
4230	38	60	90	71	93	55	83	75	90	76	91	38	68	80	56	61	73	73	28	83	88	51	78	23	70	41	36	41	46	21	68	75	31	36	53	40	46	46	35	78	60
4271	82	94	97	82	97	87	92	**	**	92	97	74	74	89	82	89	66	89	61	94	**	79	**	69	79	66	46	82	48	74	92	97	51	69	76	58	89	74	84	94	82
4360	89	94	82	87	97	92	94	92	97	94	97	84	28	94	89	74	76	92	51	97	**	84	**	43	87	89	84	89	71	64	89	**	20	82	82	46	94	89	92	94	82
4410	71	93	96	80	**	82	93	90	95	90	95	60	82	92	87	87	80	90	71	95	**	65	98	38	82	71	57	63	57	44	88	88	69	66	73	71	80	77	58	80	79
4580	51	78	95	79	98	52	71	84	96	89	95	36	51	72	78	71	70	91	44	96	97	54	88	33	73	46	46	57	47	27	90	82	32	40	64	17	78	48	42	76	66
4620	53	80	94	78	94	55	71	85	91	84	89	43	55	80	73	55	67	82	51	84	96	63	90	42	74	46	54	51	55	59	81	84	67	48	62	41	56	59	44	72	68
01SE	58	80	93	81	96	68	78	86	94	89	94	53	58	83	75	72	72	87	53	90	97	64	92	40	77	56	55	62	53	46	86	86	48	52	65	37	69	62	55	80	71
DISA	70	85	93	89	97	77	81	89	96	89	94	52	63	86	76	82	77	90	56	90	95	67	95	47	77	64	56	57	53	39	46	86	56	50	70	38	63	60	59	84	73
DISB	60	75	91	85	96	76	83	87	94	90	94	43	59	81	79	72	76	88	55	89	95	67	93	53	83	67	56	63	58	37	87	84	53	48	64	34	48	51	55	81	71
DISC	59	78	91	82	95	66	76	85	94	87	92	41	57	78	71	67	72	84	45	84	95	59	92	42	80	53	49	51	49	38	84	76	45	48	60	31	50	50	57	81	67
DISD	62	83	90	82	97	65	78	85	94	86	93	47	58	81	75	65	73	87	51	88	95	58	92	46	78	55	46	50	47	29	83	78	42	42	51	29	49	52	51	82	67
DISF	58	80	93	81	96	68	78	86	94	89	94	53	58	83	75	72	72	87	53	90	97	64	92	40	77	56	55	62	53	46	86	86	48	52	65	37	69	62	55	80	71
SIOT	62	80	92	84	96	70	79	86	94	88	93	46	59	81	75	71	74	87	51	88	95	63	93	45	79	58	52	56	52	38	85	81	49	48	62	33	55	54	56	82	70

## SCIENCE - LEVEL 4

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Life Sciences (14 items), Human Biology/Health (3 items), Physical Science (4 items), Earth Science (4 items), and Astronomy (9 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Human Biology/Health, Physical Science, and Earth Science, and most of the objectives in Astronomy. In this latter domain there is one item which fewer than fifty percent of the students answered correctly (item # 35); this item tapped knowledge of the sun's relative size in the solar system.

The most severe deficits as a strand lie in the domain of Life Sciences where of fourteen items there are four that fewer than fifty percent of the students answered correctly (items #'s 17, 19, 20, and 22). The objectives measured by these items are grouping plants into major types, recognizing that fruit develops from the flowers of plants, recognizing the parts of a flower in a drawing, and naming the ways that seeds are spread around.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SCIENCE - LEVEL 4

1935 - 1986

B.4	Measure objects or lengths to nearest quarter inch or millimeter	1
B.3	Identify appropriate measuring instrument & unit of measmt for task	2
B.1	Observing carefully; notice size, shape, color, texture, etc.	3
B.7	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	4
B.9	Make estimates of length, weight, temperature & time	5
B.5	Identify appropriate measuring instrument & unit of measmt for task	6
G.15	Describe fossils found in certain rocks and what they indicate	7
G.16	Describe the work of geologists	8
G.3	Equator; zones around it and the effect on weather	9
G.4	Three stages of water cycle: evaporation, forms of clouds, precipit.	10
F.21	Earth's gravity and Sir Isaac Newton	11
F.12	Identify objects to which magnets will stick	12
F.17	Electricity will only flow in a closed circuit w/a source of power	13
F.1	Identify the three stages of matter & give examples	14
D.3	Recognize parts of a flower in a drawing; functions of each part	15
D.1	Difference between things living & non-living, list traits	16
D.2	Group plants into major types & list characters of each group	17
D.3	Recognize parts of a flower in a drawing; functions of each part	18
D.4	Recognize that fruit develops from the flowers of plants	19
D.3	Recognize parts of a flower in a drawing; functions of each part	20
D.11	Classify animals as vertebrates & invertebrates; main characters	21
D.8	Names the ways that seeds are spread around	22
D.16	Identify the ways of telling the age of certain living things	23
D.13	Identify some adaptations advantageous to predators	24
D.12	Classify animals according to the environment where they live	25
D.5	Green plants produce starch and what they take in to prduce it	26
D.14	Life cycles of an insect, fish, amphibian, bird or mamma.	27
D.17	Migration, hibernation & dormancy as survival response to winter	28
E.5	Distinguish between instinctive behavior & learned behavior	29
E.2	Trace route taken by a piece of food in digestive system	30
E.6	Essential conditions for survival & growth; food, water, rest, etc.	31
H.2	Distinguish sun & other stars from planets & other satellites	32
H.12	Nine known planets vary in size & circle the sun at different	33
H.15	distances, held in orbit by sun's gravity & Earth is 3rd frm sun	34
H.5	Sun is an average-size star in Milky Way ; has many millicns	35
H.14	Sun is less warmer in winter because of angle of sun	36
H.12	Daylight hours longer til 6/21 & shorter til 12/21	37
H.6	Identify constellations as groups of stars that have distinct shape	38
H.4	Copernicus's theory that the earth moves around the sun	39
H.7	Describe how to locate the North Star on a clear night	40

943 SCI LEVEL 4 TELLS005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	
4052	65	69	86	95	60	47	65	56	86	73	82	86	91	86	65	91	26	59	69	8	86	34	60	78	95	60	56	52	84	60	86	78	82	65	34	91	82	34	52	47	67	
4100	69	77	97	98	63	58	90	69	89	81	93	97	79	84	83	**	55	75	55	46	76	48	73	93	95	82	69	61	84	79	84	77	84	70	52	84	82	59	81	58	76	
4120	55	85	**	**	60	90	95	75	85	90	95	**	90	95	90	95	80	80	80	10	95	45	75	60	95	35	80	70	**	65	**	70	85	95	40	95	90	50	60	55	78	
4121	45	9	**	90	65	36	**	63	72	*	**	**	90	90	**	**	81	90	18	63	72	54	81	**	**	90	**	45	72	81	81	90	81	90	81	90	90	45	90	72	77	
4530	41	51	89	96	37	44	72	27	41	58	68	86	58	44	74	**	20	37	13	13	55	20	58	82	75	27	44	37	62	68	44	55	65	27	24	68	79	31	48	37	51	
4531	54	45	81	**	18	90	90	90	72	81	81	**	54	90	**	**	27	81	54	72	81	90	45	81	**	45	72	72	72	**	45	**	72	**	81	81	72	45	81	27	74	
4590	31	40	91	**	51	77	68	71	77	68	68	**	60	62	85	97	37	71	34	54	60	25	82	85	94	48	22	28	91	54	62	48	71	60	28	88	77	40	48	34	63	
4592	62	50	**	**	37	75	87	**	87	87	87	**	25	87	87	**	75	62	37	50	75	37	75	75	75	62	50	25	**	62	62	87	87	87	62	25	87	87	62	**	62	71
4630	50	71	94	98	38	87	75	71	71	70	84	94	78	85	80	**	43	68	50	47	82	54	92	66	87	50	64	42	87	73	80	85	78	85	54	89	85	71	63	59	73	
DISC	52	52	93	96	54	62	82	65	71	71	82	92	72	72	65	97	47	57	34	34	73	39	65	79	90	52	50	49	83	69	77	70	69	66	45	84	79	47	64	55	66	
4260	12	69	90	96	51	54	93	84	78	57	75	87	72	60	78	**	45	60	36	36	63	54	57	78	84	69	39	33	75	72	69	72	75	75	57	81	75	51	57	48	65	
4280	77	80	91	94	66	47	77	72	66	72	86	88	86	77	86	91	80	75	50	63	94	61	77	83	88	75	55	83	86	91	80	72	61	69	58	91	83	72	69	61	76	
4283	38	68	90	95	61	61	75	61	77	55	66	91	63	55	62	95	48	56	30	37	76	41	47	73	91	47	38	50	81	56	84	65	56	72	58	93	83	48	58	62	64	
4381	**	76	**	95	47	42	90	85	76	76	90	95	95	90	90	95	42	90	52	28	85	19	33	71	95	57	52	47	90	66	71	80	47	85	52	95	85	66	71	52	72	
4643	39	47	86	95	38	41	66	48	45	67	84	84	75	71	57	95	38	43	22	25	61	30	40	68	84	48	51	34	72	43	65	63	70	67	46	75	62	40	62	36	57	
4650	69	47	95	95	56	63	87	63	76	76	83	88	74	68	51	92	32	51	44	30	70	60	58	77	95	47	41	45	77	72	81	77	58	88	55	81	87	56	67	57	67	
4662	96	70	96	96	84	81	90	96	96	96	**	90	87	78	**	81	84	78	78	87	87	90	90	**	90	81	71	93	97	93	90	62	93	84	84	93	90	84	78	88		
4321	39	39	85	92	39	50	71	32	75	89	82	92	89	75	64	96	32	50	10	3	78	25	57	71	96	17	42	25	75	50	57	50	50	46	35	82	71	28	67	35	56	
4322	43	37	89	98	50	37	53	50	65	50	72	86	68	81	65	96	41	68	44	34	60	24	56	72	93	41	39	22	62	60	77	87	55	68	41	75	72	43	56	41	59	
4361	60	33	**	**	53	40	93	80	93	86	86	**	80	86	**	**	46	93	20	60	93	46	93	80	**	**	40	86	93	60	80	**	66	**	86	80	60	**	60	80	78	
4541	37	10	95	97	32	52	82	57	65	50	77	95	55	50	42	97	32	40	10	10	60	22	40	80	90	52	37	45	75	72	55	65	62	60	27	72	82	32	55	50	56	
4543	39	50	92	**	52	71	86	63	68	60	92	94	65	63	50	94	28	52	42	15	78	28	76	86	97	86	39	50	84	76	76	60	71	81	68	84	78	23	57	39	65	
DISD	51	52	91	96	51	53	77	62	69	67	81	90	73	69	63	95	43	58	35	32	72	41	56	76	91	55	45	45	78	64	74	73	62	74	53	82	77	50	63	51	65	
4053	45	25	91	94	45	51	77	54	68	68	74	91	74	74	54	94	37	51	48	17	77	37	62	80	82	40	28	31	82	54	71	77	71	71	37	74	57	45	48	40	60	
4061	68	42	93	97	60	71	91	55	91	84	55	97	91	75	91	**	57	71	44	33	86	66	86	95	97	73	48	82	93	88	88	95	84	82	53	88	95	75	77	62	78	
4113	58	44	94	97	32	67	73	47	67	85	91	94	76	67	50	97	55	64	52	38	85	29	35	82	94	38	29	61	82	64	82	76	70	67	47	79	82	38	41	70	65	
4210	52	36	**	93	45	54	88	52	72	79	84	93	81	93	68	97	45	59	22	13	93	45	81	97	86	52	45	75	88	88	93	75	52	59	43	88	72	45	45	54	67	
4230	59	40	94	96	59	70	86	69	68	73	83	98	72	73	62	**	45	54	36	34	82	39	76	87	93	67	57	55	86	81	84	75	65	68	54	84	75	65	64	64	70	
4271	36	47	97	**	52	56	90	70	56	77	88	**	86	84	84	**	56	70	59	29	95	68	72	68	97	84	43	56	95	59	86	93	68	75	45	81	86	72	65	52	72	
4360	86	81	91	97	70	89	86	91	91	83	**	91	89	78	86	54	54	94	78	78	91	72	91	89	83	86	86	75	94	83	91	83	94	78	67	94	09	86	89	86	85	
4410	52	61	98	**	44	66	76	74	79	86	94	98	83	86	76	**	62	61	40	49	89	55	66	91	94	57	79	54	96	84	84	94	76	86	47	89	77	67	83	57	75	
4580	58	55	95	**	55	59	78	50	79	81	82	90	77	60	76	97	39	60	40	40	76	42	67	89	85	59	43	47	83	81	84	79	60	75	52	83	71	53	72	40	68	
4620	35	48	92	95	42	47	70	49	64	65	68	82	61	52	75	90	29	61	46	28	59	30	55	71	86	65	54	39	76	69	72	61	44	77	38	82	70	49	53	54	60	
DISF	54	48	94	97	51	62	81	60	73	77	84	93	76	71	72	97	45	62	44	35	81	45	69	84	90	63	53	55	86	77	83	79	65	74	48	84	76	59	64	57	69	
DISA	64	55	94	97	52	57	86	66	76	73	85	95	70	70	67	96	61	56	32	40	80	45	65	82	90	58	61	52	84	69	78	78	71	76	50	66	78	62	62	60	69	
DISB	62	55	90	97	64	60	79	57	74	68	81	90	75	66	65	95	50	56	42	37	76	43	58	80	90	55	52	52	80	72	73	68	66	66	48	80	77	52	62	53	67	
DISC	52	52	93	96	54	62	82	65	71	71	82	92	72	65	97	47	57	34	34	73	39	65	79	90	52	50	49	83	69	77	70	69	66	45	84	79	47	64	55	66		
DISD	51	52	91	96	51	53	77	62	69	67	81	90	73	69	63	95	43	58	35	32	72	41	56	76	91	55	45	45	78	64	74	73	62	74	53	82	77	50	63	51	65	
DISF	54	48	94	97	51	62	81	60	73	77	84	93	76	71	72	97	45	62	44	35	81	45	69	84	90	63	53	55	86	77	83	79	65	74	48	84	76	59	64	57	69	
STUT	56	52	92	96	55	59	81	62	72	71	82	92	73	70	66	96	49	58	37	36	76	42	63	80	90	56	52	50	82	70	77	73	67	70	48	83	78	53	63	55	67	

943 SCI LEVL 4 TELCR5005 11/07/80  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	
4160	69	50	94	94	50	58	77	91	86	83	72	86	66	75	72	91	50	44	8	66	80	50	66	83	88	44	72	72	97	72	83	80	55	75	44	86	80	58	52	55	69	
4170	50	31	93	**	62	31	**	25	81	93	93	93	68	87	56	93	31	62	37	31	68	43	87	81	93	43	68	31	81	87	68	87	81	87	68	81	75	62	81	81	69	
4173	40	33	88	96	40	55	88	74	62	70	85	96	62	70	55	**	29	51	25	25	77	55	51	77	92	66	18	25	85	59	55	48	70	88	44	81	88	59	70	59	63	
4220	76	47	**	90	71	60	95	57	95	**	85	**	80	71	80	85	76	76	38	38	90	57	71	71	71	80	66	80	90	71	76	90	80	76	61	**	80	52	61	76	76	
4221	92	39	85	**	25	42	64	39	50	32	67	85	50	39	50	96	50	28	17	21	57	14	42	46	75	32	32	14	71	57	57	57	50	53	46	78	53	25	42	28	50	
4570	72	80	94	97	50	58	88	56	69	58	88	94	80	80	69	97	80	58	22	19	66	25	83	88	88	75	77	58	80	72	91	86	75	77	50	80	80	63	69	75	72	
4571	43	45	96	96	51	45	88	50	87	90	85	96	77	75	77	98	40	61	25	41	88	40	58	90	95	40	58	46	82	66	75	83	80	75	45	85	85	59	48	54	68	
4010	88	83	88	94	72	69	83	63	86	80	88	88	83	58	69	80	75	55	36	44	91	58	77	91	75	55	63	47	75	80	77	83	52	69	52	88	88	86	75	61	73	
4240	70	57	98	**	59	80	**	91	87	85	96	**	71	75	73	96	70	71	50	64	89	49	56	89	96	87	61	82	85	73	87	73	80	96	49	91	84	84	71	73	79	
4241	30	43	**	**	47	52	91	39	69	65	78	**	34	65	39	**	60	47	21	13	73	13	56	95	**	34	69	56	91	65	73	86	86	82	56	86	65	39	30	43	62	
4270	27	27	95	95	40	22	90	81	90	77	**	**	86	81	63	**	81	59	40	18	50	31	45	72	90	81	77	50	77	95	81	**	68	72	59	90	72	63	63	63	69	
4310	85	48	88	96	33	44	81	55	37	51	77	**	33	66	11	**	22	14	14	14	88	55	74	70	92	33	44	25	92	62	85	66	55	66	11	88	77	70	59	51	58	
4311	44	77	**	**	38	55	88	77	88	72	77	**	72	38	94	**	83	61	44	27	77	27	77	88	94	72	66	66	94	55	77	83	61	55	61	72	61	61	72	33	70	
4370	62	55	92	**	55	22	51	55	48	22	59	92	55	40	66	**	44	48	0	40	51	48	29	62	92	18	66	14	77	29	59	48	66	29	18	77	55	18	40	29	51	
4371	75	62	**	93	65	84	96	87	65	93	**	96	87	84	84	**	87	71	59	59	**	65	87	**	**	68	87	53	84	78	87	90	78	93	68	87	65	78	87	82		
4430	79	**	**	**	70	95	**	87	95	83	95	**	**	95	91	**	83	87	87	70	95	87	95	83	**	91	62	83	95	91	95	91	95	**	**	**	83	95	95	83	91	
DISA	64	55	94	97	52	57	86	66	76	73	85	95	70	70	67	96	61	56	32	40	80	45	65	82	90	58	61	52	84	69	78	78	71	76	50	86	78	62	62	60	69	
4030	66	58	95	95	66	66	66	54	54	70	95	87	37	33	66	**	25	37	25	25	70	50	62	83	83	16	16	45	75	62	75	70	45	50	27	83	87	29	54	33	59	
4031	31	37	87	**	37	43	75	37	55	43	62	87	56	62	43	**	62	31	6	37	68	25	6	87	93	31	31	37	81	50	68	37	68	37	12	75	68	18	50	18	51	
4081	75	57	92	**	85	78	96	71	71	75	78	96	82	78	85	92	78	75	71	57	82	78	60	78	92	71	75	78	82	89	89	85	71	78	78	89	85	82	71	75	79	
4082	93	91	83	**	87	62	66	75	87	87	83	87	54	83	41	95	29	54	29	41	79	41	79	83	95	50	50	66	79	66	70	75	91	91	25	79	70	45	75	58	70	
4290	51	31	83	98	55	51	85	35	62	70	77	87	77	61	51	96	31	40	24	18	74	31	40	72	83	35	29	38	74	74	64	74	57	62	53	70	72	51	55	50	58	
4560	67	51	93	98	82	84	81	62	84	73	89	95	73	75	82	96	50	79	28	46	85	46	62	85	95	62	57	62	87	89	85	76	76	81	51	84	84	78	65	65	74	
4561	50	44	83	**	55	66	66	44	88	66	38	94	77	61	27	**	22	33	50	50	80	83	33	66	72	88	38	44	38	94	44	61	77	33	44	27	94	88	38	38	61	61
4690	46	45	91	98	45	48	63	40	62	57	69	87	83	45	66	94	49	53	37	30	65	40	33	68	86	50	41	37	78	66	67	43	57	51	34	72	72	30	50	40	57	
4070	80	92	84	94	94	51	94	98	94	84	98	96	**	94	90	94	88	92	75	75	88	4	71	88	94	90	82	67	78	71	80	76	78	92	88	94	84	78	75	67	84	
4080	38	33	88	94	44	55	94	66	66	66	88	83	88	94	50	88	38	55	50	44	83	88	88	44	44	55	86	77	72	4	61	55	33	66	66	50	50	61	64			
4151	59	49	88	94	57	64	82	56	63	57	74	82	72	58	50	93	37	55	40	33	79	33	51	74	83	48	43	50	70	65	67	58	70	57	50	71	68	49	60	43	61	
4190	50	43	93	98	50	38	75	43	79	75	82	96	82	74	54	95	53	46	53	27	64	61	72	88	87	64	62	51	79	74	72	88	70	72	50	77	82	46	72	50	67	
4192	92	84	97	**	86	68	84	63	84	71	97	84	60	60	76	97	28	52	28	23	78	23	92	84	94	86	76	55	86	89	84	84	57	71	65	94	76	68	73	50	73	
4200	68	68	90	**	65	87	90	62	84	65	78	93	81	71	68	**	75	46	46	12	62	28	59	90	93	28	46	53	93	65	65	71	53	56	25	90	81	43	81	62	67	
4201	89	86	96	96	89	75	89	89	**	93	93	96	68	82	86	**	93	75	82	89	**	89	75	93	96	89	82	86	89	96	93	**	96	93	75	93	96	62	75	82	88	
4670	47	36	94	94	31	42	78	57	47	52	57	**	57	57	36	**	47	21	10	15	89	15	63	63	**	31	47	31	73	52	63	42	68	42	15	84	68	36	36	73	54	
DISB	62	55	90	97	64	60	79	57	74	68	81	90	75	66	65	95	50	56	42	37	76	43	58	80	90	55	52	52	80	72	73	68	66	66	48	80	77	52	62	53	67	
4051	47	71	91	97	58	60	73	52	56	58	63	84	58	63	47	95	50	50	17	23	69	34	54	69	91	36	56	47	73	69	60	45	36	39	32	84	65	21	32	26	56	
4130	35	31	94	98	29	50	79	77	74	59	94	98	59	68	57	**	50	44	18	40	83	35	64	92	**	61	24	64	87	75	83	62	81	68	31	88	92	75	68	64	66	
4131	**	**	**	**	89	84	**	94	89	94	94	89	**	84	78	**	94	**	89	94	89	94	89	89	78	**	**	**	84	94	89	89	94	94	63	84	84	91	**	**	**	**
4140	63	70	96	90	53	66	90	56	60	60	76	96	76	70	53	**	40	53	46	33	80	60	43	80	86	53	36	43	93	70	73	53	76	53	56	83	73	26	50	53	65	
4150	29	34	87	93	36	46	82	72	40	53	76	91	68	46	36	**	36	31	17	17	72	31	36	57	67	48	48	36	74	40	63	48	44	48	34	68	68	25	53	42	53	
4250	62	55	90	91	63	49	88	67	55	56	77	89	77	68	63	**	37	51	36	25	67	31	57	81	89	45	50	40	77	69	75	80	76	62	52	85	83	30	69	55	64	
4340	43	26	93	97	78	74																																				



## SCIENCE - LEVEL 5

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (13 items), Human Biology/Health (3 items), Physical Sciences (10 items), Earth Science (5 items), and Astronomy (5 items).

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students appear to be mastering the objectives in the domains of Skills/Processes and Astronomy and most of the objectives tapped in Life Science and Human Biology/Health. Within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. In Life Science students are having difficulty knowing the interactions needed for photosynthesis (item # 11) and in Human Biology/Health students are not clear on the difference between an artery and a vein (item # 19).

The most severe deficits as strands lie in Physical Science and Earth Science where of fifteen items, there are seven that fewer than fifty percent of the students answered correctly. In Physical Science students are having difficulty with materials that cause sliding friction, with identifying materials that are good and bad conductors of heat, identifying simple machines, and describing how white light can be separated into colors (item #'s 22, 24, 28, and 30). In Earth Science students are having difficulty identifying the use of a barometer, the effect of geological forces on the earth's surface, and types of fossils (item #'s 32, 34, and 35).

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 5  
 1985 - 1986

B.3	Identify appropriate measuring instruments & units of measure	1	
B.7	Measure temperature to nearest degree in Fahrenheit & Celsius	2	
B.9	Make estimates of length, mass, temperature, time or volume	3	
B.11	Record info. in form of sketches, graphs & interpret	4	
D.20	Cell is basic unit of all living things	5	
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrates	6	
D.12	Identify adaptations in a given animal's body	7	
D.21	Smallest protista has single cell; larger animals millions of cells	8	
D.26	Survival of insects, fish & plants that are food of many animals	9	
D.6	Recognize various parts of a flower & function of each	0	1
D.7	Process of photosynthesis to produce starch (glucose)	1	1
D.10	Identify similar life functions of many animals	1	1
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrates	2	1
D.17	Describe various types of animal and plant behavior	3	1
D.7	Process of photosynthesis to produce starch	4	1
D.9	Identify basic conditions for & stages of, seed germination	5	1
D.30	Humans are cared for & protected by parents longer than any animal	6	1
E.7	Identify brain as control center of the nervous system	7	1
E.10	Identify difference between artery and vein	8	1
E.9	Heart beats faster when we exert ourselves & slows when we rest	9	2
F.20	Examples of materials that are electrical conductors	0	2
F.25	Materials that cause sliding friction & others that cause little	1	2
F.1	Identify the characters of three kinds of matter	2	2
F.14	Identify materials that are good & bad conductors of heat	2	3
F.15	Group objects that are magnetic and non-magnetic	3	4
F.18	Workings of an electrical switch	4	2
F.20	Examples of materials that are electrical conductors & insulators	5	2
F.22	Six simple machines that are used in everyday situations	6	2
F.26	Earth's gravity pulls objects straight down toward center of planet	7	2
F.32	Describe how white light can be separated out into spectrum/colors	8	2
G.5	Define humidity as the amount of moisture in the air	9	3
G.11	Identify a barometer as an instrument that measures air pressure	0	3
G.3	Describe how the water cycle works	1	3
G.15	Earth's surface is being built up & worn down by geological forces	2	3
G.18	Why there are few fossils of some animals & many of others	3	4
H.8	Identify constellations as group of stars	4	5
H.7	Sun is part of the Milky Way galaxy, which contains billions stars	5	6
H.3	What our solar system contains besides the sun and planets	6	7
H.5	Earth is almost certainly only planet that can sustain life	7	8
H.6	Sun and Earth's size	8	9
		9	0

953 SCI LEVL 5 TECR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	
4160	95	95	55	**	60	55	93	74	67	74	76	97	76	62	76	90	86	86	41	93	83	62	73	83	93	93	76	55	76	62	80	81	67	55	93	79	97	93	93	62	78	
4170	88	**	70	**	58	58	76	35	52	58	29	88	47	41	58	88	73	35	11	94	70	11	76	35	**	88	58	35	94	11	58	58	64	41	47	70	76	70	94	64	62	
4173	95	**	70	95	50	55	90	75	65	50	20	85	20	65	20	70	65	40	35	95	75	40	65	10	**	85	75	25	85	15	60	50	70	10	40	70	90	75	95	65	61	
4220	**	**	68	**	75	63	87	50	62	75	31	**	93	75	50	50	87	18	0	**	87	50	81	31	**	75	81	31	**	31	81	43	43	6	18	50	93	**	87	93	67	
4221	91	**	82	82	82	60	78	56	65	60	26	95	69	65	39	62	86	69	56	91	73	30	05	65	86	69	86	52	82	60	73	34	52	26	43	47	73	73	82	56	67	
4570	86	**	68	86	60	68	76	44	50	52	23	84	39	44	63	92	71	55	26	94	78	65	63	44	86	73	76	23	73	52	57	13	36	15	39	18	52	73	89	68	59	
4571	94	98	84	96	84	78	90	76	72	88	62	94	74	80	54	78	90	68	48	98	88	40	96	70	96	90	88	50	98	50	82	60	62	44	66	68	90	92	98	76	77	
4010	96	**	66	89	78	52	70	55	58	56	52	87	56	61	61	84	75	46	20	95	78	35	69	16	93	81	75	36	84	29	55	23	29	33	38	60	72	75	92	56	62	
4240	82	98	69	93	65	50	88	69	51	59	19	85	75	52	55	86	92	64	46	94	78	15	76	27	88	85	77	21	86	38	71	56	53	39	32	69	89	89	92	46	65	
4241	88	**	88	**	**	**	**	**	**	**	66	**	**	**	88	**	77	**	77	88	**	77	22	**	88	**	**	88	0	77	88	77	66	66	88	66	11	**	88	**	77	84
4270	94	**	78	94	**	68	84	89	84	89	84	**	84	73	94	**	**	89	89	94	84	84	**	78	**	**	84	84	78	78	89	84	73	94	**	68	**	94	**	84	88	
4310	93	**	93	**	81	93	**	81	93	93	50	**	75	50	75	93	**	**	68	**	87	75	93	75	93	87	01	50	81	62	75	18	68	43	62	50	87	75	**	87	80	
4311	**	**	95	30	90	85	**	80	66	95	71	**	90	85	90	90	**	76	71	90	76	71	95	25	**	**	85	71	95	23	71	42	52	4	23	38	85	95	90	61	77	
4370	94	**	**	88	77	94	88	22	94	88	83	**	94	77	94	**	94	88	83	**	**	88	88	88	**	94	88	88	**	**	**	22	83	88	16	11	55	61	72	16	80	
4371	90	95	81	**	68	68	86	77	90	36	54	95	77	72	59	90	**	81	54	**	95	59	95	40	**	81	86	18	95	36	68	81	50	13	72	63	90	90	**	72	74	
4430	**	**	**	80	80	**	90	90	90	80	**	80	90	80	80	90	**	80	80	90	**	80	80	70	90	**	70	80	**	90	70	80	80	50	60	90	90	80	**	90	85	
DISA	92	98	75	93	73	65	85	65	66	68	48	92	69	64	63	85	86	65	44	95	82	46	81	47	93	86	79	41	87	46	71	49	54	38	50	57	82	83	92	63	70	
4030	**	**	60	**	**	80	**	93	80	80	46	**	**	**	93	93	**	86	66	**	86	80	73	66	**	93	66	53	**	86	46	86	73	66	93	93	**	**	86	73	85	
4031	**	**	84	92	53	69	92	84	76	84	23	92	38	84	38	53	53	46	15	92	76	23	69	38	92	92	84	30	84	30	76	51	38	38	15	69	53	92	76	46	64	
4081	**	**	**	96	**	**	**	**	96	**	**	**	92	**	84	80	96	**	96	19	96	96	92	**	69	**	**	96	26	**	26	**	84	92	80	61	65	92	96	84	53	86
4082	75	87	62	87	**	93	68	**	56	**	**	87	**	37	**	75	68	31	12	93	62	50	68	18	81	62	68	**	68	**	37	31	62	6	43	50	15	62	68	68	68	
4290	93	98	81	96	82	81	79	77	58	67	51	86	58	67	81	82	87	46	17	93	87	61	77	27	91	81	89	12	87	51	65	15	62	24	32	43	79	81	91	68	67	
4560	97	**	88	91	93	91	82	77	73	77	77	95	40	68	55	84	88	68	31	**	86	37	91	42	88	95	86	35	95	68	48	51	57	33	48	60	82	93	93	82	74	
4561	76	95	57	95	76	80	**	80	80	52	47	90	85	57	66	80	95	52	28	**	80	14	80	28	95	76	76	47	85	61	66	42	42	14	38	52	71	76	95	80	68	
4690	90	98	84	84	66	61	83	53	57	52	23	95	33	35	38	81	84	47	11	92	61	47	74	28	81	61	57	28	71	43	46	28	47	14	32	32	47	71	81	40	56	
4070	96	96	63	87	42	48	78	57	72	60	51	75	48	48	54	69	81	65	36	93	72	39	78	28	81	69	69	45	69	51	75	45	66	54	63	57	57	78	51	64		
4080	72	86	68	90	81	68	81	50	72	45	22	77	72	22	54	77	72	54	31	77	72	54	72	54	81	72	63	68	81	31	68	50	40	31	31	63	54	81	90	68	62	
4151	92	98	78	91	73	59	85	70	56	64	38	92	67	59	46	84	85	63	32	94	77	66	77	46	98	87	71	57	80	53	76	47	47	40	52	28	74	87	90	49	68	
4190	86	96	84	90	92	59	78	76	55	55	40	92	78	69	67	94	80	51	34	98	80	67	84	63	90	94	69	51	86	59	48	28	65	32	46	51	55	73	92	71	69	
4192	96	**	88	**	30	61	88	61	57	61	34	92	61	57	46	80	76	42	23	88	88	30	84	46	96	80	84	42	96	50	42	46	65	46	42	57	73	92	**	92	67	
4200	93	**	93	**	**	87	93	81	62	93	75	93	87	87	81	93	93	87	68	**	**	68	93	93	**	**	**	87	93	87	87	75	62	56	**	87	**	**	93	93	88	
4201	88	**	88	96	85	62	**	70	66	88	37	96	70	59	88	96	74	37	48	96	92	77	81	22	70	85	74	66	85	55	66	85	40	40	33	29	40	85	81	48	70	
4670	89	**	**	94	68	78	89	42	68	**	52	78	63	31	73	68	68	**	5	**	78	26	63	31	94	68	68	**	78	31	47	**	68	5	26	89	78	94	84	57	69	
D15B	91	97	81	92	77	70	85	71	65	68	48	90	63	58	62	83	83	58	27	94	80	52	80	43	89	81	76	46	84	53	61	47	57	34	45	50	68	82	87	62	68	
4051	96	**	73	83	60	70	83	60	66	60	56	50	50	50	46	56	83	83	43	95	73	86	73	90	90	83	53	20	86	53	43	26	26	20	13	20	3	10	83	26	59	
4130	72	96	60	93	45	69	87	63	57	18	9	93	54	60	51	60	75	24	48	93	78	30	75	27	10	72	84	27	81	51	60	72	27	12	24	63	63	84	93	39	60	
4131	70	95	62	83	37	62	75	20	58	25	20	91	20	62	50	79	79	41	20	91	79	0	45	29	87	79	62	20	75	25	41	4	37	16	16	41	54	75	79	45	51	
4140	84	96	61	**	30	57	73	30	38	23	15	88	19	38	46	76	84	15	11	96	80	57	57	42	69	88	73	15	69	15	42	15	46	19	30	38	34	61	80	30	51	
4150	80	**	29	94	67	56	86	89	81	81	75	91	64	56	56	83	75	27	13	91	89	56	81	40	91	86	75	54	86	70	62	35	72	67	72	54	59	86	89	64	70	
4250	90	**	82	92	64	66	94	60	52	74	62	**	80	72	78	80	84	68	32	94	76	56	84	50	84	78	66	52	84	62	50	48	50	32	40	58	82	78	70	62	69	
4340	93	**	82	91	53	30	89	60	73	57	23	93	82	39	60	94	86	63	28	98	89	45	82	58	95	91	98															

953 SCI LVL 5 TUCR5005 11/07/06  
PERCENTAGE OF CORRECT ANSWERS PER ITEM  
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4052	86	**	**	93	86	86	**	53	93	80	33	93	33	80	66	80	86	53	53	**	80	13	86	60	**	**	80	60	93	20	80	53	46	20	46	40	66	60	93	93	71
4100	95	98	83	96	77	80	91	86	72	86	51	88	61	86	60	83	88	70	53	**	96	61	66	56	96	88	92	32	67	66	71	54	67	35	50	55	59	86	87	71	75
4120	**	**	90	95	85	35	85	90	66	14	66	85	66	76	47	95	90	66	57	**	**	42	76	42	95	95	90	61	96	90	42	14	28	61	66	47	90	95	95	76	72
4121	72	**	63	**	72	54	63	45	63	81	36	90	27	81	54	81	90	66	36	90	90	18	90	9	**	90	72	9	81	9	27	36	36	18	9	18	5	63	**	45	58
4530	97	**	86	**	88	88	94	86	80	83	60	97	91	69	91	94	94	94	55	94	97	75	83	77	97	91	83	80	86	61	72	75	75	72	75	83	91	94	97	94	85
4531	88	94	82	**	82	70	87	70	70	76	17	88	76	41	58	98	76	23	11	94	76	17	64	35	76	76	41	17	82	23	35	23	58	5	52	35	52	76	76	47	59
4590	92	**	61	97	79	64	92	71	51	64	64	84	82	66	79	92	89	61	41	92	82	79	71	38	92	84	79	35	71	74	69	33	69	43	53	41	84	87	97	35	71
4592	**	**	75	**	**	**	**	50	**	75	25	**	75	**	**	**	**	**	25	**	**	50	75	75	**	**	75	25	**	50	0	75	50	50	0	**	75	75	75	75	76
4600	96	**	78	92	72	75	86	89	83	67	56	92	69	64	56	66	92	69	13	98	92	58	76	41	96	80	73	53	96	52	52	33	50	18	50	55	60	90	89	63	70
DISC	91	99	73	93	68	65	86	72	67	62	42	91	60	63	59	80	85	58	34	96	84	52	78	46	91	83	78	37	86	49	60	41	53	30	44	51	64	80	88	62	68
4260	89	**	72	96	82	72	62	68	75	86	41	89	55	51	37	72	75	82	13	**	82	44	89	20	96	75	65	31	93	34	51	34	48	13	44	41	86	89	96	72	66
4280	95	**	95	**	**	**	**	95	**	**	**	**	**	90	**	76	**	**	90	95	**	**	95	95	**	**	**	95	95	95	52	66	85	52	61	85	85	90	**	38	90
4283	97	98	66	94	52	50	79	67	58	69	49	94	58	47	54	77	73	60	32	84	60	41	67	13	84	71	75	47	83	37	56	56	39	28	35	60	58	83	71	54	62
4381	**	**	80	**	73	80	86	86	20	80	6	60	26	26	40	80	80	53	13	86	60	31	80	26	93	73	**	20	66	6	40	26	46	13	20	20	73	60	93	46	57
4640	84	97	67	86	71	52	86	50	59	46	20	84	33	45	50	85	64	33	4	95	76	33	76	17	90	73	71	17	82	41	48	25	50	20	21	40	53	82	88	55	57
4650	90	98	73	94	68	81	90	65	62	59	44	93	63	66	59	77	80	46	37	96	84	45	77	44	96	84	81	44	90	51	75	47	63	27	55	60	70	82	93	66	69
4062	97	**	91	97	97	91	97	91	85	91	91	**	82	94	82	50	**	91	88	**	97	82	97	79	**	97	91	41	97	88	94	82	55	32	94	70	97	91	91	67	86
4271	95	**	81	**	77	77	**	54	54	50	22	86	68	54	50	86	95	40	4	**	81	40	86	22	90	90	77	36	90	27	50	13	40	4	40	45	40	77	86	63	62
4322	89	**	66	93	50	83	87	52	54	47	27	85	50	39	64	85	56	45	25	91	68	22	83	22	91	79	58	31	81	20	41	33	52	25	20	54	66	85	91	68	59
4361	88	**	82	82	70	41	82	64	76	58	41	94	35	35	82	88	82	64	47	88	64	11	88	35	82	94	88	17	88	17	52	11	35	11	5	64	70	88	94	70	62
4541	86	93	68	86	36	40	86	45	45	13	90	9	50	27	72	81	40	0	**	68	36	81	13	86	81	72	40	90	22	63	13	36	18	22	36	50	77	72	31	53	
4543	**	92	76	96	36	88	88	52	60	28	16	68	36	24	52	80	84	16	0	**	88	32	72	8	76	76	76	20	80	32	64	20	60	16	16	48	48	80	92	36	55
DISD	91	98	73	93	67	71	88	63	62	60	39	88	52	53	57	78	77	52	28	94	77	42	80	31	91	81	76	35	86	42	59	38	52	23	38	53	65	83	88	58	65
4053	93	**	68	**	72	55	96	89	51	51	65	96	65	72	72	86	82	51	37	96	72	65	89	27	93	89	79	31	93	79	37	37	44	3	24	79	86	58	93	55	68
4061	97	**	79	95	76	69	90	93	69	69	60	**	76	55	39	86	97	58	13	97	88	2	81	27	95	81	74	16	93	39	48	37	48	34	51	74	88	86	95	76	69
4113	**	**	**	95	95	**	90	54	**	90	9	90	18	27	36	90	90	59	13	**	90	68	81	68	**	90	90	40	86	40	68	27	50	13	31	45	54	90	81	90	69
4210	92	**	57	97	62	70	90	62	75	90	42	90	32	60	80	82	92	55	27	**	70	30	80	25	90	85	80	10	80	87	37	5	40	10	20	45	82	87	90	75	64
4230	95	97	72	94	68	62	84	63	62	62	36	90	41	59	60	75	80	55	14	93	88	40	81	30	91	80	74	33	78	35	51	25	50	16	26	54	54	81	81	57	62
4271	**	**	86	97	68	72	97	80	83	63	41	94	63	77	80	80	97	86	55	97	83	16	88	50	91	77	94	44	**	41	72	38	52	30	38	80	94	97	97	86	75
4360	93	97	66	93	63	68	79	72	47	77	25	97	54	47	65	93	88	50	18	95	79	31	90	36	93	81	79	18	81	40	43	22	47	31	36	63	40	75	88	54	63
4416	96	98	69	95	88	82	85	88	93	95	61	**	65	76	73	88	88	58	96	98	90	66	87	39	93	85	84	33	84	50	50	12	49	15	36	47	65	87	93	52	71
4580	96	98	84	90	62	61	88	68	54	62	34	87	49	53	52	77	91	50	35	95	88	41	82	36	94	78	84	32	78	36	58	38	51	13	40	47	62	82	89	50	64
4620	84	98	67	89	78	59	77	56	55	66	31	77	38	43	57	76	68	58	28	90	67	39	61	39	81	67	79	33	73	28	56	17	43	26	37	36	45	64	77	55	58
DISC	93	98	74	93	72	66	86	70	65	70	39	90	49	57	61	81	85	57	28	95	82	41	80	36	91	79	80	30	82	42	52	25	48	19	34	53	62	79	87	69	65
DISA	92	98	75	93	73	65	85	65	66	68	48	92	69	64	63	85	86	65	44	97	82	46	81	47	93	86	79	41	87	46	71	49	54	38	50	57	82	83	92	63	70
DISB	91	97	81	92	77	70	85	71	65	68	48	90	63	58	62	83	83	58	27	94	80	52	80	43	89	81	76	46	84	53	61	47	57	34	45	50	68	82	87	62	69
DISC	91	94	73	93	68	65	86	72	67	62	42	91	60	63	59	80	85	58	34	96	84	52	78	46	91	83	78	37	86	49	60	41	53	30	44	51	64	80	88	62	68
DISD	91	98	73	93	67	71	88	63	62	60	39	88	52	53	57	78	77	52	28	94	77	42	80	31	91	81	76	35	86	42	59	38	52	23	38	53	65	83	88	58	65
DISC	93	98	74	93	72	66	86	70	65	70	39	90	49	57	61	81	85	57	28	95	82	41	80	36	91	79	80	30	82	42	52	25	48	19	34	53	62	79	87	60	65
STUT	91	98	75	93	71	67	86	69	65	65	43	90	58	59	60	81	84	58	32	95	81	47	79	41	91	82	78	38	85	47	60	39	53	39	42	53	67	81	88	61	67

## SCIENCE - LEVEL 6

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (11 items), Physical Science (15 items), Earth Science (8 items), and Astronomy (2 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 51%. Generally, students appear to be mastering most of the objectives measured by Physical Science; however, there are three items with which students have difficulty. One of the items addresses the movement of heat to a cooler place (item # 20), and the other two items tap knowledge of machinery and types of levers (item #'s 24 and 25).

On the other domains students performed poorly, of the remaining twenty-five items, there are sixteen which fewer than fifty percent of the students answered correctly. In the domain of Skills/Processes students have difficulty with measuring weight and volume in English and metric units (item #'s 2 and 4). This weakness was also displayed in the Mathematics test at Level 6. In Life Sciences the difficulties lie with identifying the parts of a flower, stages in life cycles, cell or membrane, cell division, an ecosystem, and current species in danger of becoming extinct (item #'s 6, 9, 10, 12, 13, and 15). In the domain of Earth Science students are not mastering the concepts of various aspects of the weather and geology (item #'s 31, 32, 34, 35, 36, 37, and 38). In Astronomy students are unable to identify the latest scientific theory on the origins of the universe (item # 39).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SCIENCE - LEVEL 6

1985 - 1986

B.5	Measure length in English or metric units (Correlate w/Math Objs.)	1
B.6	Measure weight in English or metric units (Correlate w/Math Objs.)	2
B.8	Measure temperature in degrees Fahrenheit or Celsius	3
B.9	Measure volume in English or metric units	4
D.4	Describe life cycle of a flowering plant	5
D.6	Identify common parts of a flower & function of each	6
D.8	Describe the process of photosynthesis	7
D.10	Identify major characters of vertebrates & invertebrates	8
D.13	Describe stages in life cycle of a frog or other animal	9
D.17	Describe or sketch a cell and its membrane	0
D.19	Identify the basic materials that cells need to maintain life	1
D.20	How cells reproduce themselves by cell division	1
D.22	Describe an ecosystem; in terms of its main ingredients	1
D.28	Describe the three key elements in natural selection	2
D.29	Identify current species that are in danger of becoming extinct	3
F.1	Definition of matter & categorize as either solid, gas or liquid	4
F.2	All matter is made up of tiny particles called atoms	5
F.5	When substances are heated, atoms move around quickly & expand	6
F.7	Identify advantages & disadvantages of forms energy in use today	7
F.11	Principle that heat moves from a warmer to a cooler place	8
F.13	A wire with electricity passing thru has a magnetic field	9
F.16	Current electricity consists of a flow of electrons along a path	0
F.19	Identify compound machines work in the city around us	1
F.19		2
F.20	Distinguish between the three classes of levers	2
F.22	Earth's gravity is the force that pulls all matter down	2
F.25	Sound is a form of energy that is produced by a vibrating object	2
F.27	Contrast the loudness of a sound with the pitch of a sound	2
F.30	Properties of light	2
F.35	Identify the sequence of colors in the spectrum	2
G.3	Distinguish between weather & climate in 2 cities	3
G.4	Factors that determine the type of climate & weather	3
G.9	Describe the conditions that lead to forms of precipitation	3
G.12	Low barometric pressure is associated w/poor weather, high/good	3
G.13	Identify the major layers of the atmosphere & approx. depth of ea	3
G.14	Identify common weather instruments & what each measures	3
G.20	Faults in the Earth's crust are primary cause of earthquakes	5
C.23	Describe the destructive effect of topsoil erosion	6
H.1	Latest scientific theory of the origins of the universe	7
H.7	Identify those planets which have rings, Jupiter, Saturn & Uranus	8
		9
		0
		4

963 SCI LEVL 6      TECH5005      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE: 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
2130	59	55	99	46	75	38	65	86	71	43	76	32	44	84	51	65	67	60	64	37	79	71	43	69	58	74	64	68	69	62	14	49	67	37	49	46	53	16	25	90	59
2170	50	32	97	30	61	19	57	80	38	15	82	34	24	70	40	81	87	63	45	20	70	65	54	28	22	65	40	62	63	62	14	29	64	26	18	19	30	29	23	72	47
4570	45	22	96	32	35	9	29	67	22	12	70	29	32	45	27	22	51	29	51	25	64	61	41	29	9	41	38	58	25	54	9	16	51	16	22	19	22	29	16	38	35
2060	69	57	**	34	69	34	57	73	19	50	73	42	53	88	19	45	73	53	50	26	80	76	65	46	53	80	61	65	69	69	34	38	69	38	53	38	50	69	57	73	57
2070	60	38	98	32	60	26	42	72	32	20	77	23	23	74	50	49	64	43	46	22	73	67	53	16	30	57	40	61	60	38	24	34	64	35	34	16	25	29	17	80	45
7240	56	20	97	46	64	14	52	74	5	26	71	46	11	83	37	70	66	44	37	16	70	57	48	17	28	42	51	57	55	41	14	8	43	20	25	16	29	35	20	69	42
DISA	56	38	98	37	63	25	52	77	37	26	77	32	28	76	43	65	70	51	49	24	73	66	50	33	34	60	48	62	60	52	17	31	61	30	33	25	34	29	23	76	48
2110	68	37	98	59	66	31	51	70	46	38	75	31	14	81	50	51	50	29	42	44	72	70	42	37	68	50	31	62	46	74	14	12	57	18	16	12	33	24	25	66	46
2120	57	51	95	39	54	16	52	55	52	19	79	26	29	82	38	52	36	35	30	26	66	57	61	26	22	48	36	73	73	45	16	30	69	10	66	19	39	23	20	91	45
2140	77	58	99	40	58	35	54	36	26	21	78	40	34	82	58	86	58	55	53	30	75	72	47	38	76	63	46	69	63	44	17	32	76	26	61	43	45	30	30	94	54
2230	76	44	96	46	65	20	49	52	74	28	80	38	24	76	53	49	43	40	55	38	73	77	62	43	32	62	52	72	52	59	23	33	71	32	36	28	48	44	33	72	50
2550	76	67	96	67	75	22	56	60	20	31	75	39	31	71	35	55	41	59	56	32	70	65	46	43	65	70	62	68	49	62	28	29	60	30	51	26	37	38	53	89	53
DISR	73	55	97	51	65	27	53	66	29	27	77	37	28	78	47	61	46	48	51	33	71	69	51	39	56	62	50	69	56	56	21	29	67	26	49	29	41	34	36	85	51
2030	61	36	97	43	56	29	50	56	27	15	73	38	36	77	43	56	60	46	50	30	65	59	56	42	51	60	50	58	56	55	20	26	59	32	59	32	40	36	19	76	48
2080	49	29	98	37	64	25	45	74	14	31	76	40	29	81	51	70	40	33	50	37	69	70	57	55	40	60	44	70	61	37	39	33	67	17	18	13	25	22	20	77	46
2116	56	57	**	26	73	14	51	72	17	14	81	33	26	81	44	80	59	54	55	38	66	69	61	32	51	79	52	73	56	67	12	29	58	44	23	47	47	32	26	77	51
2090	73	61	98	29	77	48	54	71	58	51	80	65	40	77	35	67	73	64	62	47	77	72	61	45	36	64	65	69	43	26	28	21	58	39	39	23	47	21	29	80	55
2190	52	30	98	28	57	23	52	68	21	29	69	31	23	70	44	58	48	36	36	25	57	58	51	23	41	48	34	57	48	41	17	23	56	35	36	28	31	26	17	60	42
2760	32	22	98	18	78	11	31	39	14	19	62	16	24	77	32	75	24	42	37	31	67	54	60	6	26	52	45	70	54	36	13	9	50	36	24	16	42	21	22	73	39
DISC	56	38	98	32	65	26	49	64	25	24	74	38	30	77	43	65	53	45	48	33	66	63	57	36	44	61	48	64	53	48	21	25	58	34	38	29	38	28	21	73	47
2010	77	65	98	50	68	45	64	79	55	53	78	49	43	85	69	70	70	61	72	50	66	65	63	50	63	65	52	57	62	69	41	43	74	43	44	37	42	51	44	87	60
2640	62	47	97	32	71	43	53	87	60	28	77	32	29	86	43	78	60	59	53	40	80	81	64	28	31	65	40	65	58	68	38	28	65	20	53	34	37	40	26	84	54
2050	81	70	98	54	69	40	56	73	51	55	91	55	30	90	42	58	62	71	83	56	88	82	41	67	59	69	52	72	54	70	27	32	67	49	26	43	45	20	21	86	59
DISU	74	61	98	46	70	43	58	79	55	46	83	46	34	87	50	68	64	64	70	49	79	76	54	49	51	67	48	65	58	69	35	34	69	38	40	38	41	36	30	86	58
2100	58	39	96	31	70	24	50	70	10	17	78	48	26	79	48	57	52	50	49	39	70	62	51	38	25	47	64	77	57	48	18	32	60	25	15	22	35	25	31	76	47
2270	66	55	98	21	90	48	44	81	39	29	73	52	29	73	54	33	65	42	50	27	85	73	42	30	60	56	41	55	43	44	22	28	59	31	24	28	32	33	20	67	49
2980	73	56	98	45	77	45	54	63	17	11	71	25	35	76	54	43	72	68	69	33	81	81	81	76	69	57	68	67	64	45	43	32	62	27	43	31	33	35	27	65	54
4360	87	84	97	85	84	65	80	82	88	75	87	85	75	92	72	70	80	70	87	61	81	78	51	54	90	77	60	68	45	68	75	65	61	32	22	22	42	27	14	75	68
DISE	70	56	97	43	80	44	55	73	34	29	76	49	39	79	56	49	66	57	62	38	79	73	57	50	59	58	59	67	53	50	37	37	60	29	27	26	35	30	24	70	53
DISA	56	38	98	37	63	25	52	77	37	26	77	32	28	76	43	65	70	51	49	24	73	66	50	33	34	60	48	62	60	52	17	31	61	30	33	25	34	29	23	76	48
DISB	73	55	97	51	65	27	53	66	29	27	77	37	28	78	47	61	46	48	51	33	71	69	51	39	56	62	50	69	56	56	21	29	67	26	49	29	41	34	16	85	51
DISC	56	38	98	32	65	26	49	64	25	24	74	38	30	77	43	65	53	45	48	33	66	63	57	36	44	61	48	64	53	48	21	25	58	34	38	29	38	28	31	73	47
DISU	74	61	98	46	70	43	58	79	55	46	83	46	34	87	50	68	64	64	70	49	79	76	54	49	51	67	48	65	58	69	35	34	69	38	40	38	41	36	30	86	58
DISE	70	56	97	43	80	44	55	73	34	29	76	49	39	79	56	49	66	57	62	38	79	73	57	50	59	58	59	67	53	50	37	37	60	29	27	26	35	30	24	70	53
STUT	64	48	98	41	67	31	53	70	34	29	77	39	31	79	47	62	58	52	54	35	72	69	54	40	48	61	50	65	56	54	25	30	63	31	38	29	38	31	26	70	51

## SCIENCE - LEVEL 7

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Science/Society (2 items), and Physical Science (32 items).

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 49%. Generally, students seem to be mastering the objectives in Science/Society and most of the objectives in Skills/Processes. In this latter domain students are having difficulty with objectives tapping measuring temperature in Fahrenheit and Celsius and using laboratory equipment (item #'s 2, 4, and 5). The weakness in knowing temperature readings was also found in the mathematics test at Level 7.

The most severe deficits as a strand lie in Physical Science where of thirty-two items there are twenty-one that fewer than fifty percent of the students answered correctly. The areas of difficulty were in the general properties of matter (item #'s 9, 11, 14, 15, 18, and 19), in combinations (item #'s 20, 21, and 22), in energy and heat (item #'s 23, 24, and 25), in electricity and magnetism (item #'s 28, 29, 30, 31, 32, and 33), and in mechanics (item #'s 35, 37, and 38).



BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SCIENCE - LEVEL 7

1985 - 1986

B.4	Appropriate measuring instrument & unit of measurement	1	
B.8	Measure temperature in degrees Fahrenheit & Celsius	2	
B.14	Record info. in form of sketches, graphs, charts, tables, etc.	3	
B.15)	Use and maintain laboratory equip. & safety hazards of some	4	
B.15)		5	
B.16	Major aspects in the scientific method in experiments	6	
C.1	Difference between science & technology ("pure" vs. "applied")	7	
C.12	Identify at least 10 science-related vocations & avocations	8	
F.1	Identify general properties of matter, (volume and mass)	9	
F.2	The three state of matter: solid, liquid and gas	0	
F.3	Weight of an object changes as gravity changes, mass does not	1	
F.8,10	Define an atom, what they look like, For F.10 see below	1	
F.8,9	For F.8 see above, Sketch of a helium atom, label parts	2	
F.8,9,11	For F.8,F.9 see above, Electrical charge of ea. part of atom	3	
F.10	Make a sketch of a single atom, numbering element from 1 to 20	4	
F.13	Define elements as the basic building blocks of matter	5	
F.19	Identify groups & periods on the Periodic Table	6	
F.22	Identify where metals, non-metals & inert elements are on Table	7	
F.28	Identify the peculiar behavior of water near its freezing point	8	
F.29	Distinguish between physical changes and chemical changes	9	
F.32	Identify various output from chemical interactions	0	
F.33	Principles of conservation of matter and energy	1	
F.34	Examples of different forms of energy	2	
F.35	Trace the energy in a given situation back to original source	2	
F.37	Compare & contrast temperature and heat	3	
F.40	Lines of force of two attracting & repelling magnets	4	
F.39	Identify three methods of heat transfer; give examples of each	5	
F.41	Classify materials as magnetic and non-magnetic	6	
F.43	Describe the way in which a DC electric motor works	7	
F.44	Describe the way in which a DC generator works	8	
F.45	Ways that static charges are produced & define their polarity	9	
F.46	Recognize how objects acquire a positive or negative charge	0	
F.49	Ohm's Law; explain a simple electrical circuit carrying current	1	
F.51	Role of switches, fuses & circuit breakers in home & industry	2	
F.60	Describe machines, simple & compound, as devices	3	
F.61	Describe everyday uses of the six simple machines	3	
F.66	Define gravity, friction & inertia	5	
F.74	Describe the basic properties of sound	6	
F.78	Compare speed of sound in the air with the speed of light	7	
F.86	White light is made up of spectrum of different-colored light	8	
		9	
		0	

973 SCI CIVIL 7 TICKETS 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
2130	73	34	56	44	13	57	67	83	52	66	24	39	52	33	34	43	46	34	26	23	42	53	57	44	38	43	63	23	33	35	22	40	35	38	28	59	30	37	78	64	44
2170	73	27	58	52	20	64	75	78	58	88	34	56	60	50	42	56	62	37	28	23	46	48	37	30	58	44	63	30	40	38	63	31	64	56	41	57	21	36	86	68	50
4570	41	29	58	45	25	50	62	50	29	87	0	62	66	37	37	75	62	41	8	20	29	20	41	29	41	8	50	20	20	45	50	20	29	50	37	58	12	29	75	58	40
2060	87	69	58	38	12	64	74	82	66	84	76	71	76	79	46	79	67	74	69	71	74	79	61	79	69	71	92	79	69	41	84	64	66	69	71	76	68	71	97	84	70
2070	72	28	60	28	8	52	80	84	24	38	8	40	60	36	44	56	56	16	40	12	52	44	44	48	68	28	36	36	32	28	52	24	20	32	28	40	16	12	84	52	41
2240	70	36	50	46	25	45	64	74	24	73	12	42	54	36	44	56	60	37	29	30	32	32	33	36	38	44	82	26	38	57	38	24	21	50	44	46	30	28	69	66	43
01SA	71	35	57	45	18	56	70	77	45	78	27	50	59	44	40	57	59	39	32	29	44	47	45	42	49	43	69	33	39	42	47	34	42	49	40	56	27	36	80	66	48
2110	79	16	44	65	51	63	87	79	65	69	59	48	59	53	53	59	61	51	44	57	48	57	48	63	57	65	65	63	34	61	55	48	48	57	51	67	34	61	73	69	58
2120	73	37	54	60	50	56	64	73	69	79	39	64	66	58	52	71	47	45	33	26	54	58	28	49	54	37	62	30	18	43	22	28	30	49	43	41	15	13	64	64	48
2140	84	68	72	67	60	60	76	73	56	76	32	52	72	54	52	53	60	40	42	48	40	54	52	48	62	53	78	57	54	57	64	45	54	62	68	68	49	54	82	78	59
2200	71	26	33	38	30	40	71	73	42	57	71	45	42	83	28	54	73	46	71	38	47	47	23	33	66	28	66	33	30	35	16	59	35	33	26	66	35	26	50	42	46
2950	83	23	63	70	26	80	73	83	63	80	56	43	56	43	50	50	40	36	30	40	40	53	50	33	50	30	36	83	40	23	30	26	43	56	23	30	80	60	40	49	49
01SB	78	39	55	61	47	60	73	77	59	72	48	51	61	58	48	58	58	43	45	41	44	53	40	49	59	45	71	45	36	54	42	42	42	49	49	60	33	39	71	65	53
2030	51	19	50	42	13	58	61	77	31	69	5	41	49	38	39	43	49	30	23	29	28	36	29	42	41	28	59	34	35	44	36	33	31	59	33	41	25	27	66	52	40
2080	71	40	31	38	16	48	68	70	55	86	41	40	46	40	21	38	46	13	18	25	33	38	21	28	55	18	58	18	16	46	33	16	21	45	31	26	21	43	73	53	39
2180	76	25	42	54	32	55	61	83	45	78	32	54	55	39	55	56	69	49	33	25	44	45	35	60	64	33	71	56	23	55	45	39	54	57	43	60	37	42	80	90	51
2090	58	27	42	38	4	56	54	72	46	86	14	69	60	46	70	73	63	51	34	30	41	55	45	39	64	59	76	38	39	46	42	30	47	64	40	80	28	35	76	61	50
2190	65	41	53	48	28	65	72	76	42	76	27	45	51	44	40	61	46	32	36	34	33	42	38	40	58	34	61	38	27	46	34	36	31	42	31	55	27	21	57	53	45
2260	81	27	34	34	19	57	63	68	80	55	50	78	63	62	59	65	27	36	18	22	22	22	24	54	54	18	72	31	36	55	22	26	21	47	34	40	26	44	70	67	45
01SL	65	36	44	44	19	57	63	76	45	75	24	52	53	43	47	55	52	36	28	28	34	40	33	45	54	33	66	38	30	48	37	32	36	54	36	51	28	34	70	63	45
2010	88	49	65	39	41	75	61	73	57	85	39	60	72	51	52	79	73	55	36	40	50	37	43	56	62	50	65	40	31	53	68	39	82	58	36	67	41	56	87	75	57
2040	70	11	42	58	10	48	56	58	42	74	9	55	57	40	30	50	68	43	23	18	37	26	28	27	39	26	63	29	17	29	28	21	31	26	27	39	14	20	63	61	38
2050	83	51	56	54	19	67	76	71	67	92	51	67	71	54	65	74	75	54	35	58	61	31	72	70	62	61	78	82	41	64	66	58	51	54	45	74	31	58	89	84	62
01SD	81	40	56	50	25	65	65	76	57	85	36	61	68	49	51	69	72	51	32	41	50	32	50	54	56	48	70	46	31	51	57	41	57	48	37	62	30	47	81	75	54
1240	88	50	67	48	38	64	68	79	43	89	29	61	65	43	39	64	66	47	46	34	58	43	40	61	54	36	75	43	36	51	52	33	45	61	45	65	39	31	73	70	53
2100	81	51	66	65	38	67	75	81	55	73	40	52	55	37	60	70	67	48	42	47	45	55	48	60	53	66	73	65	55	57	48	36	40	61	57	66	36	60	75	73	57
2270	53	22	45	39	20	39	50	69	21	60	18	34	33	28	32	56	55	30	21	26	43	26	16	31	46	22	55	37	31	37	25	26	24	44	26	32	21	24	65	51	36
2980	76	53	43	58	47	58	71	88	57	73	40	52	67	62	41	68	61	50	51	28	36	31	42	46	61	58	73	75	36	48	61	31	37	47	35	41	22	31	72	65	52
01SE	76	45	58	52	36	58	66	79	44	76	31	52	57	43	42	64	63	44	41	34	47	40	37	51	54	44	70	53	39	48	47	32	38	54	41	53	31	35	71	64	50
01SA	71	35	57	45	18	56	70	77	45	78	27	50	59	44	40	57	59	39	32	29	44	47	45	42	49	43	69	33	39	42	47	34	42	49	40	56	27	36	80	66	48
01SB	78	39	55	61	47	60	73	77	59	72	48	51	61	58	48	58	58	43	45	41	44	53	40	49	59	45	71	45	36	54	42	42	42	49	49	60	33	39	71	65	53
01SC	65	30	44	44	19	57	63	76	45	75	24	52	53	43	47	55	52	36	28	28	34	40	33	45	54	33	66	33	30	48	37	32	36	54	36	51	28	34	70	63	45
01SD	81	40	56	50	25	65	65	76	57	85	36	61	68	49	51	69	72	51	32	41	50	32	50	54	56	48	70	46	31	51	57	41	57	48	37	62	30	47	81	75	54
01SE	76	45	58	52	36	58	66	79	44	76	31	52	57	43	42	64	63	44	41	34	47	40	37	51	54	44	70	53	39	48	47	32	38	54	41	53	31	35	71	66	50
01SF	73	37	52	49	27	59	67	77	49	77	31	53	59	46	46	60	66	42	34	33	43	41	40	48	54	41	68	42	34	48	45	35	42	51	40	56	29	36	74	66	49

## SCIENCE - LEVEL 8

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Experiences (1 item), Skills/Processes (3 items), Science/Society (2 items), and Life Sciences (34 items).

The population includes all students enrolled in grade 8 who took an on-level test and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students seem to be mastering the objectives in Science Experiences and most of the objectives in Skills/Processes. In this latter domain students had difficulty with recording information in the form of sketches, graphs, etc. and in interpreting data (item # 2).

The most serious deficits as strands can be found in the domains of Science/Society and Life Sciences where of thirty-six items there are nineteen which more than fifty percent of the students are answering incorrectly. In Science/Society students are having difficulty recognizing the differences between science and technology and the impacts of recent scientific/technological advances (item #'s 5 and 6). In Life Sciences students are not mastering items addressing micro-organisms (item # 7), plants (item #'s 9 and 13), animals (item #'s 21 and 23), cell theory (item #'s 26 and 28), anatomy (item #'s 28, 29, 30, 31, and 33), classification (item # 34), evolution (item #'s 36 and 37), and heredity (item #'s 38, 39, and 40).

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL      SCIENCE - LEVEL 8  
 1985 - 1986

A.2	Field trips use to find out a great deal about one topic	1	
B.5	Measure weight in English and metric units	2	
B.13	Record info. in form of sketches, graphs, etc., interpret data	3	
B.15	Major aspects of scientific method in experiments	4	
C.1	Differences between science & technology ("pure" vs. "applied")	5	
C.4	Impact of at least 3 recent scientific/technological advances	6	
D.2	Difference between viruses & bacteria, basic characters of each	7	
D.3	4 types of protozoans, major characters & importance to humans	8	
D.5	Structural diffs. monocotyledon & dicotyledon plants	9	
D.5	Structural diffs. vascular and non-vascular plants	0	1
D.8	Process of photosynthesis	1	1
D.9	Identify ways in which plants & molds spread from place to place	1	1
D.7	Identify structures & functions of major parts of plants	2	3
D.13	Diff. between plants, animals, protists, monerans & fungi	4	1
D.14	Distinguish between air- and gill-breathing animals	5	1
D.15	Compare & contrast the major phyla of animal life, give example	6	1
D.15		7	1
D.18	Differences & similarities between major plant & animal system	8	1
D.20	Sequence of stages in growth & development of a higher insect	9	1
D.21	Identify the kinds of animals that reproduce by fission	0	2
D.23	Describe the function of various forms of animal behavior	1	2
D.23		2	2
D.24	Identify the ways a particular organism provides for its needs	3	2
D.26	Recognize the cell as the basic unit of all living things	4	2
D.27	Identify main parts of a typical cell as seen thru a microscope	5	2
D.27	and state their functions	6	2
D.27		7	2
D.30	Describe the 2 kinds of cell division: mitosis & meiosis	8	2
D.33	Define organism & contrast to living things that are not	9	2
D.32	Identify common name of animal & plant organs	0	3
D.34	Digestion, process by which plants & animals; food into chemic.	1	3
D.35	What osmosis is and how it works	2	3
D.38	Objects of biological origin & artifacts of slide preparation	3	3
D.40	Carolus Linnaeus developed modern system of class of organisms	4	3
D.43	Criterion for assignment to the same species	5	3
D.50	Scientific theory of evolution	6	3
D.51	Contribution of Darwin & Wallace to develop theory of evolution	7	3
D.57	Contributions of Gregor Mendel to science of heredity	8	3
D.60	DNA is present in the cells of all living things	9	3
D.62	Sexual & asexual reproduction in plants and animals	0	4

983 SCI LEVEL 4 TECK5005 11/07/86  
PERCENTAGE OF CORRECT ANSWERS PER ITEM  
NOTE: 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCORE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	
2130	54	60	29	81	32	32	28	47	47	43	60	54	12	50	72	75	48	65	51	65	21	59	27	78	78	30	58	8	39	48	40	55	50	27	65	51	43	21	42	39	47	
2170	85	85	31	85	26	63	35	52	40	62	71	44	59	81	60	77	87	82	77	64	38	68	52	70	62	28	55	10	12	47	38	49	38	10	65	29	46	30	36	22	52	
4570	78	71	78	91	17	76	86	73	65	78	69	78	8	60	82	91	86	73	65	73	8	60	60	52	73	47	34	21	26	69	69	52	60	60	21	69	47	43	60	69	61	
2060	96	75	46	96	28	25	46	68	78	78	78	62	65	59	81	93	90	71	58	81	53	84	71	84	81	53	75	56	56	81	68	65	34	87	96	68	87	90	46	96	70	
2070	64	72	52	92	54	54	47	57	54	61	55	62	45	54	81	75	67	81	64	43	55	77	41	64	75	32	64	29	29	52	58	56	43	43	75	57	49	39	47	37	57	
2240	78	66	33	92	30	50	31	54	69	62	74	60	39	46	65	65	62	78	81	46	24	69	21	74	66	54	60	25	28	48	53	60	54	42	77	39	48	62	40	36	54	
DISA	78	73	40	89	36	51	40	55	53	60	65	56	41	60	72	76	70	77	68	57	37	70	41	71	71	36	59	21	28	52	50	55	45	35	70	47	49	40	43	39	54	
2110	88	86	77	86	65	72	54	56	56	70	61	61	59	47	81	72	63	75	70	63	70	65	52	52	52	36	47	29	43	61	72	56	63	45	75	54	50	50	51	45	61	
2120	79	73	9	85	14	47	20	50	55	60	65	52	9	49	63	69	42	50	66	52	65	68	12	69	79	36	52	17	19	53	36	63	50	60	57	44	46	20	33	38	48	
2140	66	70	34	86	48	53	28	67	47	46	57	55	28	46	71	65	51	82	49	49	34	74	24	69	74	29	58	27	30	52	44	57	39	29	72	46	37	29	30	27	49	
2200	64	64	33	75	37	29	38	59	46	55	24	40	22	35	75	59	37	66	55	55	16	50	24	68	44	40	57	3	14	29	31	44	53	18	55	29	38	29	18	25	41	
2950	76	71	21	83	29	48	20	68	47	37	33	33	16	45	51	58	54	68	45	43	29	54	19	68	56	27	43	17	23	35	33	52	43	19	66	45	25	30	31	25	42	
DISB	74	72	29	83	36	49	28	63	49	48	45	45	23	45	64	63	50	78	53	49	38	62	23	67	62	31	50	19	25	44	40	54	46	30	66	44	36	30	32	30	47	
2030	42	50	22	79	27	23	23	47	37	46	51	40	19	41	55	55	57	63	51	49	27	46	33	69	58	28	59	6	15	37	30	48	48	26	67	34	27	20	26	21	40	
2080	17	45	23	82	32	45	6	42	27	39	46	47	5	21	61	60	68	64	41	72	27	45	28	82	67	38	46	24	17	30	49	52	34	60	82	35	24	27	27	23	41	
2180	62	61	20	85	33	49	27	58	63	57	59	50	36	69	75	64	67	74	54	52	17	59	49	62	70	42	67	6	34	62	49	61	54	41	45	47	43	43	36	34	51	
2090	41	73	22	89	30	34	16	52	38	40	58	37	16	46	66	85	70	65	61	50	33	67	41	74	66	37	62	12	24	42	46	62	34	31	83	35	38	33	27	40	47	
2190	68	73	43	80	42	48	19	54	62	64	62	44	29	55	68	72	75	65	66	40	41	66	28	74	66	38	49	43	25	40	57	60	60	37	74	43	40	35	40	35	52	
2260	72	59	16	76	32	45	25	71	20	37	62	47	16	59	52	64	30	64	45	38	35	71	20	72	69	66	61	8	18	44	62	55	57	49	88	42	16	27	33	55	47	
DISC	51	60	24	82	32	38	20	53	42	49	56	44	22	49	63	65	63	66	54	50	29	57	35	71	65	38	58	15	23	43	45	56	49	37	69	39	33	31	31	32	46	
2010	52	69	38	87	44	40	22	74	46	49	54	48	49	58	81	65	65	77	65	39	38	54	54	65	83	61	70	39	37	54	54	61	64	59	79	41	66	56	49	44	56	
2040	81	81	64	86	57	64	46	72	54	55	74	66	53	69	80	74	71	80	65	62	59	65	52	65	60	41	58	22	32	58	48	55	44	43	68	49	47	43	57	55	59	
2050	67	87	58	93	47	72	24	46	58	50	50	69	28	71	84	83	82	79	68	52	69	60	47	78	76	41	57	6	43	46	68	65	45	63	43	57	47	31	63	32	58	
DISD	65	78	53	88	50	57	32	66	52	51	61	60	45	65	81	73	71	79	66	51	54	59	52	68	72	48	62	25	36	54	55	60	52	54	66	48	54	45	55	45	58	
1240	58	67	26	83	20	55	44	72	46	45	62	53	41	58	70	68	48	70	58	60	45	65	37	69	60	23	56	21	27	52	53	45	48	29	78	44	48	40	35	43	50	
2100	76	72	45	85	50	40	28	64	39	47	49	48	23	45	64	72	57	59	47	46	43	59	42	70	52	47	58	21	26	50	51	50	47	24	63	36	32	27	36	45	48	
2270	48	48	14	75	31	39	16	50	48	27	37	35	26	31	66	66	47	70	51	39	16	50	36	47	51	20	48	16	24	22	36	39	35	27	54	37	21	25	18	22	37	
2980	94	61	32	83	54	45	34	56	43	43	63	54	61	70	85	80	65	81	58	34	61	69	32	61	50	32	38	10	23	55	43	50	50	41	74	56	52	49	50	40	54	
DISF	66	63	29	82	35	46	32	63	44	41	54	48	35	50	70	70	52	69	53	48	41	61	37	63	54	30	52	18	25	47	47	46	47	29	68	42	39	35	34	39	48	
DISA	78	73	40	89	36	51	40	55	53	60	65	56	41	60	72	76	70	77	68	57	37	70	41	71	71	36	59	21	28	52	50	55	45	35	70	47	49	40	43	39	54	
DISB	74	72	29	83	36	49	28	63	49	48	45	45	23	45	64	63	50	70	53	49	38	62	23	67	62	31	50	19	25	44	40	54	46	30	66	44	36	30	32	30	47	
DISC	51	60	24	82	32	38	20	53	42	49	56	44	22	49	63	65	63	66	54	50	29	57	35	71	65	38	58	15	23	43	45	56	49	37	69	39	33	31	31	32	46	
DISD	65	78	53	86	50	57	32	66	52	51	61	60	45	65	81	73	71	79	66	51	54	59	52	68	72	48	52	25	36	54	55	60	52	54	66	48	54	55	45	55	45	58
DISF	66	63	29	82	35	46	32	63	44	41	54	48	35	50	70	70	52	69	53	48	41	61	37	63	54	30	52	18	25	47	47	46	47	29	68	42	39	35	34	39	48	
STOT	65	68	33	84	37	47	29	58	47	50	56	50	31	53	69	69	62	71	58	51	37	61	37	68	65	36	56	19	27	47	47	54	48	36	68	43	41	35	38	36	50	

HIGH SCHOOL SCIENCE

## EARTH SCIENCE

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Astronomy (12 items), Geology (17 items), Meteorology (7 items), and Oceanography (4 items).

The population includes all high school students (with the exception of the exam schools) who took an Earth Science course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 49%. Generally, students are performing moderately well in the domain of Astronomy, although they did not do well on isolated objectives. Items tapping knowledge of the solar system (item #'s 5 and 7) and earth in space (item #'s 10 and 12) were not mastered.

Performance in the domains of Geology, Meteorology, and Oceanography was poor across most items. In Geology of seventeen items there were thirteen that more than fifty percent of the students answered incorrectly. In Meteorology four of the seven items and in Oceanography all four items were answered incorrectly by more than fifty percent of the students.

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

EARTH SCIENCE

1985 - 1986

I.A.8	Describe the monthly changes in the appearance of the moon	1	
I.C.1	Members of the universe by their characteristics; stars	1 2 3 4 5 6 7 8 9 0	
I.A.9	Describe the observed daily motion of the sun	1	
I.C.10	Knowing novas suddenly become much brighter and then fade	1 1 1	
I.D.4	Knowing the most massive object is the sun & planet: Jupiter	1 2 3 4 5 6 7 8 9 0	
I.D.6	Contrast the small & large planets with respect to character	1 1 1	
I.D.8	Astronomical objects/meaning of rotation and revolution	1 1 1	
I.E.	Applying Newton's Law of Gravitation qualitatively	1 1 1	
I.F.4	Relate the seasons to the earth's axis & plane of revolution	1 1 1	
I.F.7	Eclipse of the moon	1 1 1	
I.G.2	Understand the escape velocity from a heavenly body	1 1 1	
I.F.9	Knowing the moon makes a revolution in 1 month around earth	1 1 1	
II.H.3	Difference among atoms of diff. elements by atomic structure	1 1 1	
II.H.5	Diff. between compounds & mixture by atomic-molecular theory	1 1 1	
II.H.8	Identify physical properties & relate to atomic-mole theory	1 1 1	
II.H.12	Knowing the chemical symbols of ten elements	1 1 1	
II.H.15	Measure volume & mass of substance & compute density( $d = m/v$ )	1 1 1	
II.I.1	Identify the origins of the 3 major types of rock	1 1 1	
II.I.4	Identify specimens of sedimentary rocks by their characters	1 1 1	
II.I.7	Describe the characteristics of some metamorphic rocks	1 1 1	
II.J.5	Explain concepts "young river" & "mature river"	1 1 1	
II.J.2	Describe the effects of frost, humidity on weathering	1 1 1	
II.J.8	Define the terms aquifer and water table	1 1 1	
II.J.16	Describe typical features of a glacier-eroded landscape	1 1 1	
II.K.2	Knowing the interior layers of the earth	1 1 1	
II.K.3	Knowledge of compressional and shear waves	1 1 1	
II.L.1	Define the major terms associated with mountain building	1 1 1	
II.M.7	Distinguishing among the divisions of geologic time scale	1 1 1	
II.M.9	Identify the life forms prevalent in 4 geologic eras	1 1 1	
III.N.1	Knowing that meteorology is the study of weather	1 1 1	
III.N.2	Identify the layers of the atmosphere	1 1 1	
III.N.4	Knowing the gases that make up the atmosphere	1 1 1	
III.N.9	Define radiation, conduction, convection and absorption	1 1 1	
III.O.4	Interpreting the symbols on a weather map	1 1 1	
III.P.11	Define cold front, warm front, stationary front	1 1 1	
III.P.15	Know that rain-producing clouds have the letters nimbo	1 1 1	
IV.R.2	Name the components of the hydrosphere	1 1 1	
IV.T.9	Explain the causes of neap tides; spring tides	1 1 1	
IV.V.6	Name sources of atmospheric pollution in metro Boston	1 1 1	
IV.W.12	Identify renewable and nonrenewable sources of energy	1 1 1	



550 (ARTH SCI) TRC9005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL	
104J	77	77	67	50	36	87	41	51	82	29	62	31	50	51	34	34	36	36	31	32	36	55	37	39	25	50	36	10	34	62	41	36	65	58	44	41	36	34	22	25	43	
111U	52	71	85	59	74	80	38	53	81	47	61	46	42	15	23	71	40	53	43	30	34	41	30	63	46	42	29	17	45	53	36	47	70	59	24	32	26	33	15	40	47	
224U	**	**	**	**	**	**	**	**	**	**	**	**	**	0	**	0	0	0	0	**	**	**	**	**	**	**	**	**	**	**	**	**	0	0	**	**	0	**	0	**	**	75
DISA	44	86	79	56	61	83	40	52	81	41	61	40	75	27	27	53	42	47	39	31	35	46	33	55	40	45	31	15	41	50	38	43	68	59	31	35	30	33	18	36	46	
125U	45	89	69	46	37	70	34	57	87	37	65	44	48	17	23	69	29	40	37	31	29	40	45	48	44	35	25	31	45	74	35	37	69	49	29	48	33	20	23	38	44	
110U	68	89	62	31	35	63	34	49	86	39	59	35	40	20	36	50	27	29	29	30	31	33	35	49	51	36	30	25	38	57	27	30	68	55	23	36	46	40	29	30	42	
D15B	53	89	67	40	36	67	34	54	87	38	62	40	45	18	27	62	28	36	34	31	30	38	41	48	46	35	29	29	42	68	32	34	68	51	27	44	38	27	29	35	43	
106U	38	74	60	34	33	76	41	44	73	39	53	44	47	31	33	34	38	34	30	31	34	53	49	36	28	46	28	25	42	52	39	23	74	55	31	44	39	31	17	26	42	
112U	29	83	59	41	25	63	37	45	65	30	44	38	41	26	20	27	33	43	25	33	26	40	30	47	36	43	26	16	30	72	31	16	65	62	33	16	26	25	19	27	37	
116U	49	81	54	53	58	69	22	58	88	50	57	46	46	32	29	77	33	41	44	61	42	53	57	50	40	24	46	9	45	64	21	37	68	46	34	46	33	30	14	42	46	
D15C	39	80	61	43	39	69	33	50	75	42	51	43	45	30	27	47	34	40	33	42	34	49	45	45	35	37	34	16	39	63	30	26	69	54	33	35	32	29	17	32	42	
105U	50	84	64	41	37	71	32	60	73	40	54	44	58	30	64	62	33	53	50	48	39	58	53	54	42	58	37	39	52	66	44	36	68	63	37	61	58	39	50	50	51	
107U	25	36	48	37	24	77	32	41	71	37	64	40	24	42	59	60	49	44	32	45	36	40	53	63	35	47	37	34	50	77	35	30	49	71	33	57	59	30	19	60	46	
D15D	36	85	57	39	30	74	32	49	72	38	60	42	39	37	61	61	42	48	40	46	37	48	53	59	38	52	37	36	51	72	39	32	57	67	34	59	59	34	32	50	49	
108U	68	90	80	77	54	91	69	68	77	62	67	65	64	3	55	81	53	66	60	49	25	3	41	46	45	34	32	30	47	72	41	46	77	48	37	52	54	48	42	42	56	
119U	35	80	52	34	54	77	51	62	70	41	52	28	53	34	19	40	20	29	35	47	19	40	57	54	45	39	34	27	34	62	38	43	51	57	30	34	31	24	25	29	42	
121U	50	87	66	53	59	82	57	73	72	50	59	27	50	28	53	67	32	40	45	31	46	46	31	44	37	35	25	40	39	64	41	40	69	63	32	41	42	36	20	28	47	
124U	64	87	89	70	86	92	71	75	92	73	55	74	65	44	57	79	65	73	57	49	59	53	61	61	57	68	56	54	68	90	50	60	77	92	61	66	45	50	68	69	67	
D15E	63	86	75	65	61	87	64	69	78	59	61	53	60	34	50	73	47	57	53	45	35	57	44	49	45	41	35	36	47	72	42	47	72	60	39	50	47	43	39	42	54	
D15A	44	86	79	56	61	83	40	52	81	41	61	40	45	27	27	58	42	47	39	31	35	46	33	55	40	45	31	15	41	50	38	43	68	59	31	35	30	33	18	36	46	
D15B	53	89	67	40	36	67	34	54	87	38	62	40	45	18	27	62	28	36	34	31	30	38	41	48	46	35	29	29	42	68	32	34	68	51	27	44	38	27	25	35	43	
D15C	39	80	61	43	39	69	33	50	75	42	51	43	45	30	27	47	34	40	33	42	34	49	45	45	35	37	34	16	39	63	30	26	69	54	33	35	32	29	17	32	42	
D15D	36	85	57	39	30	74	32	49	72	38	60	42	39	37	61	61	42	48	40	46	37	48	53	59	38	52	37	36	51	72	39	32	57	67	34	59	59	34	32	56	49	
D15E	63	86	75	65	61	87	64	69	78	59	61	53	60	34	50	73	47	57	53	45	35	57	44	49	45	41	35	36	47	72	42	47	72	60	39	50	47	43	39	42	54	
STOT	51	86	69	52	48	79	47	59	78	47	60	46	50	31	44	64	41	48	43	41	34	50	45	51	42	42	34	31	45	69	38	39	67	59	35	47	44	36	31	42	49	

## PHYSICAL SCIENCE

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Measurement (1 item), Motion (1 item), Forces (3 items), Work/Energy (3 items), Energy/Waves (5 items), Energy/Matter/Heat (8 items), Chemical Change (6 items), Electricity/Water (3 items), Electricity/Magnetism (3 items), Electricity/Light (2 items), Special Relativity (1 item), and Nucleus (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Physical Science course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 42%. There are a total of twenty-eight items on the test which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL      PHYSICAL SCIENCE  
 1985 - 1986

C.3,4	English and SI units of measure, convert English to SI unit	1
D.16	Determine acceleration of falling dense objects	2
E.7	Distinguish between weight and mass	3
E.17	Centripetal force used to keep objects in orbit is gravity	4
E.24	State Newton's third law of motion	5
F.1	Define work as $W = F \times d$	6
F.4	Work, potential energy & kinetic energy can be transformed	7
F.11	Power is work per unit & horsepower & watt are units of power	8
G.2	Produce & describe waves in strings, slinkies & water	9
G.4	The period, frequency, velocity & amplitude of a wave	1
G.5	Relate the velocity of a wave to frequency & wavelength	1
G.28	Describe the path of light thru lenses of varying shapes	2
G.24	Recognize that color is related to frequency	3
H.4	Law of conservation of energy	4
H.3	Define heat as a form of energy that changes temperature	5
H.7	Define the unit of heat as the calorie	6
H.15	Materials can exist as solids, liquids & gases & change	7
H.11	Define density as Mass/Volume & way to identify substances	8
H.25, 26	Understanding atmospheric pressure	9
H.19	Operation of a hot air balloon	1
H.32	Principles of a refrigerator	2
I.3	Different elements have different physical properties	2
I.13	Equal volumes of different gases equal nos. of particles	2
I.25	Writing and balancing chemical equations	3
I.33	Major components of the atmosphere	4
I.43	Know that $H_2CO_3$ is a component of tonics	5
I.50	When acids & bases are mixed, they neutralize to water; salt	6
J.3	Matter is composed of + & - charges	7
J.24	Relate the atomic no. to the no. of positive charges; nucleus	8
J.29	Distinguish between ionic & covalent bonds; use atom model	9
K.1	Passage of electricity through a conductor	0
K.13	Recognize that a moving charge produces a magnetic field	3
K.7	Distinguish between simple series & parallel circuits	3
L.4	Light is produced by electrons change energy levels in atoms	3
M.1	Speed of light in a vacuum is a constant	3
L.11	Describe the complete electro-magnetic spectrum	5
N.1	Nucleus of an atom of atomic number 10 & mass 20 AMU	6
N.2	Isotopes of an element are atoms w/same no. of protons	7
N.15 }	Define fission	8
N.15 }		9
		0
		4

555 PHYS SCI                      TECRS005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOT 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL		
1040	75	39	64	39	35	25	42	25	64	96	10	28	32	35	67	21	60	21	14	53	25	46	46	35	21	32	25	25	42	32	25	14	50	25	39	35	39	7	39	7	36		
1110	81	25	43	81	87	43	62	68	62	87	43	43	68	75	87	68	68	31	25	68	18	68	50	25	62	37	50	6	50	18	31	25	68	25	25	68	50	43	50	0	50		
DISA	77	34	56	54	54	31	50	40	63	93	22	34	45	50	75	38	63	25	16	59	22	54	47	31	36	34	34	18	45	27	27	18	56	25	34	47	43	20	43	4	41		
1250	54	13	40	72	50	45	50	45	54	59	27	36	22	36	68	45	63	45	22	40	36	54	36	18	22	50	31	9	22	40	22	22	50	18	22	27	31	31	50	18	37		
DISD	54	13	40	72	50	45	50	45	54	59	27	36	22	36	68	45	63	45	22	40	36	54	36	18	22	50	31	9	22	40	22	22	50	18	22	27	31	31	50	18	37		
1066	73	16	40	63	20	33	60	33	36	63	16	20	16	33	60	53	43	36	3	40	30	30	20	16	26	26	53	10	10	36	23	23	53	40	36	40	23	26	33	16	33		
DISC	73	16	40	63	20	33	60	33	36	63	16	20	16	33	60	53	43	36	3	40	30	30	20	16	26	26	53	10	10	36	23	23	53	40	36	40	23	26	33	16	33		
1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
DISD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
1190	77	44	55	67	53	69	56	40	49	79	22	58	50	63	68	46	64	36	29	46	41	48	44	24	37	46	60	51	41	41	40	15	58	11	22	63	45	31	50	17	46		
1210	76	24	68	77	56	48	48	54	48	74	24	36	34	40	62	44	54	48	40	42	38	48	34	30	30	34	60	26	34	54	44	46	60	42	38	64	42	24	50	40	45		
DISF	76	36	60	69	54	61	53	45	48	77	23	49	44	54	65	45	60	41	33	44	40	48	40	26	34	41	60	41	38	46	41	27	58	23	28	63	44	28	50	26	46		
DISA	77	34	56	54	54	31	50	40	63	93	22	34	45	50	75	38	63	25	16	59	22	54	47	31	36	34	34	18	45	27	27	18	56	25	34	47	43	20	43	4	41		
DIS6	54	13	40	72	50	45	50	45	54	59	27	36	22	36	68	45	63	45	22	40	36	54	36	18	22	50	31	9	22	40	22	22	50	18	22	27	31	31	50	18	37		
DISC	73	16	40	63	20	33	60	33	36	63	16	20	16	33	60	53	43	36	3	40	30	30	20	16	26	26	53	10	10	36	23	23	53	40	36	40	23	26	33	16	33		
DISD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
DISF	76	36	60	69	54	61	53	45	48	77	23	49	44	54	65	45	60	41	33	44	40	48	40	26	34	41	60	41	38	46	41	27	58	23	28	63	44	28	50	26	46		
SID1	73	30	54	65	49	50	53	42	50	76	22	41	38	48	66	45	53	37	25	46	34	47	38	25	33	38	51	29	34	40	34	24	57	25	30	53	39	26	46	19	42		

## BIOLOGY

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Biology/Study of Living Things (11 items), Continuity of Life (5 items), Microbiology (3 items), Animal Kingdom (16 items), and Plant Kingdom (5 items).

The population includes all high school students (with the exception of the exam schools) who took a Biology course and for whom valid answer sheets were turned in.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students performed fairly well on the items in the Animal Kingdom domain, although they had difficulty with one item on invertebrates (item # 28) and two items on vertebrates (item #'s 33 and 34).

In the remainder of the domains out of twenty-four items there were twelve which fewer than fifty percent of the students answered correctly. In Biology/Study of Living Things the difficulty was with characteristics of living things (item #'s 4, 6, 8, 10, and 11). In the Continuity of Life domain students had difficulty with the items that tapped the inheritance of traits (item #'s 12 and 13). In Microbiology the two items identified had to do with monera (item #'s 17 and 18). Within the Plant Kingdom domain students had difficulty with the items that tapped the structure and function of a seed plant and plant reproduction (item #'s 36, 37, and 40).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

BIOLOGY

1985 - 1986

I.A.1	Describing the scientific method		
I.A.5	Identify parts & functions of a light microscope	1	
I.B.4	Importance of chemical element carbon; define organic compounds	2	
I.B.7	Basic principles of the cell theory	4	
I.B.8	Major structural cell components seen thru light microscope	5	
I.B.8		6	
I.B.10	Similarities & differences between animal & plant cells	7	
I.B.10		8	
I.B.13	Function of amino acids in construction of proteins	9	
I.B.19	Major structural differences between RNA and DNA	0	1
I.B.37	Stages of mitosis and meiosis in their correct sequence	1	1
II.A.4	Mendelian inheritance scheme; trace a single trait	1	1
II.A.8	What is meant by "sex-linked traits"	2	3
II.D.1	Contributions Karl von Linne made to classification organisms	1	1
II.D.3	Define "binomial nomenclature"	1	1
II.D.4	Enumerate main levels classification from species to kingdom	5	6
III.A.1	Describe some of the important characteristics of monera	1	1
III.A.4	Distinguish three general shapes of bacteria	7	8
III.B.1	Describe the structure of a typical protozoan cell	1	1
IV.A.1	Radial structural symmetry	2	2
IV.A.6	Understand what is meant by "regeneration" in invertebrates	0	1
IV.A.15	Recognize the different parts of an earthworm	2	2
IV.A.15		2	3
IV.A.18	Industrial importance of mollusk aquaculture; food	2	2
IV.A.20	Familiar with animals belonging to phylum Echinodermata	2	2
IV.A.26	Disease carriers and how insects contribute to human disease	4	5
IV.A.24	Major characteristics of the class Insecta	6	2
IV.A.27	Describe & identify the main parts & organs of grasshoppers	2	2
IV.A.28	Concept of complete and incomplete metamorphosis	2	2
IV.A.30	Being familiar with the class Arachnida	8	9
IV.B.1	Characteristics of vertebrates & typical vertebrate body plan	0	1
IV.B.6	Characteristics of animals belonging to the class Amphibia	3	3
IV.B.7	External & internal structure of larval & mature amphibians	3	3
IV.B.10	Mesozoic Era is referred to as the "Age of the Reptiles"	3	3
IV.B.20	Discuss the characteristics of mammals	4	5
V.B.2	Compare characteristics of gymnosperms & angiosperms	3	3
V.B.5	Describe the function & structure of xylem & phloem	6	7
V.C.6	Major differences between photosynthesis & respiration	3	3
V.C.12	Describe different types of tropism	8	9
V.D.1	Parts of a flowering plant & the function of each part	0	4

S10 BIOLOGY TCCR5005 11/07/36  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1340	63	92	62	57	51	20	87	42	60	31	63	23	3	46	60	61	34	44	64	64	71	53	59	53	43	54	51	31	72	67	77	57	54	44	62	52	55	50	76	52	54
1110	80	63	54	35	74	40	92	37	75	52	32	67	17	61	75	67	42	49	64	63	73	71	76	46	56	67	63	47	72	72	70	66	60	75	67	53	63	43	75	82	62
DISA	72	76	58	45	63	31	90	39	68	43	46	47	77	54	68	64	38	46	64	64	72	63	68	49	50	61	58	40	72	69	73	62	57	61	65	53	60	46	76	68	58
1250	78	69	58	39	32	21	83	33	58	38	40	47	14	52	54	32	24	42	56	50	67	46	60	52	34	53	45	31	55	60	70	63	32	39	53	40	43	54	75	38	48
1100	54	71	57	29	42	32	82	34	46	19	21	34	3	36	39	48	15	24	60	62	79	72	58	57	50	32	39	39	63	60	69	56	53	57	46	51	58	46	78	36	48
D150	69	70	54	35	36	25	82	34	53	31	33	42	10	46	48	38	21	36	57	54	71	55	59	54	40	45	43	34	58	60	69	61	39	46	50	44	49	51	76	38	48
1060	80	80	79	26	66	60	86	58	70	67	52	58	50	67	80	69	54	69	72	67	75	67	3	38	64	61	70	63	75	83	75	66	63	63	70	48	60	66	82	66	66
1120	56	72	47	21	49	21	76	24	66	38	17	31	3	43	33	47	24	24	53	56	50	33	36	43	34	50	49	16	67	54	69	50	12	27	53	40	20	40	30	29	41
1160	59	54	42	22	51	30	74	28	66	30	33	30	6	37	50	48	27	34	45	56	65	28	46	50	40	45	54	31	59	63	71	56	25	34	56	18	37	59	72	27	44
D15C	64	69	55	23	55	35	78	36	67	44	32	39	18	48	52	54	34	40	56	59	62	42	50	43	45	52	57	35	67	66	71	56	31	40	59	36	37	53	78	39	49
1050	61	78	61	42	67	40	83	40	66	56	41	43	26	48	50	27	40	65	59	59	38	55	42	55	49	51	40	62	59	72	54	36	45	60	52	55	57	74	37	53	
1070	74	79	68	32	55	42	87	30	66	54	47	47	38	40	60	50	30	33	64	53	41	51	57	57	50	38	49	41	57	60	76	50	34	26	48	35	36	56	72	41	50
D15D	67	78	64	37	62	41	85	36	66	55	44	45	31	45	57	50	28	37	64	56	51	44	56	49	52	44	50	40	60	65	74	52	35	36	54	44	46	56	73	39	52
1080	85	77	71	46	66	43	38	60	70	40	42	60	48	58	65	43	41	64	62	64	67	63	52	49	55	62	71	44	55	63	74	59	54	46	54	49	40	59	81	46	59
1190	70	68	72	60	80	52	94	72	96	78	56	58	23	72	84	76	43	56	74	82	76	66	92	86	70	74	74	60	52	80	92	62	41	41	54	84	64	66	90	58	68
1210	80	85	77	39	56	50	89	43	75	58	50	58	22	59	65	53	32	60	79	73	78	68	57	64	65	70	58	61	66	79	77	60	50	49	70	60	56	63	77	54	62
1240	79	85	62	43	75	58	95	50	79	62	69	62	29	69	77	53	48	55	71	68	66	39	52	77	63	68	68	42	67	68	87	65	61	47	65	41	49	65	80	22	62
D15E	81	81	71	44	65	49	90	53	75	57	51	60	33	62	68	51	40	60	71	70	71	60	57	63	61	67	66	51	61	71	79	61	53	47	62	54	49	62	80	45	61
D15A	72	76	58	45	63	31	90	39	68	43	46	47	27	54	68	64	38	46	64	64	72	63	68	49	50	61	58	40	72	69	73	62	57	61	65	53	60	46	76	68	58
D15B	69	70	58	35	36	25	82	34	53	31	33	42	10	46	48	38	21	36	57	54	71	55	59	54	40	45	43	34	58	60	69	61	39	46	50	44	49	51	76	38	48
D15C	64	69	55	23	55	35	78	36	67	44	32	39	18	48	52	54	34	40	56	59	62	42	50	43	45	52	57	35	67	66	71	56	31	40	59	36	37	53	78	39	49
D15D	67	78	64	37	62	41	85	36	66	55	44	45	31	45	57	50	28	37	64	56	51	44	56	49	52	44	50	40	60	65	74	52	35	36	54	44	46	56	73	39	52
D15F	81	81	71	44	65	49	90	53	75	57	51	60	33	62	68	51	40	60	71	70	71	60	57	63	61	67	66	51	61	71	79	61	53	47	62	54	49	62	80	45	61
STOT	72	76	63	38	57	39	86	42	67	48	43	49	25	52	60	50	32	46	64	62	66	54	58	54	52	55	56	42	62	67	74	58	44	45	58	47	48	56	77	34	55

## MARINE SCIENCE

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of General Characteristics of the Marine Environment (6 items), Composition of the Seas (4 items), Properties/Motion of the Seas (16 items), Interactions (3 items), and Life in the Sea (11 items).

The population includes all high school students (with the exception of the exam schools) who took a Marine Science course and for whom valid answer sheets were submitted. It should be noted that this course is only offered at a few high schools and the data included is only for Districts A and C.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. There are a total of twenty-nine items which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

MARINE SCIENCE

1985 - 1986

I.1	Dimensions of earth, moon and sun are very different	1
I.3	Distances between earth & moon & between earth & sun	2
I.11	Oceans cover about 4/5 of the earth's surface	3
I.20	Principal difference between seawater & fresh water	4
I.22	Volumes of seawater, ice & fresh water on the globe	5
I.27	Familiar with a few nautical terms	6
II.1	Oceans contain varied assortment of nonliving & living substance	7
II.3	Seawater is a solution containing many different solutes	8
II.4	Chemical elements that are found dissolved in seawater	9
II.16	Living organisms when they die are decomposed by chain of organ.	0
III.A.1	Properties of the ocean are determined by properties of water	1
III.A.2	Chemical & physical properties of water	1
III.A.6	Light travels faster & sound more slowly in air than in water	2
III.A.7	Depending on turbidity of water, light reaches diff. depths	3
III.A.9	Coastal waters are usually more turbid than ocean waters	4
III.A.14	Define Centigrade, Fahrenheit & Kelvin temps & a calorie	5
III.A.18	Heat capacity of water plays a vital role in earth's climate	6
III.A.24	Aqueous salt solution freezes at lower temp. than pure water	7
III.A.35	Define atmospheric pressure & how much is at sea level	8
III.A.36	Pressure on a body as it descends into the ocean	9
III.B.2	Waves are the most readily observable marine phenomenon	0
III.B.5	Understand that waves transmit energy rather than mass	1
III.B.13	Tsunamis has lengths of 150-1000 km, speed up to 800 km/hr	2
III.B.15	Tides are the most precisely predictable marine events	2
III.B.20	Diurnal tides and where they occur	3
III.B.23	Effects the Gulf Stream & Humboldt Current have upon climate	4
IV.A.8	Fossils & other remains of marine organisms are found in rock	5
IV.B.3	Seas play an important part in the hydrologic cycle	6
IV.B.5	1/3 third more water falls on land than evaporates from it	7
V.A.1	Class of chemical compounds, the proteins, unique of live organ.	8
V.A.7	Believed by many that life originated in the seas	9
V.A.10	Seawater contains a supply of compounds that are nutrients	0
V.B.1	Plants need sunlight to sustain their growth & development	1
V.B.6	Greater environmental stability of oceans; more animals live in	2
V.B.8	Gravity of most organisms on land is many times their environ.	3
V.C.3	Marine plants provide lge. part of world's atmospheric oxygen	4
V.C.10	Marine animals are the consumers in the sea	5
V.C.11	Energy requirements of marine animals	6
V.C.15	Faster-moving bilaterally symmetrical animals mouths in head	7
V.C.17	Mechanism of jet propulsion that animals use to propel themselves	8
		9
		0
		1
		2
		3
		4

556 MARINE SCI            TERRYBOUN            11/07/80  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1340	60	35	60	30	10	75	85	40	75	40	30	30	35	20	40	55	35	20	30	55	35	50	65	50	60	25	50	20	45	40	30	60	50	20	55	55	80	30	35	65	44
DISA	60	35	60	30	10	75	85	40	75	40	30	30	35	20	40	55	35	20	30	55	35	50	65	50	60	25	50	20	45	40	30	60	50	20	55	55	80	30	35	65	44
1160	26	35	65	43	13	55	90	30	58	28	56	26	21	48	55	25	30	43	23	28	45	58	28	56	13	35	53	33	8	42	23	42	50	23	37	42	36	23	48	65	39
DISC	26	35	65	43	13	55	90	30	58	28	56	26	21	48	55	25	30	43	23	28	45	58	28	56	13	35	53	33	8	42	23	42	50	23	37	42	36	23	48	65	39
DISA	60	35	60	30	10	75	85	40	75	40	30	30	35	20	40	55	35	20	30	55	35	50	65	50	60	25	50	20	45	40	30	60	50	20	55	55	80	30	35	65	44
DISB	60	35	60	30	10	75	85	40	75	40	30	30	35	20	40	55	35	20	30	55	35	50	65	50	60	25	50	20	45	40	30	60	50	20	55	55	80	30	35	65	44
DISC	26	35	65	43	13	55	90	30	58	28	56	26	21	48	55	25	30	43	23	28	45	58	28	56	13	35	53	33	8	42	23	42	50	23	37	42	36	23	48	65	39
DISD	26	35	65	43	13	55	90	30	58	28	56	26	21	48	55	25	30	43	23	28	45	58	28	56	13	35	53	33	8	42	23	42	50	23	37	42	36	23	48	65	39
DISL	26	35	65	43	13	55	90	30	58	28	56	26	21	48	55	25	30	43	23	28	45	58	28	56	13	35	53	33	8	42	23	42	50	23	37	42	36	23	48	65	39
STUT	33	35	64	41	13	59	89	32	62	31	51	27	24	43	52	31	31	39	25	34	43	57	36	35	23	33	57	31	16	42	25	46	50	23	41	45	45	25	46	65	40

## CHEMISTRY

### INSTRUMENT AND POPULATION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Overview (3 items), Atomic Theory (8 items), Periodic Table (5 items), Atomic Structure/Nucleus (2 items), Atomic Structure/Electrons (7 items), Gases (4 items), Phases/Phase Transitions (1 item), Solutions (1 item), Stoichiometry (1 item), Kinetics (1 item), Acids/Bases/Ionic Solutions (3 items), and Electrochemistry (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Chemistry course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 56%. Generally, students performed fairly well on the domains of Atomic Theory, and Solutions, and most of the items in Overview, Periodic Table, Atomic Structure/Nucleus, Atomic Structure/Electrons, Gases, Phases/Phase Transitions, Stoichiometry, and Kinetics.

Of the seven items in the remaining two domains, there were five items that fewer than fifty percent of the students answered correctly. In Acids/Bases/Ionic Solutions students had difficulty defining pH (item # 33) and knowing that solution of pH less than 7 are acid and greater than 7 are basic (item # 38). In Electrochemistry students had difficulty calculating oxidation numbers, writing equations for reactions at anode and cathode with electrical current, and defining oxidation, reduction, oxidizing agent, and reducing agent (item #'s 35, 36, and 37).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

CHEMISTRY

1985 - 1986

I.4	Law of conservation of mass	
I.8	Calculate Kelvin temperature from Celsius and vice-versa	1
I.15	Define chemical change	2
II.8	Recognize chemical formulas	3
II.9	Define atomic mass, molecular mass, gram atomic mass, gram molecular mass and mole	4
II.9		5
II.9		6
II.10	Interpret chemical symbols and formulas	7
II.10		8
II.11	Determine empirical formulas from info. about percent composition	9
II.12	Writing balanced chemical equations	0
III.10	Determine combining power of elements from location periodic tab.	1
III.4	Define atomic no., periods, families, groups & transition elems.	1
III.8	Locate metals, nonmetals & metalloids in the periodic table	1
III.3	Understand basis for acceptance of Mendeleev's periodic table	1
IV.5	Describe current model of the nucleus	1
IV.6	Define isotope	1
V.6	List order of filling available in orbitals of elements from H/Rb	1
V.9	Define filled shell and valence electrons	1
III.7	Describe the general characteristics of each family	1
V.20	Define covalent bond	2
V.8	Associate energy of orbitals with location of elements/periodic tab	2
V.5	Number of electrons that may occupy each set of orbitals	2
V.18	Recognize common polyatomic ions	2
V.27	Define polar covalent bond	2
XI.1	State Boyle's law	2
XI.11	Value of Avogadro's number	2
XI.5	Define standard temperature and pressure of a gas	2
XI.10	Know the molar volume at STP	2
XII.1	Describe the assumptions of the kinetic theory	2
XIII.3	Compute concentrations in solution	3
XVII.2	Define conjugate acid-base pairs, amphoteric substance, etc.	3
XVII.8	Define pH	3
XVIII.7	Define anion, cation, anode, cathode, electrolysis, electroplating	3
XVIII.4	Calculate oxidation numbers	3
XVIII.8	Write equations for reactions at anode & cathode w/elec. current	3
XVIII.5	Define oxidation, reduction, oxidizing agent & reducing agent	3
XVII.9	Solutions of pH less than 7 are acid, greater than 7 are basic	3
XIV.4	Solve mixed volume, mole & weight problems	3
XV.11	Explain function of a catalyst on rate of a chemical reaction	4

515 CHEMISTRY                      TCCR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	63	31	72	90	40	79	63	52	90	54	70	59	95	75	75	72	54	84	45	52	79	65	63	68	68	52	70	54	47	50	34	63	45	72	70	56	61	65	38	50	62
1110	67	63	61	84	48	75	48	50	71	51	59	48	75	59	65	53	51	82	32	38	67	53	40	42	46	28	50	40	63	46	40	71	46	40	30	15	55	25	13	55	50
DISA	65	48	66	87	44	77	55	51	80	53	64	53	84	66	69	62	53	93	38	44	72	59	51	34	56	39	59	46	56	47	37	40	45	55	48	34	58	43	25	53	55
1250	70	35	59	81	37	50	48	62	85	25	62	49	74	71	81	61	32	84	37	36	65	55	55	51	41	53	61	14	44	40	55	51	37	38	28	62	31	38	23	25	50
1100	81	47	65	82	60	52	73	40	71	50	71	52	72	76	76	63	42	94	44	36	57	50	68	68	68	44	63	36	63	44	60	63	57	39	42	15	18	57	13	23	56
DISB	73	39	61	84	45	51	56	61	80	33	65	50	80	73	80	61	35	87	40	36	61	53	60	57	50	50	61	21	50	41	57	55	44	39	33	33	26	45	20	25	52
1360	50	28	64	85	50	64	64	57	85	64	50	57	92	76	71	92	54	5*	64	57	71	71	64	71	92	71	64	42	42	7	21	71	50	64	35	35	35	28	35	35	58
1120	92	32	67	78	60	42	67	53	89	50	60	71	75	67	75	78	53	92	50	46	67	46	35	82	50	71	64	39	60	42	50	64	50	57	50	71	39	75	60	71	61
1160	**	40	68	30	52	68	76	76	92	72	68	52	92	84	76	80	28	96	48	64	68	72	64	72	68	68	80	52	52	20	48	44	24	56	24	28	28	28	36	12	59
DISC	86	37	67	80	55	56	70	62	89	61	61	61	85	76	74	82	46	95	52	55	68	61	53	76	65	70	70	44	53	26	43	58	40	58	37	47	34	47	46	41	60
1050	93	63	75	87	70	39	67	55	77	74	78	54	92	86	74	73	67	88	68	65	79	74	75	73	77	67	84	59	69	46	69	62	68	77	69	82	67	60	37	43	71
1070	61	33	79	92	48	79	46	46	84	64	53	51	87	79	76	61	30	69	35	43	61	61	66	56	71	58	76	46	56	33	51	58	58	58	25	20	35	33	20	20	55
DISD	83	53	77	88	63	85	60	52	79	71	70	53	90	83	75	69	55	82	57	58	73	70	72	67	75	64	82	55	65	42	63	61	65	71	55	61	56	54	32	35	65
1080	50	16	37	59	22	31	34	29	52	33	26	43	59	50	43	46	24	49	43	22	31	37	31	19	36	37	44	24	32	18	38	31	25	30	23	30	24	39	27	29	34
1210	65	38	47	70	76	69	78	63	92	56	61	54	89	87	83	63	40	94	58	45	61	60	76	39	43	40	38	32	56	34	52	40	32	40	41	41	30	12	18	12	55
1240	87	62	90	67	76	85	78	84	85	71	68	85	89	76	76	67	70	84	64	68	90	85	81	75	73	87	84	59	71	76	65	76	81	84	68	50	57	60	53	42	74
DISF	65	35	56	72	52	57	58	54	73	50	48	58	75	67	63	57	42	71	49	42	57	58	58	54	49	53	54	37	50	40	50	47	44	49	41	39	36	39	33	28	51
DISA	65	48	66	87	44	77	55	51	80	53	64	53	84	66	69	62	53	83	38	44	72	59	51	54	56	39	59	46	56	47	37	40	45	55	48	34	58	43	25	53	55
DISB	73	39	61	84	45	51	56	61	80	33	65	50	80	73	80	61	35	87	40	36	61	53	60	57	50	50	61	21	50	41	57	55	44	39	33	33	26	45	20	25	52
DISC	86	37	67	80	55	56	70	62	89	61	61	61	85	76	74	82	46	95	52	55	68	61	53	76	65	70	70	44	53	26	43	58	40	58	37	47	34	47	46	41	60
DISD	83	53	77	88	63	85	60	52	79	71	70	53	90	83	75	69	55	82	57	58	73	70	72	67	75	64	82	55	65	42	63	61	65	71	55	61	56	51	32	35	65
DISF	65	35	56	72	52	57	58	54	73	50	48	58	75	67	63	57	42	71	49	42	57	58	58	54	49	53	54	37	50	40	50	47	44	49	41	39	36	39	33	28	51
STOT	72	47	64	81	52	64	59	55	78	53	59	55	81	74	71	63	45	61	47	46	64	60	59	59	57	54	63	40	51	51	48	53	43	42	41	44	30	34	56		

## PHYSICS

### INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Physics Preliminaries (9 items), Mechanics (19 items), Electromagnetism (6 items), Properties of Matter/Kinetic Theory/Thermodynamics/Waves (3 items), and Light/Optics (3 items).

The population includes all high school students (with the exception of the exam schools) who took a Physics course and for whom valid answer sheets were submitted.

### SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 52%. Generally, students appear to be mastering the objectives in the domain entitled Properties of Matter/Kinetic Theory/Thermodynamics/Waves and most of the items in the Physics Preliminaries domain. In this latter domain students had difficulty with items involving basic concepts of trigonometry of right angles and modern standards of length and time (item #'s 25 and 27).

In the remaining domains there were a significant number of items that more than fifty percent of the students answered incorrectly. In Mechanics students had difficulty with items that tapped motion in more than one direction (item #'s 12, 32, and 36), motion in one direction (item #'s 17 and 26), vectors (item # 16), force (item #23), work/energy/power/conservation (item # 40), and momentum/conservation (item #39). In the Electromagnetism domain students performed poorly on the items involving electricity/electrostatics (item #'s 3 and 18), electrical currents/resistors/capacitors (item #'s 3 and 24), and simple circuits (item # 13). In the Light/Optics domain performance was poor on the items tapping the nature of light and illumination (item #'s 5, 10, and 15).

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

PHYSICS

1985 - 1986

I.B.5	Other basic units of measurement & concept of derived units	1	
II.A.4	Definition of average acceleration and its use	2	
III.B.10	Simple parallel plate capacitor	3	
IV.C.2	How temperature is measured and how it differs from heat	4	
V.A.1	The five properties associated with light	5	
I.A.4	Acquiring familiarity with scientific notation	6	
II.D.8	Nature of friction: direction, magnitude, static, kinetic & coeff.	7	
III.B.3	Resistance & resistors; Ohm's Law $V = R I$ & units of resistance	8	
IV.C.1	Concept of heat & temperature are related but distinct quantity	9	
V.A.2	Properties that light possesses that can be associated w/waves	0	1
I.A.5	Understand arithmetic manipulations with scientific notation	1	1
II.C.5	Motion in vertical direction is independent of horizontal dir.	2	1
III.E.5	2 types of connections, series & parallel, which occur elec circ	3	1
IV.C.3	Three systems of measuring temp.: Farenheit, Celsius & Kelvin	4	1
V.A.3	Fact that color is simply the frequency of visible light	5	1
II.B.2	Utility of representing position & velocity by vectors	6	1
II.A.10	Understand the physics of free fall	7	1
III.A.2,5	Electrons & Coulomb's law	8	1
I.B.8	Metric system as a decimal system	9	1
II.B.4	Fundamentals of adding vectors; resultant of 2 or more vectors	0	2
III.B.7	Relation exists between power & resistance, $P = I^2 R$	1	2
I.B.9	Contrast weight, (earth vs. moon) & mass independent of location	2	2
II.D.10	Universal law of gravitation, and Newton's constant	3	2
III.B.4	Physical model of electron transport in conductors; resistivity	4	2
I.A.10	Basic concepts of trigonometry of right triangles	5	2
II.A.12	Area under curve by plotting speed vs. time is distance traveled	6	2
I.B.3	Modern standards of length and time	7	2
II.B.1	Concept of a vector as distinguished from a scalar	8	2
I.A.9	Basic results from geometry	9	2
II.B.8	Graphical & analytical resolution of vectors	0	3
I.B.7	Systems of units & conversion factors	1	3
II.C.11	Define simple harmonic motion, its amplitude & period	2	3
II.A.1	Concepts of displacement and average speed	3	3
II.A.6	Calculate final velocity from initial velocity, accelerat., time	4	3
II.C.8	Projectile is fired at angle; velocity must be horiz. & vert.	5	3
II.C.10	Knowledge of the kinematics of uniform circular motion	6	3
II.D.3,4	Newton's second law ; unit of force	7	3
II.F.4	Scientific definition of power	8	3
II.E.3	Momentum (p) is product of mass times velocity	9	3
II.F.8	Energy & momentum conservation in collisions; elastic/inelastic	0	4

535 PHYSICS                      TCR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
1040	91	89	34	46	38	95	85	75	65	46	91	65	46	77	53	10	46	34	59	79	73	40	57	48	61	20	10	69	61	81	83	16	63	91	42	28	83	79	40	69	59
1110	40	70	25	60	20	95	55	35	75	30	55	25	35	80	45	5	25	45	70	85	50	85	65	40	35	30	45	55	35	50	85	10	30	80	75	15	60	50	35	25	48
DISA	76	84	31	50	33	95	76	63	68	42	81	53	43	78	50	8	40	37	62	81	66	53	59	46	53	23	20	65	53	72	84	14	53	88	52	24	76	71	39	56	55
1250	**	73	13	86	43	90	90	53	76	3	70	23	30	90	40	6	3	33	**	40	66	70	33	20	40	16	16	70	56	73	90	46	60	96	46	16	70	70	3	43	51
1100	**	62	0	77	81	92	66	40	77	40	55	88	22	70	59	59	44	37	70	59	75	59	48	62	62	33	14	62	44	62	59	33	55	60	29	40	48	40	74	33	52
DISB	**	68	7	56	61	91	78	47	77	21	63	54	26	80	49	31	27	35	65	49	47	64	40	40	50	24	15	66	50	68	75	40	57	82	38	28	59	56	36	38	52
1060	**	**	0	**	50	**	**	50	**	**	**	50	**	50	**	**	**	**	**	**	**	**	**	**	**	50	0	50	**	50	**	0	0	**	0	**	**	**	**	**	75
1120	80	50	40	60	50	60	70	30	60	30	60	80	70	50	30	20	60	40	50	20	30	60	40	50	20	30	60	30	50	0	60	20	50	30	50	20	30	60	60	20	45
1160	**	46	61	38	69	76	69	46	61	38	53	0	38	61	30	23	76	38	76	76	53	69	69	30	53	7	46	61	69	64	76	30	69	69	30	46	46	46	61	61	54
DISC	92	52	48	52	60	72	72	40	64	40	60	36	56	56	36	28	72	40	68	56	48	68	52	44	44	20	48	48	64	68	72	24	56	56	36	40	44	56	64	48	52
1050	**	**	47	86	43	**	**	86	**	56	**	78	60	95	82	56	78	69	73	73	91	86	82	69	78	69	39	86	95	86	**	69	86	65	78	60	69	91	**	91	79
1070	50	70	50	70	20	**	60	70	60	40	90	70	20	**	60	30	50	70	**	**	40	70	80	60	60	80	70	**	70	70	90	60	50	70	**	60	70	90	80	50	68
DISD	96	90	48	81	36	**	87	81	87	51	96	75	48	96	75	48	69	69	81	81	75	81	81	66	72	72	43	90	87	81	96	66	75	66	84	60	69	90	93	78	76
1080	62	32	13	21	48	29	27	10	54	8	27	27	21	13	27	16	13	29	32	13	13	24	8	32	10	13	24	37	16	54	35	29	27	24	43	16	24	16	16	21	25
1210	34	68	21	31	47	**	63	36	73	21	63	36	10	31	36	0	36	31	84	21	63	63	36	26	36	0	0	68	52	68	73	15	47	89	52	42	68	84	78	36	47
1240	95	64	46	68	46	71	5	53	93	46	33	48	44	51	60	22	37	40	82	44	44	60	37	68	40	42	46	66	53	46	57	48	53	62	53	37	44	44	53	55	53
DISF	81	53	29	44	47	61	44	34	75	27	36	38	29	33	43	15	28	34	64	28	36	47	26	47	28	23	29	56	39	53	52	35	42	53	49	30	41	41	44	39	41
DISA	76	84	31	50	33	95	76	63	63	42	81	53	43	78	50	8	40	37	62	81	66	53	59	46	53	23	20	65	53	72	84	14	53	88	52	24	76	71	39	56	55
DISB	**	68	7	56	61	91	78	47	77	21	63	54	26	80	49	31	22	35	85	49	47	64	40	40	50	24	15	66	50	68	75	40	57	82	38	28	59	56	36	38	52
DISC	97	52	48	52	60	72	72	40	64	40	60	36	56	56	36	28	72	40	68	56	48	68	52	44	44	20	48	48	64	68	72	24	56	56	36	40	44	56	64	48	52
DISD	96	90	48	81	36	**	87	81	87	51	96	75	48	96	75	48	69	69	81	81	75	81	81	66	72	72	48	90	87	81	96	66	75	66	84	60	69	90	93	78	76
DISF	81	53	29	44	47	61	44	34	75	27	36	38	29	33	43	15	28	34	64	28	36	47	26	47	28	23	29	56	39	53	52	35	42	53	49	30	41	41	44	39	41
STOT	86	68	29	53	46	81	66	50	74	33	49	36	63	49	22	38	40	70	54	51	58	45	47	45	29	28	63	52	65	71	34	53	69	50	32	57	58	49	48	52	



SOCIAL STUDIES

BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 3  
 1985 - 1986

B.7	Use maps frequently and completing at least one map project	1
B.7		2
B.7		3
B.7		4
B.7		5
C.4	Give a simple definition of history	6
B.8		7
C.12	Experiencing the curriculum first-hand	8
C.12		9
C.12	Describe who consumes what in a community	0
C.47		1
C.47,49	Being able to give brief description of importance of at least 5 major items in Boston history and at least 8 major personalities	1
C.34		1
C.11	Identify major Boston neighborhoods on a map & be able to place	2
C.47,49		3
C.47	List major economic activities in a community	4
C.47		5
C.49	See Questions #11 and 12 for objectives	6
C.49		7
C.49	See Question # 11 for objective	8
C.49		9
C.49	See Question #12 for objective	0
C.49		1
C.47,49	See Question #11 and 12 for objectives	2
C.50		2
C.36	Describe how the landscape & skyline of Boston has changed	2
C.53		2
C.37	Identify major parks in & around Boston on a map & place them	2
C.39		2
C.57	Name the 3 parts of Boston's city govt. & describe what ea. does	2
C.35		2
C.35	Locate important Boston landmarks, historical/other, on a map	2
C.38		2
C.38	Locate Boston, MA and the New England states on a map of the US	2
C.38		2
C.49	Name current Pres. of US, Governor of MA, Mayor of Bos. & US Sen.	2
C.49		2
C.49	Identify major bodies of water & parks in and around Bos. on a map	2
C.49		2
C.49	Locate surrounding towns on a map	2
C.49		2
C.47	Identify & describe 8 major persons in Bos. history	3
C.49		3
C.49	Describe importance of 5 major items in Bos. history	3
C.49		3
C.49	Identify and describe importance of at least eight major personalities in Boston history from the Revolution to the present	3
C.49		3
C.57	Name current Pres. of US, Governor of MA, Mayor of Bos., US Sen.	3
C.49		3
C.43,45	See Question #34 for objective	3
C.57		3
C.47	Identify 7 continents, 4 oceans, N/S hemispheres on map & globe	3
C.47		3
C.3,36	See Question #37 for objective	3
C.30		3
C.18	See Question #33 for objective	3
C.34		3
C.39	Experience curriculum first-hand; Identify parks in Boston on map	4
C.53		4
C.40	Know approximate population of Boston & rank in the cities of US	4
C.40		4
C.46	Name major transportation systems in a community	4
C.46		4
C.46	Identify & place major Bos. neighborhoods on a map	4
C.46		4
C.46	Locate Boston, MA and New England states on a map of US	4
C.46		4
C.46	Name 3 parts of Boston city govt. and describe what each part does	4
C.46		4
C.46	Locate some states on a map of the US, including Texas, California, Ala.ka, and Hawaii	4
C.46		4
C.46	Distinction between city, state & country; Name the neighborhood, city, state, region, country, and continent in which one lives	4
C.46		4



934 SOC LVL 3 TECKSOVS 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOT 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4160	81	94	91	97	72	32	39	97	81	83	89	43	67	91	78	81	59	59	72	51	67	54	67	75	8	94	81	67	94	27	27	59	59	37	67	48	86	83	75	81
4170	69	86	**	95	78	21	47	91	82	73	**	69	43	69	87	91	73	82	86	39	47	34	60	47	47	91	86	43	73	69	43	13	52	26	47	21	78	78	91	78
4173	50	90	80	90	60	15	75	**	55	55	60	20	45	85	40	55	55	30	80	20	40	60	30	30	10	85	55	70	55	65	20	15	25	40	80	35	80	65	70	45
4220	50	69	92	84	61	42	80	84	53	65	80	65	65	88	46	84	65	61	88	61	46	73	46	80	19	92	92	76	80	38	15	69	96	65	30	61	80	53	38	
4221	91	79	83	91	79	37	91	95	83	75	91	45	75	91	54	87	62	54	54	37	58	58	66	70	16	91	58	62	83	66	29	29	54	37	50	29	62	75	83	45
4570	74	74	79	84	64	46	53	94	74	82	69	76	71	79	46	74	66	66	74	61	82	76	79	89	15	97	84	84	82	43	61	64	71	23	79	61	87	74	51	61
4571	65	84	87	75	56	25	81	68	87	84	93	65	75	84	84	87	68	84	78	84	81	71	81	75	18	84	84	65	78	40	25	84	71	43	59	53	68	68	84	59
4010	73	75	88	98	58	37	83	94	66	77	84	49	71	92	62	86	64	56	79	54	66	83	54	84	24	86	77	71	83	47	49	52	64	62	62	49	79	75	77	69
4240	65	55	90	80	55	20	57	82	60	47	57	30	67	75	57	65	45	55	55	32	27	55	57	52	17	60	65	62	60	32	35	60	37	22	50	45	70	67	62	45
4241	95	**	95	95	56	3	78	**	95	**	86	78	95	82	**	78	91	86	86	78	91	73	78	91	30	**	73	78	82	47	91	56	82	43	95	65	91	95	95	78
4270	78	81	96	**	69	39	69	87	87	78	72	57	51	90	33	60	54	63	54	42	48	51	51	81	9	81	81	48	54	39	60	42	60	69	60	75	81	75	63	
4310	96	93	86	93	72	48	58	96	86	82	89	62	86	86	37	79	75	62	82	62	48	68	65	93	68	89	89	58	58	68	44	34	65	27	72	37	96	82	86	72
4311	62	75	79	91	50	16	75	83	66	70	75	45	66	87	41	79	62	62	75	50	50	62	41	75	45	79	62	58	62	45	50	41	54	45	45	58	70	70	79	70
4370	80	80	93	96	73	16	76	93	63	70	93	80	76	86	63	76	63	53	60	66	80	80	73	90	43	96	60	76	66	60	63	73	60	70	66	43	73	83	83	70
4371	87	72	89	92	68	32	82	73	85	76	90	31	64	93	54	89	65	70	82	21	42	89	42	78	32	85	90	78	70	53	43	59	45	43	62	23	81	65	75	50
4430	78	**	85	96	42	35	96	96	92	85	96	89	78	89	32	89	60	39	67	39	78	85	39	96	85	78	85	67	75	39	50	64	50	35	96	89	89	92	92	60
DISA	76	87	88	91	63	31	75	91	76	75	83	54	68	86	57	79	64	62	73	48	59	69	56	79	29	88	79	68	73	48	43	54	57	41	66	46	79	76	76	61
4030	57	47	89	89	63	21	68	94	57	36	52	36	47	73	10	47	31	52	31	10	42	5	36	52	0	89	42	84	47	31	10	21	31	10	42	21	52	57	52	52
4031	68	86	90	81	81	13	59	90	68	45	90	63	77	90	72	**	54	40	81	36	54	54	36	86	9	77	86	54	50	59	22	31	77	22	40	36	86	77	63	63
4081	68	68	81	93	53	31	53	96	81	81	81	34	75	62	62	84	50	56	62	34	28	68	62	84	34	81	75	56	65	25	15	28	46	46	59	37	87	90	56	62
4082	95	85	92	85	57	52	80	85	47	71	61	14	57	**	66	33	71	42	76	61	38	90	71	95	19	80	85	66	42	23	57	95	52	28	85	85	95	**	95	
4290	55	68	60	91	42	26	68	88	57	53	60	33	62	84	31	71	42	28	33	20	33	24	46	71	4	84	75	33	35	26	20	17	26	15	24	37	57	62	42	53
4560	78	87	92	87	66	26	78	96	75	77	82	61	78	75	38	87	68	70	85	56	66	34	73	85	42	91	75	66	73	38	45	19	28	42	63	43	85	14	73	75
4561	75	75	91	91	66	54	79	91	75	83	87	58	70	87	79	79	75	70	58	47	37	50	62	79	62	91	50	54	54	41	33	41	37	50	45	58	91	70	66	75
4690	69	83	88	85	67	37	64	95	75	78	82	64	72	74	57	82	69	58	43	24	51	48	47	75	15	94	81	68	65	35	38	43	44	45	69	50	87	78	65	58
4070	92	94	96	86	76	45	86	94	76	74	94	82	76	90	86	76	80	86	94	27	80	72	92	94	23	86	74	86	76	27	27	52	52	49	66	54	82	64	18	64
4080	96	**	96	96	80	64	80	92	72	92	72	52	80	92	60	**	72	80	88	64	84	80	84	76	24	96	64	76	84	32	20	36	48	52	72	48	68	92	52	48
4151	87	88	83	80	66	42	76	77	81	83	81	57	70	87	28	84	73	53	61	46	47	67	23	81	38	84	84	81	73	46	42	38	40	54	59	64	89	77	61	63
4190	88	86	93	91	76	50	85	93	80	81	88	60	88	88	68	90	80	61	73	56	76	76	58	83	45	91	80	76	76	38	46	65	51	51	63	58	66	83	68	68
4192	89	89	86	86	68	31	82	93	75	79	93	41	86	82	62	82	62	96	89	79	89	72	65	75	41	89	58	82	72	41	27	68	75	10	44	20	75	93	86	41
4200	77	72	95	81	81	18	90	95	**	90	77	27	72	**	18	90	54	31	31	27	36	13	59	95	9	86	81	68	40	81	81	**	72	59	86	72	95	95	45	40
4201	91	85	74	91	42	22	54	94	68	91	71	34	82	97	45	77	51	46	51	17	42	71	60	88	62	91	33	31	48	28	48	51	25	37	71	42	91	85	71	54
4670	94	67	87	87	57	42	63	84	73	68	84	57	73	78	89	84	68	84	73	63	84	36	52	73	78	94	42	47	68	42	57	26	42	42	57	47	78	57	42	68
DLSB	80	84	85	87	65	36	73	91	76	76	80	52	74	84	53	81	65	60	64	40	56	60	56	81	31	88	74	56	64	37	37	44	45	41	60	49	79	78	65	62
4051	81	79	88	84	54	15	75	86	72	61	63	75	86	86	43	86	45	52	43	54	59	61	31	68	25	86	77	27	59	40	29	27	52	27	54	40	84	63	68	45
4130	75	77	75	72	55	13	72	91	77	75	80	66	80	91	41	66	63	61	75	25	69	66	44	80	19	83	69	58	50	47	41	25	36	36	61	41	80	72	66	44
4131	64	93	90	96	61	32	87	93	83	90	80	70	83	96	87	90	54	54	48	25	32	80	54	83	12	83	96	87	87	25	64	54	32	61	77	19	77	88	74	54
4140	88	96	96	**	74	48	81	88	66	70	96	77	85	92	88	77	51	74	77	70	59	66	55	85	25	92	74	70	70	40	44	70	37	33	59	55	85	77	70	74
4150	52	66	77	78	57	24	52	82	42	50	70	24	68	77	21	38	50	28	47	29	36	26	64	24	71	73	52	43	28	29	21	33	35	36	33	54	50	54	45	
4250	69	81	80	88	51	34	61	89	65	74	75	53	80	87	48	88	55	56	52	37	41	52	31	77	37	89	77	59	60	47	27	52	37	28	32	31	73	68	76	51
4340	75	84	87	83	68	33	82	96	64	70	87	67	81	83	77	80	49	64	66	63	62	48	34	73	32	85	70	63	58	40	26	41	46	30	41	26	63	67		

934 SOC LEVEL 3                      TLGR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE: 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	TOTAL
4160	40	62	37	89	75	75	29	45	81	75	67
4170	39	91	43	91	69	73	13	69	69	82	65
4173	35	40	55	80	40	60	40	70	35	55	54
4220	73	88	30	88	57	73	38	57	69	53	64
4221	29	66	29	95	66	58	33	66	62	70	63
4570	25	28	48	84	79	69	51	38	64	69	66
4571	53	59	87	84	81	75	53	65	75	78	70
4010	54	66	67	81	62	66	47	60	75	79	68
4240	12	40	52	62	45	40	57	37	50	55	51
4241	69	86	82	82	78	82	56	82	95	86	80
4270	42	63	66	84	48	63	54	69	84	54	64
4310	65	62	44	96	60	79	62	72	82	86	71
4311	45	66	79	83	79	54	58	62	75	54	63
4370	40	80	46	93	80	73	70	76	70	60	71
4371	46	42	31	71	56	54	48	62	76	67	64
4430	75	92	67	67	53	75	92	67	85	67	73
DISA	45	61	53	82	64	65	50	61	74	68	66
4030	21	21	52	63	36	47	26	42	68	57	44
4031	22	45	36	81	68	45	31	68	81	59	60
4081	43	50	56	90	56	65	28	53	65	62	59
4082	33	52	66	95	66	52	90	76	76	71	67
4290	24	33	31	73	33	53	26	40	62	57	46
4560	56	61	59	87	73	73	15	59	80	73	67
4561	66	50	62	83	62	62	45	70	87	87	66
4690	27	30	58	64	36	56	34	66	68	60	60
4070	47	66	78	92	68	72	43	58	72	74	71
4080	28	56	28	88	84	72	52	56	76	84	70
4151	40	53	73	81	61	63	54	59	73	71	64
4190	51	73	71	78	66	70	60	65	76	70	71
4192	51	62	51	86	82	82	44	51	82	79	69
4200	22	50	31	95	72	72	27	59	50	72	64
4201	22	45	45	91	65	80	57	68	62	71	62
4670	73	52	42	63	36	73	42	52	78	73	64
DISB	39	50	56	81	59	65	41	59	72	69	63
4051	38	52	65	81	54	54	36	47	50	65	58
4130	41	44	30	75	47	72	47	41	66	69	59
4131	61	48	48	70	58	51	64	64	64	90	66
4140	33	66	55	88	59	81	48	62	70	88	70
4150	24	40	38	64	50	43	21	45	61	52	46
4250	35	54	61	82	58	57	59	52	73	68	59
4340	50	54	55	61	55	51	30	41	70	72	60
4350	30	42	50	72	44	60	36	49	66	57	50
4390	37	70	45	83	54	79	29	37	62	70	64
4391	29	70	50	75	45	70	20	41	75	70	65
4400	27	45	31	84	39	56	17	50	68	56	57
4550	76	80	84	84	72	76	80	52	68	88	76
4022	31	54	36	72	59	77	45	50	81	81	68

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934 SOC LEVEL 3 TECR5005 11/07/66  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4052	70	80	60	70	50	60	85	90	50	65	80	75	75	80	70	80	90	60	85	20	50	90	65	80	65	90	75	60	80	40	50	80	65	85	85	50	80	80	60	30
4100	76	80	80	89	58	28	86	80	84	82	89	58	69	80	26	36	65	60	82	41	56	69	21	73	17	84	71	52	67	19	32	19	26	30	36	36	54	76	54	63
4120	85	85	**	95	75	25	70	95	85	70	95	80	70	90	70	90	80	95	95	30	35	65	45	85	10	**	80	75	85	30	45	80	60	65	55	40	90	90	85	65
4121	61	83	**	74	83	38	88	**	55	77	94	77	77	72	83	**	72	61	83	38	38	83	44	94	33	**	77	77	77	50	44	77	22	33	44	66	**	83	94	33
4530	73	76	85	82	64	20	64	93	76	67	79	31	76	78	17	75	45	60	50	21	43	31	18	67	14	95	73	57	54	32	21	10	28	17	39	34	57	54	57	42
4531	95	**	95	**	95	90	**	**	95	95	85	60	65	95	30	90	60	45	55	40	85	35	25	80	25	**	**	65	90	65	35	75	50	30	65	55	80	90	70	60
4590	74	79	69	77	44	23	62	88	69	74	59	30	55	83	20	67	33	57	47	28	37	55	35	49	18	66	62	52	38	28	27	23	38	23	33	42	57	52	49	57
4592	**	**	81	**	63	54	63	81	90	90	**	63	81	**	63	90	45	63	63	36	36	63	81	54	9	**	63	81	**	63	18	18	54	63	72	54	90	90	81	36
4630	86	91	95	89	71	57	78	93	73	79	80	50	75	89	54	86	58	65	73	50	61	67	52	80	38	87	95	76	84	43	41	49	49	38	53	43	57	73	76	60
DISC	75	82	84	86	61	35	72	89	68	71	78	53	75	85	50	77	55	65	62	39	50	55	37	74	29	36	76	61	63	40	33	39	42	33	48	37	69	68	63	50
4260	77	80	74	71	65	28	62	**	71	77	85	17	62	91	54	65	17	57	74	42	62	31	48	85	17	85	88	60	80	17	37	11	28	42	45	40	85	71	45	57
4280	93	87	96	**	74	45	93	90	87	74	96	70	96	80	80	80	64	90	93	51	96	93	90	93	48	96	**	93	**	80	70	93	38	51	83	96	96	**	58	54
4283	69	74	84	98	62	38	62	93	59	64	74	47	52	83	16	71	52	42	22	18	25	40	61	67	18	99	71	59	62	27	25	38	44	38	50	18	79	74	61	30
4381	80	88	94	91	66	38	63	**	75	75	72	41	68	86	69	52	52	33	41	25	22	83	25	88	16	94	58	80	83	77	75	16	33	19	66	61	91	77	58	52
4640	73	79	77	82	60	34	67	88	56	61	82	74	65	86	64	74	63	64	69	45	62	60	53	75	32	80	74	56	66	50	40	59	65	45	47	47	66	62	50	63
4650	75	65	63	88	59	34	59	86	72	68	84	63	72	90	90	81	68	50	54	59	47	86	50	81	18	90	68	72	75	29	20	45	72	18	34	31	65	68	43	47
4067	89	92	85	96	78	53	89	72	96	**	92	85	75	92	82	82	85	78	82	89	78	89	60	96	89	**	96	96	89	82	82	89	46	85	82	85	**	96	75	**
4321	62	78	71	78	37	18	65	93	65	68	81	84	28	34	18	68	56	59	62	37	37	43	71	81	15	81	71	50	71	43	31	25	18	34	37	28	59	75	37	43
4322	74	86	78	74	49	17	66	86	54	56	56	27	23	68	17	56	43	47	29	13	25	39	23	64	11	76	68	49	49	21	25	19	11	21	23	21	62	72	58	35
4361	71	80	71	95	76	14	95	90	85	76	61	30	76	95	19	90	57	76	57	57	57	38	47	90	23	90	95	57	76	57	47	42	19	4	61	52	61	**	61	85
4541	76	85	97	97	94	8	52	94	82	73	97	67	64	79	67	76	58	50	70	50	55	61	58	79	20	97	79	61	67	56	55	35	29	17	76	52	94	97	64	44
4543	45	84	77	84	70	22	63	93	65	65	65	36	27	81	27	79	61	65	45	9	40	27	22	65	27	90	77	56	36	45	36	22	27	34	38	43	68	77	56	43
DISD	73	81	80	85	64	30	68	91	68	68	78	57	59	84	50	72	56	58	56	38	47	56	50	78	26	87	76	63	68	46	42	42	41	35	50	44	75	76	54	52
4053	28	56	64	65	37	12	71	75	53	56	40	15	75	90	9	65	34	21	46	21	31	43	28	46	21	93	59	71	56	59	21	9	37	25	18	18	65	65	50	37
4061	**	95	95	**	61	19	85	**	90	90	**	23	76	76	47	85	19	52	47	23	19	42	14	95	33	80	76	42	66	38	61	23	33	14	57	28	90	85	61	76
4113	65	80	82	75	75	40	85	90	65	50	95	85	75	70	35	80	60	65	70	40	55	65	45	70	50	95	70	90	65	35	20	25	30	50	60	25	65	80	60	30
4210	90	86	89	95	62	18	83	97	83	95	97	67	88	90	67	**	67	90	97	72	69	88	74	97	13	90	81	53	83	48	62	53	58	39	95	48	**	95	83	79
4230	53	80	66	77	47	39	61	88	60	38	58	52	60	73	36	65	44	47	47	12	34	38	39	74	12	77	65	47	55	47	38	30	33	41	30	17	77	63	41	34
4271	81	94	94	97	64	29	84	94	83	91	97	89	83	**	97	91	78	94	**	83	94	72	**	89	24	97	70	81	89	59	43	56	56	24	78	78	81	97	86	86
4360	84	76	79	87	64	20	82	79	69	76	79	33	82	89	53	74	35	69	53	38	48	64	71	66	28	82	58	56	53	35	25	15	43	28	41	41	64	69	48	38
4410	79	90	95	96	69	37	79	87	66	77	96	56	80	87	75	90	74	87	88	70	79	69	67	80	22	82	80	69	83	70	56	67	53	48	79	45	82	91	72	50
4580	64	82	82	91	65	39	70	95	69	75	75	34	75	89	26	61	51	35	47	26	30	47	40	80	28	86	80	52	60	38	30	27	38	27	85	34	79	69	59	42
4620	82	78	88	86	66	32	79	82	71	75	80	42	73	91	31	84	51	66	50	44	44	47	34	68	32	85	65	58	62	29	32	14	34	32	48	37	67	78	63	48
DISL	72	81	84	88	61	31	76	88	70	72	80	48	76	87	45	78	53	62	62	43	50	56	50	76	25	86	71	59	67	45	38	32	41	33	0	37	77	78	62	50
DISA	76	82	88	91	63	31	75	91	76	75	83	54	68	86	57	79	64	62	73	48	59	69	56	79	29	88	79	68	73	48	43	54	57	41	66	46	79	76	76	61
DISB	80	84	85	87	65	36	73	91	76	76	80	52	74	84	53	81	65	60	64	40	56	60	56	81	31	88	74	66	64	37	37	44	45	41	60	49	79	78	65	62
DISC	75	82	84	86	61	35	72	89	68	71	78	53	75	85	50	77	55	58	62	39	50	55	37	74	29	86	76	61	63	40	33	39	42	33	48	37	69	68	63	50
DISD	73	81	80	85	64	30	68	91	68	63	78	57	59	84	50	72	56	58	56	38	49	56	50	78	26	87	76	63	68	46	42	42	41	35	50	44	75	76	54	52
DISF	72	81	84	88	61	31	76	88	70	72	80	48	76	87	45	78	53	62	62	43	50	56	50	76	25	86	71	59	67	45	38	32	41	33	60	37	77	78	62	50
STOT	75	84	87	63	33	73	90	71	72	80	53	71	85	51	78	58	60	63	41	52	59	48	77	28	87	75	63	66	42	38	42	45	36	56	42	75	74	64	55	



934 SUC LEVELS                      TEACHERS                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	TOTAL
4052	80	60	80	80	65	70	25	35	65	70	67
4100	26	73	73	71	73	65	50	50	67	69	59
4120	30	70	30	90	60	55	15	75	80	60	68
4121	22	61	38	72	**	77	44	61	94	94	69
4530	20	59	57	59	28	46	31	48	59	64	51
4531	15	80	35	95	60	70	55	60	80	85	70
4590	23	40	44	62	35	40	32	40	47	57	48
4592	27	54	36	81	63	72	54	72	**	72	68
4630	36	80	82	91	61	76	50	64	65	80	68
DISC	35	56	54	75	53	60	39	50	66	69	59
4260	22	68	37	82	74	57	48	57	68	80	58
4280	54	83	45	**	80	76	67	80	**	90	81
4283	15	54	42	71	35	44	33	57	64	52	52
4381	13	77	80	80	77	58	61	27	67	83	63
4640	38	60	62	66	54	49	41	52	52	62	61
4650	45	65	38	79	70	63	27	45	59	56	60
4062	57	89	67	85	85	82	89	85	96	82	85
4321	18	37	21	65	34	68	28	37	46	46	51
4372	25	33	33	47	27	56	43	45	50	60	44
4361	42	42	52	57	28	66	28	52	76	85	62
4541	11	52	26	79	41	73	23	50	64	67	62
4543	38	50	30	61	47	61	25	40	56	34	51
DISU	31	58	46	71	53	60	41	51	63	63	59
4053	21	25	58	71	46	43	21	50	75	76	46
4061	19	52	52	80	66	71	61	57	57	47	60
4113	30	45	90	70	60	60	80	55	65	60	62
4210	44	65	39	88	76	67	58	6	57	67	73
4230	26	36	53	74	46	55	33	50	49	60	50
4271	70	78	81	89	89	67	75	81	81	75	79
4360	35	41	61	64	53	48	30	38	30	53	55
4410	53	70	66	83	66	70	46	67	74	66	72
4580	28	45	48	83	58	63	30	50	65	63	56
4620	19	58	34	82	47	67	34	59	72	63	57
DISF	34	52	54	80	58	62	42	50	64	63	60
DISA	45	61	53	82	64	65	50	61	74	68	66
DISB	39	50	56	81	59	65	41	59	72	69	63
DISC	35	56	54	75	53	60	39	50	66	69	59
DISD	31	58	46	71	53	60	41	51	63	63	59
DISI	34	52	54	80	58	62	42	50	64	63	60
STOT	37	56	53	77	57	62	4	50	68	67	61

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SOCIAL STUDIES - LEVEL 4

1985 - 1986

C.3	Describe various aspects of what is called culture	1
C.4	Identify the origins of the present population of the United	2
C.4	States and the immigration routes used by various groups, with	3
C.4	special emphasis on where current residents of Boston came from	4
C.5	Identify key events in US history, emphasis on events in N.E.	5
C.6	Give description of contributions of major persons in US history	6
C.45	Identify important governmental landmarks; why they are important	7
C.6	Give description of contributions of some major personalities in	8
C.6	U.S. history	9
C.7	Identify on map of US, major population centers & natural resources	10
C.8	Locate on globe or world map: Boston, the U.S., Canada, Mexico,	11
C.8	No. Am., the other 6 continents, 4 major oceans	12
C.9	Place the major features of the US on a blank map	13
C.10	Describe the basic functions of the 3 branches of the federal gov't	14
C.10	executive (President), legislature (law-makers), & judiciary(ct)	15
C.13	Describe the election process for the Presidency	16
C.15	Locate Mass./N.E. on a map of US and on a world map or globe	17
C.16	Compare different kinds of maps of MA/NE & draw some conclusions	18
C.17	Identify major natural resources in MA/N.E.	19
C.18	Identify major features of MA/N.E. on a map of the area	20
C.23	Significance of major events in MA/N.E. and US history	21
C.24	Sequence of major events in MA/N.E. history (timeline)	22
C.6	Give description of contributions of major persons in US history	23
C.51	Location of 5 N.E. states and place them on a blank map	24
C.25	Major contributions of MA/N.E. history to history of the US	25
C.6	Give description of contributions of major persons in US history	26
C.28	Nat. Am. were original settlers, others came from diff. areas	27
C.33	Give examples of prejudice & discrimination based on race, sex,	28
C.33	ethnicity, religion, national origin, physical disability	29
C.38	Describe major features of economies of MA/N.E. and compare	30
C.41	Describe basic functions of 3 branches of government in ea. state	31
C.51	Location of 5 N.E. states and place on a blank map	32
C.52	Location of capitals of N.E. states & major cities of MA on map	33
C.56	Location of the equator, North & South Poles, the No/So hemisphere	34
C.56	and the East/West hemispheres and place them on a blank map	35
C.59	Become familiar w/maps of Boston, MA, & N.E.	36
C.13	Describe the election process for the Presidency	37
C.23	Significance of major events in MA/N.E. and US history	38
C.44	Recognize who is allowed to vote in local, state & nat'l elections	39
C.43	Identify some major elected & appointed officials of Bos., MA/NE	40

944 STATE LEVEL 4 ILCR5005 11/07/06  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL		
4160	61	47	69	41	53	38	94	86	22	72	69	30	30	36	50	72	97	86	38	58	52	38	27	83	16	50	16	13	36	61	63	44	71	69	55	33	58	61	66	52	52		
4170	37	56	37	62	68	25	75	93	25	50	75	37	31	43	12	37	25	**	25	81	31	25	12	62	18	43	37	6	37	68	62	50	87	68	62	25	43	75	18	54	47		
4175	37	23	55	51	62	29	81	81	40	81	74	70	33	55	25	66	51	83	29	92	48	25	11	85	25	22	66	7	18	37	62	14	92	77	62	18	44	44	44	37	51		
4220	93	73	60	80	53	66	93	86	73	86	80	80	65	46	51	61	35	87	41	62	30	35	17	70	22	35	37	9	33	64	56	54	87	67	58	8	64	32	48	40	48		
4221	39	56	39	26	43	21	69	73	21	30	47	43	0	39	17	43	26	69	30	34	21	26	4	13	8	17	17	17	13	34	26	34	56	65	26	8	39	60	13	26	33		
4570	77	71	94	91	77	61	97	94	75	97	94	88	69	44	41	80	60	91	94	77	44	58	75	80	77	27	30	36	61	77	61	75	80	80	72	61	61	72	11	69	70		
4571	35	35	27	51	48	46	80	80	33	58	75	64	35	46	51	61	35	87	41	62	30	35	17	70	22	35	37	9	33	64	56	54	87	67	58	8	64	32	48	40	48		
4010	85	55	87	70	88	85	97	97	55	73	85	88	73	79	55	94	64	97	97	79	73	61	61	94	64	70	88	85	73	79	67	82	97	79	79	76	88	91	88	79	79		
4240	56	46	68	72	70	65	89	87	67	74	87	55	44	53	58	63	46	89	62	75	60	56	46	81	60	62	65	46	62	74	62	77	87	74	65	51	70	65	53	67	65		
4241	21	30	34	52	43	52	69	82	26	47	60	60	39	17	26	65	43	73	56	56	43	47	17	52	8	34	56	13	21	56	56	56	91	91	52	21	34	47	52	34	46		
4310	40	14	33	40	48	25	55	74	11	48	59	55	11	11	14	51	40	62	25	48	40	11	37	59	18	18	29	7	25	62	48	62	81	66	37	18	44	18	51	81	39		
4311	21	78	31	42	83	36	69	47	15	94	73	63	73	63	42	36	20	89	73	84	73	26	26	57	42	26	10	15	15	42	52	42	84	73	42	52	42	78	42	51			
4370	14	70	43	37	66	33	92	91	14	96	81	66	29	77	74	33	44	77	85	77	70	66	44	77	25	18	88	3	18	66	51	62	85	88	37	22	59	40	77	44	55		
4371	93	21	96	87	81	84	**	90	65	78	96	81	65	84	81	71	40	87	71	87	59	56	43	81	71	75	90	75	84	68	68	65	90	68	78	71	87	90	77	44	55		
4430	96	96	84	88	80	80	**	92	92	92	84	96	69	88	61	92	73	**	92	92	73	73	80	92	73	65	69	80	57	84	92	88	**	96	84	88	84	84	**	84	85		
UISA	54	50	59	60	65	52	86	84	44	72	78	65	45	52	45	65	47	86	59	71	51	45	37	73	40	42	53	32	43	65	60	63	87	75	59	39	62	58	53	57	58		
4030	54	29	37	45	54	25	67	91	66	91	70	67	58	59	79	41	54	91	79	87	54	29	62	75	75	50	58	45	58	66	75	79	87	79	58	42	54	66	70	37	62		
4031	18	43	31	18	37	43	93	75	37	56	68	43	37	12	12	56	31	68	43	43	56	37	12	50	31	12	18	12	25	50	50	43	75	62	50	62	56	56	56	62	43		
4081	86	87	93	51	51	72	86	86	58	79	89	32	68	65	58	86	65	89	75	82	65	48	62	68	44	75	86	62	58	79	93	72	72	89	75	62	58	75	75	82	73		
4082	60	62	52	60	43	47	82	78	47	56	78	73	52	30	21	82	60	82	65	82	47	52	39	86	26	34	69	47	60	82	69	60	76	56	73	69	56	69	56	56	60		
4290	60	47	45	49	45	24	77	79	18	67	67	58	30	20	24	54	52	79	41	54	37	22	13	62	33	35	49	11	43	64	49	64	79	60	52	33	54	49	73	45	47		
4560	77	85	78	57	62	55	93	90	31	83	81	73	52	44	59	62	81	96	70	93	65	29	60	91	32	73	68	45	39	81	77	67	95	83	70	73	67	47	67	73	68		
4561	33	11	27	44	72	77	94	77	5	94	66	61	38	27	27	38	50	94	66	33	38	16	33	83	16	16	27	27	16	55	22	44	77	94	66	38	55	55	77	72	49		
4690	30	31	34	40	48	34	72	72	30	63	68	53	30	11	29	49	37	80	34	66	35	29	19	53	17	38	49	30	29	46	49	46	76	56	44	34	47	44	39	45	43		
4070	81	98	97	**	92	75	83	87	74	64	74	88	70	72	72	70	42	85	66	77	75	50	75	87	88	86	79	81	66	62	83	79	94	79	68	90	87	79	92	75	79		
4080	44	50	50	61	38	27	83	66	33	50	61	33	11	44	33	72	27	66	38	50	11	55	11	72	16	38	61	27	22	50	66	61	72	50	27	27	77	61	88	27	46		
4151	36	58	46	53	58	51	81	81	43	73	73	66	53	64	46	68	38	80	50	73	55	48	41	70	26	40	61	20	45	70	65	68	81	80	53	53	68	61	28	56	57		
4190	25	46	35	51	67	41	75	79	41	48	80	53	32	38	43	62	43	80	58	72	59	27	33	64	30	43	46	17	35	62	46	62	93	69	56	30	56	41	62	61	52		
4192	89	97	44	71	65	47	84	76	18	89	76	68	21	28	60	65	60	84	76	65	60	52	76	81	63	57	81	60	52	78	68	65	92	78	78	55	65	34	50	68	57		
4200	56	81	65	56	31	53	81	78	62	50	78	53	50	56	15	81	28	90	25	53	62	46	62	59	34	71	50	21	68	62	56	81	81	85	81	44	88	77	88	**	66	83	
4201	88	92	**	88	85	96	**	74	92	92	88	88	77	96	51	**	85	**	96	85	81	74	81	88	48	74	85	96	88	70	74	81	85	81	44	88	77	88	**	66	83		
4670	61	33	42	42	33	19	51	90	0	42	76	66	19	23	28	47	33	95	23	57	42	28	19	47	28	47	76	14	47	66	76	52	85	57	19	9	33	14	28	28	43		
UISB	55	61	54	56	57	48	82	80	41	68	75	64	43	42	43	63	48	85	55	70	53	38	43	70	37	52	60	38	46	65	63	64	84	71	56	52	60	55	60	58	58		
4051	50	43	54	35	37	47	62	64	35	43	68	45	35	35	35	43	45	66	70	60	31	18	41	54	25	39	50	43	29	60	52	47	64	58	35	29	52	62	37	45	45		
4130	60	66	52	54	75	54	88	81	33	77	90	71	54	52	32	84	60	88	79	84	81	49	67	83	54	86	81	67	69	71	75	79	94	87	81	62	73	73	71	69	76		
4131	**	**	**	95	**	**	**	**	**	**	95	**	95	**	96	90	**	85	**	**	**	**	95	95	**	**	90	90	**	85	85	**	95	95	**	**	**	95	**	**	95	95	96
4140	54	41	51	41	45	35	64	87	41	45	80	61	19	32	32	34	38	77	54	74	51	25	51	67	32	41	41	51	41	64	38	80	51	19	51	38	38	54	48	49			
4150	31	44	48	53	42	21	61	59	21	55	55	42	19	34	21	23	36	70	23	59	36	17	29	55	23	25	53	57	19	40	40	51	72	51	29	17	40	27	55	42	40		
4250	71	70	81	50	64	63	87	82	42	73	73	61	55	53	63	65	65	89	65	64	67	53	56	65	34	64	51	50	50	80	68	70	90	78	68	64	70	56	75	67	65		
4340	48	50	51	47	59	37	76	71	57	74	74	69	60	56	52	64	45	76	40	65	46	56	32	80	30	37	79	36	50	56	63	78	87	56	48	51	41	71	29	68	50	57	



944 SUL LIVL 4      TCR5J05      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PLS ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4100	71	53	72	67	77	50	85	81	42	86	89	73	59	43	39	59	56	91	63	78	57	57	37	63	34	68	65	36	62	73	71	68	87	79	75	45	66	55	67	79	64
4120	75	55	90	20	65	75	85	75	50	85	80	75	65	5	15	85	85	90	85	**	75	30	40	**	60	80	85	35	45	65	65	90	75	90	90	25	75	65	50	85	67
4121	18	36	54	18	36	18	45	72	36	81	63	45	36	18	0	45	9	54	27	63	0	9	9	54	18	0	81	27	27	45	45	63	90	54	54	27	63	63	54	36	40
4530	24	31	48	27	24	31	48	72	27	37	72	31	27	51	17	31	10	62	24	51	20	24	17	72	6	37	31	93	34	48	41	41	79	51	31	27	31	31	41	31	38
4531	54	63	72	63	63	54	**	81	36	54	90	54	27	27	27	54	18	**	81	90	18	54	9	90	36	36	81	18	36	72	72	72	90	**	90	36	54	27	90	81	59
4590	33	57	63	60	72	60	96	81	54	72	75	72	18	63	54	78	18	81	57	66	69	57	45	90	39	48	60	42	45	75	51	78	90	45	36	48	54	69	63	51	60
4592	**	75	**	62	75	87	**	75	37	**	87	50	37	25	50	50	37	**	25	**	37	37	12	87	37	62	50	12	37	62	**	87	**	75	50	37	75	87	87	50	64
4630	64	49	65	49	44	32	77	82	28	68	82	55	26	43	22	49	47	92	52	74	34	29	23	77	28	38	59	19	31	58	62	86	91	58	64	44	44	61	74	77	54
DISC	54	52	60	48	55	44	79	77	40	69	76	62	42	45	38	61	44	81	52	69	49	41	37	69	31	47	61	42	44	64	58	69	85	67	58	45	54	57	63	58	56
4260	57	34	68	68	42	82	80	65	65	91	80	60	34	82	34	74	37	85	60	71	77	20	34	77	54	57	31	51	62	62	62	68	85	60	74	42	40	31	65	25	59
4280	51	60	65	71	74	54	88	88	65	65	74	62	65	77	60	71	51	85	71	77	37	14	31	51	20	28	31	20	40	74	57	65	82	74	60	20	54	48	48	45	57
4283	52	48	50	55	55	41	78	77	38	67	75	65	51	35	25	61	50	80	51	55	35	37	41	55	32	47	44	35	32	58	60	62	87	72	61	40	42	57	55	57	53
4381	**	**	47	42	57	38	95	90	28	66	**	85	38	57	61	80	90	71	85	95	47	23	33	71	42	38	61	4	28	47	42	38	95	80	80	80	66	66	90	90	64
4640	38	30	46	47	30	21	73	59	17	61	65	56	30	11	24	39	30	70	49	62	42	23	28	61	29	35	35	24	25	48	32	69	83	60	37	28	42	37	39	44	42
4650	40	36	41	44	51	44	84	81	27	63	78	60	43	36	25	62	30	80	56	56	43	32	29	58	22	30	24	27	40	57	61	79	94	64	52	35	49	51	54	51	49
4062	93	74	77	77	80	67	87	83	70	80	83	77	64	61	58	80	51	90	77	80	77	48	38	80	61	74	90	48	61	83	80	64	90	74	74	64	67	74	80	74	73
4321	14	57	39	46	53	25	78	42	50	50	60	57	46	50	21	28	17	75	60	42	35	35	17	53	25	35	25	10	32	64	28	50	82	50	42	17	57	71	17	35	42
4322	60	51	51	46	70	13	77	68	25	68	89	77	55	50	46	74	50	74	62	77	32	32	13	75	34	22	34	22	22	37	34	79	89	68	53	27	51	53	41	65	32
4361	68	37	31	43	93	12	**	68	18	93	68	75	62	75	75	62	93	87	81	87	31	6	62	50	37	75	0	43	87	68	68	**	81	81	93	93	81	87	56	65	
4541	40	37	70	32	52	32	92	70	27	72	80	75	35	42	27	62	57	85	52	75	20	50	20	82	10	37	62	27	22	40	55	75	82	77	35	35	50	45	50	32	50
4543	44	60	76	73	68	47	86	86	42	81	84	78	60	63	21	71	39	81	73	50	42	63	42	81	39	36	86	26	26	68	60	50	89	68	68	31	63	63	50	52	60
DISD	50	47	54	52	56	38	82	73	36	69	77	66	46	45	34	62	43	79	60	63	44	33	29	66	32	38	44	27	34	57	51	64	87	67	55	37	51	52	52	51	53
4053	25	37	34	28	31	28	65	62	22	45	68	60	37	31	11	34	20	80	40	51	20	8	25	51	17	17	28	20	37	42	40	48	80	57	42	37	48	37	40	45	39
4061	63	76	43	67	65	56	91	86	50	97	82	78	52	54	71	91	50	84	32	60	69	47	63	89	65	50	84	50	60	84	67	76	84	89	60	39	82	56	78	76	69
4113	76	32	52	52	64	35	82	70	38	52	70	55	35	47	50	73	44	82	41	58	47	29	47	41	38	52	44	35	52	67	52	55	82	64	58	38	67	73	64	73	55
4210	50	9	61	63	34	22	97	70	56	81	93	70	36	70	47	65	43	75	70	77	54	54	24	95	34	40	90	29	38	63	61	93	93	79	70	34	50	40	59	52	59
4230	34	41	61	51	61	53	83	85	46	62	01	60	42	40	31	65	35	87	52	66	59	34	33	70	28	42	55	30	41	66	57	61	87	70	61	40	54	56	52	44	54
4271	26	30	50	54	56	47	93	76	43	76	73	54	58	41	58	82	52	84	50	67	67	45	54	91	39	34	34	39	41	67	58	52	97	86	71	67	95	43	82	41	59
4360	**	82	71	78	46	78	96	78	85	85	85	57	42	14	39	53	67	**	82	82	82	82	60	75	32	85	82	42	50	89	96	57	96	71	67	78	35	89	75	71	71
4410	82	75	73	85	87	78	89	84	36	67	85	85	59	75	57	64	59	92	85	68	87	70	45	80	80	33	50	28	50	85	70	71	**	84	64	43	70	78	61	61	71
4580	53	54	60	45	52	43	83	75	26	81	82	67	67	44	47	66	46	86	55	61	55	43	38	76	39	36	37	39	56	68	58	89	73	60	38	63	49	59	45	57	
4620	18	31	38	57	34	28	73	64	28	61	64	49	39	21	32	54	15	70	36	60	30	30	16	51	32	16	30	26	27	55	27	54	70	55	41	39	41	45	43	48	41
DISC	47	45	54	57	53	46	84	76	40	72	78	63	48	43	43	65	40	83	56	64	56	42	38	71	39	37	50	33	44	67	55	62	86	72	58	43	59	54	58	52	56
DISA	54	50	59	60	65	52	86	84	44	72	78	65	45	52	45	65	47	86	59	71	51	45	37	73	40	42	53	32	43	65	60	63	87	75	59	39	62	58	53	57	58
DISB	55	61	54	56	57	48	82	80	41	68	75	64	43	42	43	63	48	85	55	70	53	38	43	70	37	52	60	38	46	65	63	64	84	71	56	52	60	55	60	58	58
DISC	54	52	60	48	55	44	79	77	40	69	76	62	42	45	38	61	44	81	52	69	49	41	37	69	31	47	61	42	44	64	58	69	85	67	58	45	54	57	63	58	56
DISD	50	47	54	52	56	38	82	73	36	69	77	66	46	45	34	62	43	79	60	65	44	33	29	66	32	38	44	27	34	57	51	64	87	67	55	37	51	52	52	51	53
DISC	47	45	54	57	53	46	84	76	40	72	78	63	48	43	43	65	40	83	56	64	56	42	38	71	39	37	50	33	44	67	55	62	86	72	58	43	59	54	58	52	56
STUT	52	51	56	54	57	46	82	78	40	70	77	64	45	45	40	63	44	83	56	68	51	40	37	70	35	44	55	35	43	64	58	65	66	70	57	44	57	55	58	55	56

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SOCIAL STUDIES - LEVEL 5

1985 - 1986

C.3,42	Voyages of discovery & colonization; sequence of events in history	1
C.4	Nature of earliest European settlements in No. America	2
C.9,82,83	Balance of powers: state vs. fed. govt., 3 branches of govt.	3
C.41	Outline major issues facing our nation today, i.e., nuclear arms	4
C.13	Major annexations of add'l territory to US & changing map of growth	5
C.73	Identify concentrations of econ. activity in diff. parts of US	6
C.20,68,69	Plessy v. Ferguson; origins of prejudice and discrimination	7
C.37,45,46	Causes, major events & effects of civil rights movement	8
C.42	Sequence of major events in US history; place them on a timeline	9
C.47	Identify major regions of US; place ea. state in one of them	0
C.53	Place countries, continents, and bodies of water on a blank map	1
C.54	Label Equator, Artic Circle, latitude, No hemisphere on blank map	1
C.3	Describe European expansion into the New World	2
C.4,42,46	Contributions of important persons in US history/see #2&9	3
C.6,42,46	Trace origins of rebellion of Am. colonists/British rule/see #2&14	4
C.9,82	Balance of powers; state vs. govt. and 3 branches of government	5
C.17,84	Major features of Emancipation Proc. & effects & fed. elections	6
C.85	List qualifications of voting in national elections	7
C.11	Describe institution of slavery in US & Fugitive Slave Law	8
C.25	Describe destructive effect of settlers on Indians' way of life	9
C.22	Describe emergence of labor unions and conflict with management	0
C.27	Arms buildup before WWI, major events of war, US world&colonial pow	1
C.30	Describe major effects of Great Depression & Roosevelt's New Deal	2
C.31	Describe emergence of totalitarianism in Germany, Italy, Russia	2
C.33	Describe effects of Hitler's murder of 6 million Jews	3
C.37	Describe the causes, major events, and effects of the civil rights	4
C.37	movement of the 1960's	5
C.82	Power & functions of 3 branches of govt & how laws are made	6
C.85,87	Who was allowed to vote @ points in US history; qualifications	7
C.45	Overall contributions of diff. racial, ethnic, etc. groups in US	8
C.17	Major features of Emancipation Proclamation and its effects on US	9
C.10	Identify "unfinished business" of original US Constitution	0
C.9,82	Balance of powers; state vs. govt. and 3 branches of government	1
C.19	Describe abolition of slavery and the main events of the	2
C.19	Reconstruction era	3
C.85	List qualifications for voting in national elections	3
C.16,45	Evolution of more effective ways of moving people & goods/ See #29	4
C.79	Supply & demand; demand for or shortage of product affects price	5
C.34	Identify effects of development of atomic weapons on world affairs	6
C.41	Outline major issues facing our nation today, i.e.; national debt	7
		8
		9
		0
		1
		2
		3
		4

954 SOL LIVL 5                      TECRS005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCH#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4160	8d	84	84	48	**	92	52	d	92	84	72	**	96	44	92	80	92	72	80	52	88	**	76	60	72	64	88	60	56	88	44	48	44	60	60	40	92	4	**	**	70
4170	70	41	41	29	94	70	23	35	0	47	70	82	58	23	11	58	47	47	35	0	41	64	11	23	41	29	11	64	52	23	23	35	23	35	47	29	41	17	64	35	40
4173	85	45	85	30	95	95	30	20	60	70	75	85	80	40	50	55	90	50	40	50	45	80	40	20	50	50	45	55	40	35	15	40	45	35	80	45	20	5	45	55	51
4220	81	62	37	25	**	93	12	6	50	75	68	87	81	12	68	50	75	68	25	12	62	68	12	50	18	56	56	68	62	12	56	37	37	31	37	12	81	50	56	50	50
4221	85	52	76	61	95	95	19	19	28	47	61	80	66	42	38	33	80	14	19	28	52	80	33	28	47	38	33	57	42	9	38	28	28	47	42	47	14	0	52	52	45
4570	61	71	58	48	**	87	28	23	30	66	82	92	89	43	76	58	53	64	53	41	79	79	43	38	53	30	51	51	48	17	51	30	53	48	48	38	23	23	66	64	54
4571	85	66	68	60	95	93	16	27	58	79	93	93	75	25	70	60	77	72	45	52	85	89	45	54	62	58	68	81	58	47	56	47	52	64	58	62	68	43	85	87	64
4010	42	38	23	3	92	84	11	19	7	46	69	88	38	19	76	46	57	38	34	30	61	80	11	23	34	26	23	42	26	19	30	42	23	65	42	50	26	15	42	46	40
4240	46	52	65	52	91	78	26	54	46	64	68	73	64	56	69	61	65	49	20	36	60	84	49	41	38	49	46	56	47	38	52	52	47	43	36	53	20	27	65	52	52
4241	87	75	**	62	**	**	62	50	62	50	75	**	75	0	**	12	50	62	62	50	75	75	62	12	25	37	37	62	37	50	37	25	50	62	50	37	75	0	**	75	58
4270	**	84	78	0	**	94	21	89	**	94	84	94	73	0	73	94	**	89	78	94	68	**	94	78	89	89	89	89	73	89	**	68	78	68	57	78	89	10	94	**	78
4310	**	86	53	80	**	86	66	66	66	60	86	93	66	73	80	46	80	66	60	73	73	86	46	86	73	**	86	86	73	66	80	60	53	53	73	73	66	66	86	80	74
4311	95	47	52	85	**	80	57	71	42	47	57	95	76	19	80	61	85	76	71	28	71	80	66	47	71	61	42	85	57	66	57	47	38	47	42	23	80	66	80	80	64
4370	81	87	93	81	**	93	18	75	75	47	87	93	87	62	62	87	81	81	75	75	68	87	75	28	75	93	81	81	62	81	81	68	87	25	75	75	81	75	93	77	
4371	95	91	73	91	**	91	13	82	82	82	**	95	95	17	**	78	95	**	73	13	86	**	60	56	86	78	56	78	65	39	86	56	78	73	47	13	73	60	**	95	74
4430	**	**	91	91	91	75	83	66	91	75	83	91	91	66	91	75	91	83	83	83	83	91	75	83	75	83	50	66	66	75	91	58	75	75	75	58	75	50	91	91	80
01SA	75	64	65	51	96	87	29	42	52	67	77	88	74	36	71	61	74	62	48	42	69	85	48	47	55	55	53	66	53	43	54	47	49	53	49	47	50	31	73	70	59
4030	**	86	73	86	**	**	86	86	80	86	93	**	93	**	60	86	80	86	86	93	86	**	53	73	86	86	**	93	93	80	60	40	86	66	**	13	**	53	**	86	83
4031	92	84	69	92	**	92	0	84	92	84	69	**	76	0	**	53	92	84	76	92	92	**	92	53	61	61	69	**	76	0	69	69	84	92	46	7	69	7	84	76	71
4081	**	**	**	**	**	**	8	92	**	**	92	**	**	96	**	**	92	96	**	96	**	**	**	88	96	96	**	96	**	**	**	64	**	**	40	52	28	32	**	**	89
4082	**	**	**	**	**	**	93	93	37	50	62	87	56	**	87	31	**	25	**	93	**	68	**	18	75	**	50	62	50	87	37	**	50	93	93	93	81	25	62	43	75
4290	82	62	53	37	93	81	17	37	44	44	62	89	48	34	70	55	56	58	37	22	68	84	32	68	34	50	41	60	46	18	46	51	53	39	36	62	46	22	79	36	51
4560	88	91	66	51	97	88	13	31	53	57	86	95	75	33	55	60	80	42	51	31	62	80	28	57	66	71	71	71	80	57	40	48	51	57	44	68	48	91	71	61	
4561	65	70	50	25	**	75	20	55	50	55	75	85	70	5	50	55	70	35	35	0	55	75	45	40	45	50	40	65	50	15	40	25	30	35	35	25	25	10	80	65	41
4630	77	54	28	17	90	77	17	17	22	31	58	71	59	10	18	25	32	31	36	22	36	63	24	10	32	36	8	37	33	16	31	18	21	21	36	35	16	24	39	43	34
4070	66	51	60	63	**	75	18	42	42	69	57	81	57	11	63	54	78	54	48	45	72	69	33	33	51	39	45	66	57	36	57	36	39	60	45	51	63	42	51	78	54
4080	80	71	80	71	76	71	28	66	80	80	66	71	71	14	66	71	71	57	23	33	57	76	23	28	76	47	19	76	47	38	61	38	57	38	66	47	57	28	61	71	56
4151	84	69	62	56	98	84	34	55	54	63	69	97	81	23	66	77	66	56	50	44	80	77	52	40	65	63	73	83	43	36	63	50	45	47	62	55	38	30	79	72	61
4190	72	46	59	79	94	90	62	72	31	61	7	85	42	72	40	68	74	59	55	72	83	79	53	44	74	42	46	57	59	51	57	42	62	61	62	46	62	40	74	59	62
4192	88	40	32	72	88	68	32	24	48	24	20	92	88	20	20	24	52	72	28	16	68	80	44	40	40	36	8	52	36	4	56	28	28	32	32	44	24	8	64	36	42
4200	93	93	**	93	**	**	87	87	81	81	**	**	**	68	93	**	93	93	81	68	93	93	87	81	81	87	**	87	62	81	93	68	75	75	87	93	62	**	93	87	
4201	68	88	64	76	96	96	88	72	52	**	68	76	80	84	80	40	48	60	52	20	60	52	56	44	60	64	40	80	36	92	40	52	68	40	56	64	52	44	72	68	63
4670	84	73	68	57	**	89	10	84	10	31	47	94	68	0	78	89	84	84	31	26	73	84	47	57	31	57	78	63	26	10	63	57	63	57	78	78	89	94	**	**	63
01SB	81	68	60	58	95	85	33	53	48	58	67	87	68	38	58	59	67	56	50	42	70	77	47	45	57	56	50	67	52	40	53	44	51	50	53	50	49	34	73	63	58
4051	96	53	78	64	**	64	53	57	53	71	57	64	32	53	14	57	64	17	50	60	67	89	82	7	71	85	89	78	46	28	78	60	42	35	39	32	67	17	78	50	57
4130	85	79	44	58	97	85	26	29	35	35	73	85	67	47	67	67	67	44	50	14	44	76	32	14	32	47	38	47	35	8	47	29	41	38	61	35	8	11	64	55	48
4131	50	79	37	20	95	83	16	41	20	45	45	95	54	20	25	20	58	37	20	33	75	75	16	29	37	41	29	20	33	16	37	25	12	37	50	33	25	12	70	33	40
4140	44	25	40	18	96	70	7	14	3	33	29	77	70	11	11	25	40	22	2	7	44	51	40	29	44	37	22	44	11	14	22	22	33	48	40	33	22	40	29	33	33
4150	65	63	63	60	94	84	52	60	65	50	55	81	60	39	36	57	65	63	31	18	57	76	52	65	63	39	55	65	60	34	31	39	52	31	34	26	31	68	47	54	
4250	88	88	92	82	98	94	70	86	82	64	90	86	94	78	68	90	92	86	56	62	84	90	54	33	64	56	49	62	54	35	60	43	56	25	49	47	41	60	78	72	69
4340	59	52	36	12	95	76	7	29	8	38	45	77	59	5	19	36	47	32	18	28	63	77	22</																		

954 SOC LEVEL 5 TFCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	TOTAL
4052	73	66	93	60	93	93	20	73	86	80	66	**	86	66	93	66	93	73	46	20	80	86	60	20	40	46	40	46	66	53	80	73	13	40	46	33	60	40	80	86	64
4100	90	79	86	77	98	93	18	61	77	67	77	91	76	39	76	65	80	71	51	44	75	92	60	35	66	56	40	65	50	58	40	66	50	61	45	41	33	33	76	60	63
4120	95	57	95	76	**	90	33	28	90	57	52	95	66	0	57	23	95	57	76	47	76	80	19	19	57	85	42	90	85	66	90	38	38	57	47	76	19	0	76	57	60
4121	**	72	36	27	**	72	18	0	18	7	81	**	54	9	90	27	**	54	9	18	27	90	9	45	36	27	63	54	36	18	54	54	9	27	45	63	27	36	81	45	47
4530	66	57	47	38	**	85	14	23	47	85	85	85	66	28	28	76	57	23	52	71	80	42	33	47	33	57	52	47	14	61	23	57	47	66	42	28	23	66	57	52	
4531	88	58	58	58	94	64	17	52	41	64	76	76	70	17	52	64	70	64	52	5	64	64	23	23	35	29	11	64	17	23	52	35	17	29	47	11	35	52	64	35	47
4590	78	58	82	75	**	95	46	75	90	87	78	85	80	21	75	63	80	60	29	41	75	82	80	51	85	56	60	56	24	51	58	43	58	46	41	34	46	29	70	70	63
4592	**	**	**	**	**	**	**	**	**	**	**	**	**	75	50	50	**	**	0	50	50	25	**	**	25	50	0	25	75	50	75	25	50	**	75	**	0	75	50	75	67
4630	93	84	89	80	95	87	87	78	77	74	84	81	80	43	71	77	84	83	60	51	59	63	63	40	56	65	53	65	69	53	62	51	63	51	53	57	60	56	77	66	68
DISC	80	66	63	54	97	85	30	46	50	59	70	86	70	31	49	57	70	56	40	30	66	80	46	33	55	48	41	60	42	34	51	42	43	45	46	38	34	29	65	57	54
4260	89	75	89	75	**	96	65	51	72	62	79	72	82	27	72	75	79	65	51	65	89	82	44	48	58	55	48	68	34	34	48	55	41	58	55	62	34	20	55	79	64
4280	84	88	96	56	**	96	**	**	**	96	84	**	88	84	**	80	61	88	76	24	96	96	92	92	92	72	52	68	80	96	64	28	48	64	40	88	92	52	96	44	78
4283	76	49	41	58	96	90	56	49	35	54	70	90	62	49	52	68	58	25	56	66	70	27	45	52	35	33	62	43	39	64	45	43	37	64	50	68	50	78	76	56	
4381	80	20	20	60	**	80	13	20	20	26	53	86	66	13	53	60	46	26	20	6	33	73	26	13	6	26	26	73	20	6	40	66	26	33	26	60	33	26	40	53	39
4640	55	40	47	46	98	85	16	16	19	60	64	78	55	22	22	52	50	50	27	38	64	76	33	17	51	35	25	59	29	55	33	29	42	38	36	45	23	19	52	41	44
4650	58	56	55	46	93	79	37	32	30	62	62	86	74	43	44	53	66	51	43	60	67	80	45	44	62	55	48	60	55	46	53	58	51	61	59	52	50	37	75	77	56
4062	82	76	94	91	**	94	79	79	91	85	97	**	88	52	94	91	97	**	94	88	91	91	79	70	79	82	70	79	76	79	**	91	79	62	82	91	**	91	**	88	87
4321	90	50	50	27	95	86	4	22	40	50	72	81	72	22	27	63	40	40	36	27	40	90	45	40	72	54	13	77	27	68	27	31	31	54	36	36	13	9	54	63	47
4322	68	62	50	25	89	75	18	14	27	54	64	75	64	20	27	31	62	58	27	22	54	75	41	35	52	35	20	41	35	31	54	39	37	25	41	31	16	33	60	45	43
4361	82	88	64	17	**	76	5	70	52	35	58	70	70	41	76	52	52	41	52	58	58	70	52	47	58	17	5	52	58	52	70	52	41	47	47	41	70	5	82	64	54
4541	69	21	26	30	95	78	30	56	34	30	60	86	69	21	26	47	69	43	39	8	65	86	8	30	39	56	39	56	43	26	43	39	43	39	43	39	13	26	69	52	45
4543	68	72	40	36	**	70	16	8	44	56	76	72	48	16	84	28	56	24	20	8	56	64	24	28	40	32	28	44	40	16	36	32	36	8	48	16	24	8	60	64	41
DISD	70	56	55	48	96	84	37	38	41	59	69	84	68	35	44	56	65	55	40	39	67	79	42	40	57	46	35	60	45	47	52	46	45	46	50	50	44	33	69	62	54
4053	68	27	20	34	93	79	27	20	3	37	75	89	58	13	6	34	55	37	27	27	62	55	51	20	34	20	27	48	34	0	34	48	17	13	27	31	24	31	48	37	37
4061	86	72	48	44	**	88	20	23	34	72	74	90	83	23	69	60	76	34	44	18	53	86	39	44	60	48	37	69	44	46	29	51	62	46	62	39	53	32	81	67	55
4113	**	**	**	90	**	**	42	23	23	47	42	95	71	14	28	38	71	47	23	28	66	80	42	76	42	61	71	52	23	33	42	38	38	61	38	42	66	38	76	80	56
4210	72	45	55	30	**	92	22	20	20	62	92	95	87	7	80	50	80	55	27	40	42	90	40	12	57	55	42	50	35	15	37	27	45	40	37	30	47	17	82	32	49
4230	55	55	38	41	95	87	14	18	28	52	71	85	65	22	42	46	52	47	30	14	55	81	38	33	47	43	45	62	52	15	45	48	33	43	42	46	19	24	60	60	46
4271	80	65	85	82	97	97	42	28	40	77	85	97	94	48	62	65	82	80	48	34	77	94	54	45	91	34	80	68	57	31	57	51	54	40	54	57	51	20	88	60	64
4360	77	67	72	75	97	94	2	63	69	83	63	88	83	13	75	30	83	75	30	5	68	80	77	38	77	44	19	55	50	41	52	47	52	50	38	38	66	30	72	55	57
4410	65	59	57	54	95	85	35	68	82	59	79	93	75	26	29	67	76	57	40	50	67	75	59	62	65	68	62	64	37	28	28	35	51	59	56	34	48	20	76	54	57
4580	82	51	49	43	89	82	27	38	38	57	74	83	80	29	76	50	64	56	44	28	63	75	49	48	62	62	52	64	55	52	49	40	42	50	45	47	49	35	66	65	55
4620	50	46	42	77	96	75	24	25	32	45	59	69	50	18	33	54	51	36	24	20	51	66	44	25	36	20	28	54	28	23	35	49	43	37	42	30	23	19	66	47	41
DISC	68	55	51	46	95	85	24	32	38	57	72	85	71	22	50	51	64	50	34	25	59	77	47	38	55	45	45	60	43	23	42	44	43	44	45	40	39	26	69	56	50
DISA	75	64	65	51	96	87	29	42	52	67	77	88	74	36	71	61	74	62	48	42	69	85	48	47	55	55	53	66	53	43	54	47	49	53	49	47	50	31	73	70	59
DISB	81	68	60	58	95	85	33	53	48	58	67	87	68	38	58	59	67	56	50	42	70	77	47	45	57	56	50	67	52	40	53	44	51	50	53	50	49	34	73	63	58
DISC	80	66	63	54	97	85	30	46	50	59	70	86	70	31	49	57	70	56	40	30	66	80	46	33	55	48	41	60	42	34	51	42	43	45	46	38	34	29	65	57	54
DISD	70	56	55	48	96	84	37	38	41	59	69	84	68	35	49	56	65	55	40	39	67	79	42	40	57	46	5	60	45	47	52	46	45	46	50	50	44	33	69	62	54
DISC	68	55	51	46	95	85	24	32	38	57	72	85	71	22	50	51	64	50	34	25	59	77	47	38	55	45	45	60	43	28	42	44	47	44	45	40	39	26	69	56	50
STOT	75	62	59	52	96	85	30	42	46	60	71	86	70	32	54	56	68	55	42	35	66	79	46	40	56	50	44	62	46	37	50	44	46	47	48	44	42	30	69	61	55

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

SOCIAL STUDIES - LEVEL 6

1985 - 1986

C.36	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle, North and South Poles, latitude and longitude lines, No/So/E/W hemispheres on a blank map	1
C.36		2
C.4	Describe way in which humans obtained food prior to agriculture	3
C.9	Identify modern countries located on sites of ancient civilizations	4
C.3	How archeologists pieced together story of early human evolution	5
C.8	Acquire basic knowledge of location and narrative history of ancient civilizations, including role of outstanding individuals and groups	6
C.8		7
C.14, 15, 27	Summarize importance of major events; describe major features of Middle Ages; distinguish between different economic systems	8
C.14	Summarize importance of major events, i.e., discovery of fire	9
C.13	Give major contributions of at least 10 historical figures	0 1
C.14, 15	Summarize importance of major events, describe major features of Middle Ages	1 1
C.15	Describe major features of Middle Ages in diff. parts of E. hemis.	2 1
C.16	Describe major features of the Renaissance in Europe	3 1
C.14	Summarize importance of major events, i.e., invention of writing	4 1
C.8	Acquire basic knowledge of location & narrative hist. of anc. civ.	5 1
C.13	Give major contributions of at least 10 historical figures	6 1
C.14, 18	Summarize major events; Identify holidays, customs of E. hem. cult.	7 1
C.8	Basic knowledge of location & narrative history of anc. civiliz.	8 1
C.14, 15	Summarize major events; major features of Middle Ages	9 1
C.27	Distinguish between different economic systems	0 2
C.13	Give major contributions of at least 10 historical figures	1 2
C.39	Locate other major physical features of the Eastern Hemisphere for example: Sahara Desert, Himalaya Mountains, Alps	2 2
C.39		3 2
C.40	Locate major countries of the Eastern Hemisphere	4 2
C.37	Place the 7 continents and 4 major oceans on a blank map	5 2
C.42	Identify some major natural resources of regions each continent	6 2
C.42		7 2
C.42		8 2
C.42		9 2
C.36, 37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	0 3

C.36,37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	1	3
C.36	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle, North & South Poles, latitude and longitude lines, N/S/W/E Hemispheres on a blank map	2	3
C.36		3	3
C.36		4	3
C.8,14	Acquire basic knowledge of location & narrative history of ancient civilizations; Summarize importance of major events	5	3
C.8,14		6	3
C.13	Give major contributions of at least 10 historical figures	7	3
C.14	Summarize importance of major events, i.e., Code of Hammurabi	8	3
C.13	Give major contributions of at least 10 historical figures	9	3
C.13		0	4
C.8	Acquire basic knowledge of location & narrative history of ancient civilizations, include role of outstanding individuals	1	4
C.8		2	4
C.19	Identify instances of prejudice & discrimination in ancient world	3	4
C.30	Development of systems of money from simple barter to exchange	4	4
C.8	Basic knowledge of location & narrative history of anc. civiliz.	5	4
C.8,14	Knowledge of location & narrative hist. of ancient civiliz., Summarize importance of major events, Identify some customs, holidays, festivals, etc. of Eastern Hemisphere cultures,	6	4
C.8,14		7	4
C.8,14		8	4
C.8,14		9	4
C.37	Place the seven continents & four major oceans on a blank map	9	4
C.39	Locate other major physical features of the Eastern Hemisphere	0	5

964 SUC LEVEL 6 TCCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
2130	86	62	29	24	55	56	60	43	35	37	56	51	45	42	55	49	33	64	41	32	70	89	88	60	84	83	28	50	50	83	72	34	52	44	92	55	58	55	12	53
2170	94	86	20	61	70	81	61	82	70	74	54	63	65	50	61	55	20	54	65	42	75	96	85	49	91	88	37	45	60	63	77	55	75	30	90	68	86	77	12	68
4570	80	77	27	67	51	70	54	74	74	93	35	32	48	22	25	51	32	29	41	29	25	74	64	77	77	80	25	64	41	29	58	48	48	25	77	54	54	38	25	38
2060	94	57	63	63	73	89	57	57	73	36	73	52	42	36	89	68	52	52	47	52	52	94	84	52	**	94	57	84	84	57	73	31	68	68	73	47	63	73	42	84
2070	87	68	41	32	81	72	64	61	69	74	39	65	72	19	63	56	29	80	45	51	82	87	80	50	89	85	24	61	44	56	81	54	53	38	87	67	68	63	13	67
2240	94	75	5	25	48	53	50	29	17	32	26	48	35	15	42	41	23	71	24	12	55	78	67	58	73	74	19	39	50	52	58	35	42	33	76	57	35	43	8	58
DISA	89	72	27	39	65	68	59	57	53	58	46	56	55	32	56	52	28	65	45	37	68	88	80	55	85	83	28	52	51	62	73	45	56	37	86	61	63	60	14	61
2110	90	73	54	43	73	75	73	50	43	39	37	45	43	30	47	56	39	47	26	32	50	83	73	35	73	84	18	60	77	50	56	41	56	39	90	45	41	33	15	75
2120	98	61	72	73	79	79	52	67	52	73	47	66	52	51	70	67	27	70	36	38	69	91	75	48	83	91	29	60	70	47	70	36	61	36	94	61	72	35	16	64
2140	95	57	33	60	82	84	70	60	44	41	44	73	48	44	71	60	34	68	36	30	67	92	89	50	85	83	31	50	58	66	79	40	57	51	91	59	47	60	7	61
2200	96	71	25	43	78	59	40	43	40	43	33	67	23	18	54	50	28	40	29	33	58	83	69	40	77	77	38	44	43	50	61	38	42	31	77	50	38	41	14	54
2950	92	74	49	63	86	83	64	52	64	71	47	55	43	35	54	54	27	53	36	37	71	90	84	50	87	83	39	63	56	70	68	51	66	61	88	57	56	64	19	72
DISB	94	67	43	57	81	77	60	54	51	55	42	63	41	35	61	56	30	56	34	34	65	89	80	46	83	83	34	55	57	60	68	43	57	47	87	55	50	52	14	65
2330	89	80	46	51	61	64	57	41	46	50	53	54	22	10	52	50	30	76	31	23	56	87	81	42	81	86	19	52	55	57	68	37	61	38	90	59	43	62	16	55
2080	88	51	20	24	66	76	50	77	21	23	47	55	33	25	49	34	17	29	44	21	68	93	77	40	88	88	35	62	59	46	59	35	60	34	86	57	32	37	14	55
2180	94	78	47	61	78	78	71	78	45	64	56	60	53	38	56	51	41	53	33	17	49	87	76	48	78	76	25	66	74	51	54	40	46	48	87	61	49	48	17	50
2090	90	56	31	55	64	76	68	56	40	43	44	52	33	30	52	54	39	52	38	38	66	90	63	52	83	79	39	44	61	53	74	52	50	29	89	56	61	59	13	65
2190	87	70	22	39	70	69	51	65	52	55	34	52	37	28	56	54	21	64	44	30	54	89	72	46	89	77	21	5	57	57	67	41	54	37	92	59	41	41	15	44
2260	80	59	19	32	51	40	45	32	22	22	41	35	11	4	41	33	41	48	20	20	37	77	64	35	85	70	19	43	51	58	54	24	59	33	79	51	16	29	17	33
DISC	89	70	34	45	66	69	58	58	41	47	47	53	32	22	52	48	30	59	36	25	56	88	77	44	83	81	26	53	59	54	64	39	55	37	88	58	42	49	16	51
2010	96	71	15	57	72	76	73	78	84	54	51	47	74	38	54	59	35	62	50	28	53	91	78	43	85	85	25	55	65	63	68	43	65	37	89	55	56	57	15	73
2040	85	79	23	51	67	79	69	66	74	57	26	49	61	36	68	45	30	57	53	42	57	88	73	45	79	93	26	43	49	59	65	43	57	45	89	56	68	39	6	53
2050	89	68	23	54	67	69	47	46	31	30	32	42	48	20	52	50	23	44	32	30	47	84	65	37	80	79	23	61	61	55	66	38	53	38	89	49	50	42	15	62
DISD	90	72	21	54	68	74	62	62	60	46	35	46	60	30	57	51	29	53	44	33	52	87	72	41	81	85	24	53	58	58	66	41	58	40	89	53	57	45	12	63
2100	85	59	30	32	71	73	53	37	29	29	55	60	25	25	54	36	21	41	22	25	72	86	63	46	77	88	35	59	83	56	70	42	52	37	84	53	42	41	11	62
2270	96	87	71	75	84	85	68	53	76	76	54	63	41	31	23	76	26	74	27	52	55	31	80	43	89	89	54	72	75	56	61	71	70	42	93	5	44	35	11	83
2980	93	91	64	61	85	90	75	84	73	54	71	70	70	40	77	61	41	78	70	42	79	95	88	61	95	92	61	76	73	77	83	59	70	61	93	79	88	67	20	89
4360	92	92	80	95	89	97	72	84	86	96	70	60	80	61	76	64	10	66	55	55	90	89	86	58	90	86	30	70	66	67	72	76	41	41	95	69	86	78	9	87
DISF	91	82	60	64	82	85	67	63	65	61	65	64	52	37	55	60	27	65	43	43	72	90	79	52	88	89	47	69	75	64	72	61	60	46	91	64	63	53	13	80
DISA	89	72	27	39	65	68	59	57	53	58	46	56	55	32	56	52	28	65	45	37	68	88	80	55	85	83	28	52	51	62	73	45	56	37	86	61	63	60	14	61
DISB	94	67	43	57	81	77	60	54	51	55	42	63	41	35	61	56	30	56	34	34	65	89	80	46	83	83	34	55	57	60	68	43	57	47	87	55	50	52	14	65
DISC	89	70	34	45	66	69	58	58	41	47	47	53	32	22	52	48	30	59	36	25	56	88	77	44	83	81	26	53	59	54	64	39	55	37	88	58	42	49	16	51
DISD	90	72	21	54	68	74	62	62	60	46	35	46	60	30	57	51	29	53	44	33	52	87	72	41	81	85	24	53	58	58	66	41	58	40	89	53	57	45	12	63
DISF	91	82	60	64	82	85	67	63	65	61	65	64	52	37	55	60	27	65	43	43	72	90	79	52	88	89	47	69	75	64	72	61	60	46	91	64	63	53	13	80
STUF	91	72	36	51	72	73	60	58	52	52	46	56	45	30	56	53	29	59	39	33	62	88	78	47	84	83	31	55	59	59	68	44	57	41	88	58	53	52	14	62

964 SMC LVL 6                   TECR5005                   11/07/06  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT OF A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	TOTAL
2130	50	55	41	42	57	61	95	80	52	56	
2170	91	74	41	40	61	92	63	95	80	46	65
4570	64	41	25	45	77	74	51	83	61	32	52
2060	78	68	73	52	68	89	68	89	63	68	66
2070	78	70	36	48	84	91	53	93	83	40	62
2240	43	39	21	17	43	71	34	74	41	50	44
DISA	68	61	37	40	65	86	55	90	73	46	58
2110	62	45	22	32	49	86	49	92	58	33	53
2120	79	51	26	23	27	89	60	91	75	29	60
2140	89	60	34	43	56	92	68	93	68	41	60
2200	57	38	27	26	30	79	50	85	67	41	49
2950	77	64	30	53	71	88	54	91	62	53	62
DISB	75	54	29	39	51	87	57	90	66	43	57
2030	61	41	24	33	61	80	54	92	77	49	54
2080	64	65	32	50	44	88	61	73	65	38	52
2180	61	64	20	23	58	86	56	92	82	39	57
2090	60	58	37	23	62	87	47	86	65	41	56
2190	66	47	28	34	34	87	57	92	70	42	53
2260	50	50	30	19	24	74	37	88	64	40	42
DISC	61	52	27	32	50	86	54	91	72	43	53
2010	81	53	28	36	67	87	55	94	78	52	60
2040	66	64	29	22	19	84	64	90	67	39	50
2050	54	61	23	36	52	82	56	89	69	32	51
DISD	66	59	26	32	46	84	58	91	71	40	55
2100	44	55	35	23	75	83	46	85	61	30	51
2270	73	64	41	72	54	85	43	92	84	25	63
2980	85	78	43	50	76	94	78	96	89	60	73
4360	90	83	67	49	83	95	56	**	87	55	72
DISE	72	69	45	49	71	89	56	92	80	41	64
DISA	68	61	37	40	65	86	55	90	73	46	58
DISB	75	54	29	39	51	87	57	90	66	43	57
DISC	61	52	27	32	50	86	54	91	72	43	53
DISD	66	59	26	32	46	84	58	91	71	40	55
DISF	72	69	45	49	71	89	56	92	80	41	64
STOT	68	57	32	37	55	86	56	91	72	43	57



BOSTON PUBLIC SCHOOLS  
 DEPARTMENT OF EDUCATIONAL TESTING  
 CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 7  
 1985 - 1986

C.2,14	Basic knowledge of Pre-Columbian civiliz. in West Hemisphere	1
	Significance of major events & persons in Latin Am. & Canada hist.	2
C.1-3,14,22	See #1 for C.2,14; Pre-Colum. soc. level tech.; patterns of migration of humans into & thru W. hemis.; major natural resourc.	3
C.5,6	Negative cultural attitudes of European explorers & settlers toward Pre-Columbian people & destruction of their civilizations	4
C.4,11,14	Describe major voyages of discovery & exploration by Europeans; Knowledge of major events in Latin Am. hist. in post-Columbian era; Signify major events & persons in Latin Am. & Canada hist.	5
C.4,11,14		6
C.4,11,14		7
C.4,9,11,14	See Questions # 4-6 for C.4,11,14; Knowledge of major events in Canadian hist., difference between French & non-French speaking	8
C.9	Knowledge of major events in Canadian history	9
C.6-8,11,14	See Ques. #4-6 for C.11,14 & #3 for C.6; Examples of resistance to Europeans by Pre-Colum. people; effect of Europeans on cult.	0
C.8,11,17	See Ques. #9 for C.8,11; Identify major racial, ethnic, & relig. groups of Canada & Latin America, emphasize pluralism	1
C.11,17	Knowledge of major events in Latin Am. hist. in post-Columb. era, major racial, ethnic, & relig. groups of Canada & Latin America	1
C.11,17		2
C.8,11,17	See Ques. #10 for C.8,11,17; Describe ways in which diff. groups in W. Hemisphere have influenced ea. other thru war, trade, etc.	3
C.17	Identify major racial, ethnic, & relig. groups of Can. & Lat. Am.	4
C.17,20	See Ques. # 14 for C.17, See Ques. # 13 for C.20	5
C.17,19	See Ques. # 14 for C.17, Prejudice & discrimination against groups in Canada & Latin America	6
C.16	Influences of Latin Am. culture on US based on trade, migration	7
C.9,17	See Ques. # 14 for C.17, Knowledge of major events in Can. hist. Differentiate between French-speaking & non-French speaking Canadians	8
C.9,17		9
C.18,20	Customs, holidays & festivals of Can. & Lat. Am., Ways different groups in W. Hemisp. have influenced ea. other thru war, trade	0
C.11,14	Acquire basic knowledge of major events in Latin Am. history in post-Columbian era; Significance of selection of major events & persons in Latin Am. and Canadian history	1
C.11,14		2
C.11,13,14	See Questions # 21&22 for C.11,14; Sequence of major events and able to make a timeline	3
C.11,14	See Questions # 21 - 22 for C.11,14	4
C.11,14		5
C.9,10	Knowledge of major events in Can. hist., Est. of Commonwealth of Nations & the new Commonwealth nations	6
C.11,13	Knowledge of major events in Lat. Am. hist., Sequence of major events & able to make a timeline	7
C.9	Knowledge of major events in Canadian history	8
C.9,14	See Question #28 for C.9; Significance of major events & persons in Latin Am. and Canadian history	9
C.9	See Question # 28 for C.9	0
		3

C.9,14	Knowledge of major events & persons in Lat. Am & Canada history	1	3
C.9	Knowledge of major events in Can. hist. diff. between Canadians	2	3
C.16	Influences of Latin Am. culture on US based on trade, migration	3	3
C.28	Describe way in which competition drives prices down and scarcity increases prices of items for which there is demand	4	3
C.28,29	See question # 34 for C.28, Define inflation, & give examples of countries in W. Hemisphere that have experienced it in recent yrs.	5	3
C.29	See Question #35 for C.29	6	3
C.29	See Question #35 for C.29	7	3
C.12,30	Establishment of Am. colonial possessions, Econs. of W. Hemisphere	8	3
C.24	Identify diff. stages of economic development in Western Hemisphere	9	3
C.34	Explore effect of political systems in the Western Hemisphere on each other (e.g., Cuba's "exporting" of socialism)	0	4
C.34	Explore effect of political systems in the Western Hemisphere on each other (e.g., Cuba's "exporting" of socialism)	1	4
C.14,18	Significance of major events & persons and identify customs, holidays, & festivals of Latin Am. and Canada	2	4
C.34	See Question #40 and 41 for C.34	3	4
C.35	Compare practices of diff. govts. in West. Hemisp. on civil rights	4	4
C.32	Identify reasons for migration of thousands of people from Latin America to the US every year	5	4
C.32	Identify reasons for migration of thousands of people from Latin America to the US every year	6	4
C.36	Place major geographic features on a blank map of West. hemisphere, that has political boundaries & locate major rivers & mountains	7	4
C.36,37	See Question #47 for C.36, Place some major countries & cities on a blank map of West. Hemisphere w/political boundaries	8	4
C.37	See Question #48 for C.37	9	4
C.11,14	Knowledge of major events & persons in Lat. Am. and Can. history	0	5



974 SJC LEVL 7 TECK5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
2130	50	35	49	46	77	10	41	41	64	51	65	78	66	75	80	47	49	67	30	42	48	38	42	80	49	52	53	37	24	53	71	56	66	62	44	73	35	32	47	42
2170	37	39	52	50	54	10	31	30	54	50	60	63	62	34	82	36	49	75	34	25	50	41	63	59	32	47	54	47	34	42	50	75	69	71	51	66	20	41	31	26
4570	41	50	50	29	16	8	16	33	54	45	62	83	66	29	75	37	66	45	20	37	50	37	58	62	20	50	25	33	29	45	58	54	58	62	37	45	25	58	25	37
2060	74	67	7	40	48	74	88	62	40	44	77	85	92	77	85	44	88	59	11	44	40	77	77	66	29	66	33	44	81	33	29	88	62	55	40	81	44	44	22	44
2070	45	41	37	39	42	6	24	32	40	27	60	72	67	30	75	26	57	42	17	32	50	35	46	50	21	51	36	26	20	54	40	44	50	53	37	42	17	31	20	31
2240	35	32	40	52	57	22	58	28	61	22	71	68	75	21	77	30	50	54	10	37	52	21	55	54	31	37	41	34	21	42	52	61	50	57	28	61	25	50	37	35
DISA	44	40	43	45	54	15	39	35	53	40	64	72	68	42	79	35	54	59	23	34	50	38	54	61	32	49	44	37	29	47	52	61	60	61	41	60	25	39	32	34
2110	56	56	58	37	68	35	39	27	56	16	68	62	52	75	85	41	62	66	20	37	62	45	56	64	29	60	47	33	33	41	54	68	66	70	47	79	20	35	45	37
2120	86	86	50	59	71	17	44	50	44	48	53	46	50	57	78	28	65	69	9	21	67	38	63	48	26	63	48	48	32	57	51	73	65	71	26	69	30	50	38	53
2140	60	53	60	57	73	24	58	44	48	48	70	74	73	62	88	41	67	61	35	38	64	61	55	59	38	61	52	38	45	62	64	75	60	68	46	71	20	39	50	62
2200	38	34	38	36	69	19	19	34	26	28	55	58	73	41	80	39	44	1	23	33	60	44	46	33	22	38	33	52	22	41	47	53	46	49	39	44	22	26	30	39
2950	63	60	55	56	82	60	68	62	56	62	74	81	76	68	88	73	78	74	57	54	77	68	57	73	48	68	58	57	57	62	64	74	71	71	54	75	59	52	57	54
DISB	60	57	53	51	75	36	51	47	48	46	67	69	68	61	85	50	66	64	35	40	69	56	55	59	36	60	50	47	42	55	58	70	63	67	45	69	35	42	47	52
2030	56	46	57	42	63	31	44	36	57	39	63	67	64	48	74	37	49	57	30	33	57	45	58	49	25	50	44	45	40	54	57	56	63	54	35	63	30	44	36	37
2080	63	36	50	71	59	24	43	33	63	53	82	68	65	71	86	31	69	62	14	42	39	56	40	49	27	53	42	40	46	52	50	68	69	78	43	63	43	46	36	43
2180	29	65	49	53	54	26	48	24	58	52	76	70	71	18	83	47	65	63	13	50	63	44	53	51	32	52	32	41	33	47	47	66	66	71	43	55	37	53	46	42
2090	36	36	50	45	53	20	35	32	57	38	67	60	63	50	66	28	50	46	17	23	40	38	62	41	34	43	38	32	36	34	36	57	55	68	40	56	17	51	33	27
2190	93	55	50	49	60	40	29	48	69	31	62	83	52	91	77	35	58	57	19	39	78	30	66	37	29	58	56	42	31	53	51	62	58	69	39	84	33	52	57	64
2260	38	38	50	39	87	49	38	38	49	42	84	65	82	22	84	38	65	69	12	28	44	66	42	79	44	42	49	49	36	57	46	55	63	53	20	65	17	49	57	55
DISC	52	47	53	48	62	31	41	35	57	42	70	69	65	49	77	37	57	58	20	36	55	46	55	49	30	50	43	42	37	50	49	60	62	64	37	64	30	49	43	43
2010	53	63	54	36	62	26	40	43	46	43	62	70	79	35	93	42	68	67	34	41	59	64	55	38	32	56	51	40	53	52	47	74	61	64	26	56	18	48	36	41
2040	40	52	45	25	41	1	44	30	56	31	65	68	56	25	72	41	41	51	10	40	57	53	47	47	31	40	38	30	17	33	41	41	46	54	32	52	25	40	22	31
2050	34	29	30	52	67	9	56	53	43	31	55	63	67	42	83	48	50	61	10	16	50	46	44	51	33	44	43	42	54	46	47	53	61	63	29	53	21	42	36	46
DISD	42	48	46	39	58	13	47	43	48	36	60	67	68	35	84	44	54	60	19	32	55	54	49	45	32	47	44	38	43	44	45	57	57	61	29	54	21	43	32	40
1240	35	31	42	36	45	24	39	25	40	18	56	52	46	54	75	29	70	57	10	26	60	50	44	59	34	45	30	46	36	42	33	60	59	63	31	72	44	30	30	19
2100	58	69	51	70	62	42	71	56	63	53	80	79	73	43	98	56	74	69	37	51	78	57	60	62	59	47	41	62	50	63	60	63	71	74	53	74	29	59	46	41
2270	38	42	41	37	81	17	68	40	44	31	52	67	68	27	75	29	57	57	22	14	49	29	52	38	17	40	23	48	41	36	42	57	49	44	27	41	25	37	25	16
2980	40	39	40	40	62	17	26	38	52	35	68	79	68	40	80	43	75	61	10	23	53	43	56	48	22	28	49	21	13	53	46	58	70	66	39	65	10	43	37	32
DISE	42	44	43	45	61	25	50	38	49	33	63	67	62	42	82	38	69	61	19	28	60	45	52	52	33	40	35	42	35	48	44	60	62	62	37	64	28	41	34	26
DISA	44	40	43	45	54	15	39	35	53	40	64	72	68	42	79	35	54	59	23	34	50	38	54	61	32	49	44	37	29	47	52	61	60	61	41	60	25	39	32	34
DISB	60	57	53	51	75	36	51	47	48	46	67	69	68	61	85	50	66	64	35	40	69	56	55	59	36	60	50	47	42	55	58	70	63	67	45	69	35	42	47	52
DISC	52	47	53	48	62	31	41	35	59	42	70	69	65	49	77	37	57	58	20	36	55	46	55	49	30	50	43	42	37	50	49	60	62	64	37	64	30	49	43	43
DISD	42	48	46	39	58	13	47	43	48	36	60	67	68	35	84	44	54	60	19	32	55	54	49	45	32	47	44	38	43	44	45	57	57	61	29	54	21	43	32	40
DISE	42	44	43	45	61	25	50	38	49	33	63	67	62	42	82	38	69	61	19	28	60	45	52	52	33	40	35	42	35	48	44	60	62	62	37	64	28	41	34	26
STOT	49	47	48	46	62	25	45	39	52	40	65	69	66	46	81	40	60	60	23	34	57	47	53	53	32	49	43	41	37	49	50	62	61	63	38	62	28	43	38	39

974 SOC LEVEL 7                      TCCR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	TOTAL
2130	62	37	70	50	52	38	94	70	15	88	53
2170	58	43	75	40	60	22	96	67	16	81	49
457J	54	37	62	54	50	29	91	41	50	54	45
2060	55	51	51	33	48	25	81	59	40	66	56
2070	40	29	57	29	38	28	76	49	24	58	40
2240	51	25	61	44	30	32	97	50	20	62	44
DISA	53	36	65	40	47	29	90	58	22	72	47
2110	43	37	52	47	45	39	91	68	29	79	51
2120	59	46	65	42	51	25	78	50	28	65	51
2140	55	56	67	59	44	42	80	57	56	70	56
2200	39	30	44	46	36	19	66	36	11	49	40
2950	66	53	71	63	55	32	85	68	37	68	64
DISb	55	47	63	55	48	32	81	58	30	66	55
2030	41	41	59	40	51	31	86	56	28	56	48
2080	46	40	73	49	59	31	88	65	46	55	52
2180	51	33	69	53	55	24	88	60	21	52	50
2090	41	40	56	40	32	21	87	55	16	66	43
2190	56	41	65	71	48	39	94	60	44	66	55
2260	65	34	69	58	61	31	98	61	20	71	52
DISC	48	38	64	50	50	29	89	59	29	59	50
2010	56	33	71	51	51	30	93	73	16	78	52
2040	46	28	53	43	41	27	84	51	27	57	41
2050	53	46	68	37	35	22	81	63	26	79	46
DISD	52	36	65	44	42	26	86	63	22	73	47
1240	48	36	65	36	41	19	84	51	19	63	43
2100	65	43	67	54	59	35	89	78	47	74	60
2270	36	27	52	22	34	21	76	43	29	51	41
2980	52	29	73	39	46	26	94	59	20	78	46
DISE	50	34	64	38	44	25	85	57	28	66	47
DISA	53	36	65	40	47	29	90	58	22	72	47
DISb	55	47	63	55	48	32	81	58	30	66	55
DISC	48	38	64	50	50	29	89	59	29	59	50
DISD	52	36	65	44	42	26	86	63	22	73	47
DISE	50	34	64	38	44	25	85	57	28	66	47
STOT	51	38	64	46	47	28	87	59	26	66	49

CURRICULUM REFERENCED FINAL

C.1 Acquire basic knowledge of events in US history	C.1,4,27,32	1
C.2 Sequence of major events in US history & able to make a timeline of historical events	C.1,4,27,32 C.1,4,27,32 C.1,4,27,32	2 3 4
C.3 Trace origins of different racial/ethnic groups in the US back in time & geography to their origins in other continents	C.1,9,14,28 C.1,8,12,28 C.1,7 C.1,7	5 6 7 8
C.4 Describe way in which Native American and African cultures have been treated by European culture in the US	C.1,2,7 C.1,2,7 C.1,7,13	9 0 1 1
C.5 Describe some contributions of the cultures of Native Americans, Africans & other groups to the European culture of the US	C.1,7 C.1,5,7,14 C.1,7,12	1 1 1 2 3 4
C.7 Give a brief description of a number of important historical events & figures	C.1 C.1,18 C.1,3,5,7	5 6 7 1 1 1
C.8 Describe ways in which different groups have recorded & preserved their culture	C.1,7,12 C.1,3,5,7 C.1,7	8 9 0 1 2
C.9 Identify the major racial, ethnic, and religious groups of the US, with emphasis on multi-ethnic and multi-racial make-up of our country	C.1,4,7,12,13 C.1,7,19 C.1,7	2 2 2 2 3 4
C.10 Identify some shared values & beliefs of different cultures in the US	C.1,7,18 C.1,7,13 C.1,7,28	5 6 7 8 9 0
C.11 Identify some customs, holidays, and festivals associated with different groups in the US	C.1,7,11 C.1,7,9,10,18 C.1,7,9,12,13	1 2 2 2 2 3
C.12 Describe the way in which Native American, African, Hispanic, and other "minority" cultures have been treated by Europeans in the US, citing instances of prejudice, discrimination and oppression	C.1,7,10 C.1,7,8,10,14 C.1,7,21 C.1,7,18 C.1,7	3 3 3 3 3 3
C.13 Identify some instances of prejudice and discrimination against other groups in the US	C.1,7,21 C.1,7,8,9,10,14	4 5 6 7 8 9
C.14 Describe the ways in which oppressed groups have not only survived (coping mechanisms) but influenced US culture	C.1,7 C.1,7 C.1,7,8,10,14 C.1,7	3 3 3 3 4 4
C.18 Identify major economic resources of the US	C.1,3,7,9,14	4 4 4 4 4 4
C.19 Describe the role of labor unions in economic history & structure of the US	C.1,7 C.1,3,7,13 C.1,3,7,13	4 4 4 4 4 4
C.21 Identify technological advances that have affected economic development of the US and highlight the inventors who were responsible	C.1,7,9,10,12 C.1,7,8,10,13 C.1,7,18,21	4 4 4 4 4 4
C.27 Describe the main political values behind the US political system	C.1,7,18,21 C.1,7,21 C.1,7,21	4 4 4 5 5 5
C.28 Explore case studies that exemplify value conflicts in US history		0
C.32 Use different maps to identify climatic features & natural resources of different regions in US or the world		

984 SUC LEV 8 TECS005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
2130	75	58	58	70	78	52	31	90	91	91	90	23	50	15	54	51	43	44	86	73	46	58	51	1	65	45	51	46	25	55	68	53	43	38	83	34	40	41	42	17
2170	96	77	85	85	85	85	53	96	93	94	96	41	34	48	60	82	66	60	85	85	33	37	34	31	78	83	71	67	63	66	83	57	77	64	76	52	70	58	50	58
4570	86	73	65	69	69	60	52	78	89	78	86	39	73	4	65	78	43	17	82	96	57	39	26	4	78	60	39	60	34	60	69	69	78	8	56	56	52	52	52	34
2060	85	53	89	**	82	85	75	96	92	85	89	46	89	50	67	78	32	85	85	92	53	64	78	64	92	53	67	96	67	53	67	85	96	92	75	35	7	32	82	32
2070	94	89	87	94	91	73	61	97	92	93	95	44	75	7	69	75	15	7	93	76	45	13	59	56	84	80	38	55	61	75	85	74	80	76	84	73	69	53	28	64
2240	86	60	60	73	89	43	16	96	95	89	95	16	41	18	46	73	53	60	67	72	35	56	15	3	60	58	61	41	36	53	75	24	49	46	75	32	12	29	44	21
DISA	89	73	76	83	85	69	47	94	92	91	94	35	68	24	62	72	43	63	85	77	43	38	44	29	76	69	54	57	50	64	78	59	70	59	78	51	51	47	43	44
2110	97	34	78	**	97	95	82	95	89	97	**	32	76	13	37	36	22	69	82	39	52	21	36	76	93	89	69	89	93	82	89	71	69	82	93	91	67	82	89	56
2120	92	55	56	90	89	70	41	96	92	95	86	16	61	16	63	50	41	66	87	75	55	38	33	7	76	67	49	58	43	52	90	52	41	52	67	50	55	64	60	40
2140	90	90	31	90	90	96	51	92	89	91	50	87	11	85	88	36	77	96	77	68	17	15	56	94	93	52	44	66	80	96	69	87	61	82	30	80	71	84	10	
2200	66	37	40	74	77	73	41	90	81	86	87	25	55	24	37	44	34	26	65	72	33	51	38	3	62	65	41	50	34	39	58	55	39	25	48	39	32	30	50	31
2950	90	57	54	65	80	73	42	**	90	90	95	35	66	19	56	57	35	55	92	78	49	34	31	8	67	69	59	42	49	64	75	41	66	49	74	45	35	52	47	37
DISB	86	58	49	80	85	80	49	95	89	90	91	33	69	17	62	63	35	58	85	77	57	33	37	25	76	75	53	51	54	62	80	55	62	51	72	46	51	57	62	32
2030	89	57	69	69	84	73	46	90	88	85	86	42	67	25	46	52	59	48	84	92	56	33	38	25	71	62	54	50	30	46	74	48	59	52	75	58	57	61	47	56
2080	96	97	87	92	96	87	80	97	96	93	93	82	82	43	74	31	11	74	94	82	79	15	73	5	89	83	21	88	78	79	87	75	87	69	87	73	87	74	70	74
2180	77	63	60	68	86	79	49	93	90	90	94	31	62	13	49	59	30	42	85	65	54	35	26	14	73	70	66	54	45	59	69	35	70	43	65	54	42	52	45	52
2090	94	72	55	88	88	77	47	98	90	89	90	47	72	8	64	56	26	50	89	86	58	33	22	11	75	82	54	64	27	67	80	64	57	80	64	52	55	58	59	59
2190	84	76	77	81	81	82	41	93	87	94	88	37	67	30	71	67	47	61	84	72	67	60	42	31	64	75	71	62	51	66	70	64	52	55	67	72	62	58	61	41
2260	82	66	71	71	89	89	49	92	96	94	92	40	80	29	68	78	43	57	82	87	61	63	50	70	82	80	66	66	64	82	92	78	87	75	43	73	61	54	52	24
DISC	86	67	68	76	86	79	50	93	71	90	90	44	69	23	57	60	39	52	85	80	50	38	38	22	74	73	56	60	44	61	76	55	65	52	71	61	57	59	53	53
2010	82	70	73	95	96	81	43	93	92	91	95	24	75	22	72	60	27	65	94	75	55	43	38	9	87	78	61	67	75	67	86	42	77	57	67	54	70	59	70	50
2040	79	49	50	78	76	54	35	71	82	81	86	24	50	8	40	41	29	38	87	67	39	33	30	20	64	61	44	57	44	62	81	62	57	34	70	44	3	47	47	31
2050	94	74	71	87	96	79	67	95	88	90	90	57	83	34	77	80	32	72	87	86	52	30	65	59	89	80	69	76	61	75	76	59	76	78	77	48	71	63	57	48
DISD	86	66	66	87	90	73	50	93	88	88	90	37	71	23	65	63	30	60	89	77	50	35	47	32	81	74	60	68	61	69	81	54	71	59	72	49	60	57	58	44
1240	88	71	54	75	86	69	33	94	79	81	85	29	55	21	41	57	32	49	81	76	35	15	27	20	70	67	58	52	46	59	82	44	57	58	80	38	34	26	38	33
2100	84	67	58	75	79	72	25	92	85	82	88	25	53	20	55	69	50	53	81	78	44	46	37	25	63	63	50	54	49	59	72	54	56	46	72	54	38	50	49	45
2270	80	49	52	60	88	77	13	86	91	90	81	19	55	14	31	57	21	9	88	75	39	42	14	3	52	40	54	49	13	36	63	29	62	21	68	29	11	32	45	34
2980	80	24	58	82	83	74	51	97	93	93	92	32	55	12	43	56	39	60	93	91	44	46	27	3	62	62	71	56	53	65	85	41	62	49	75	32	45	37	44	23
DISE	84	56	56	74	84	72	31	93	86	86	87	27	54	17	44	60	37	46	85	79	40	36	28	15	63	60	58	53	43	56	76	44	59	46	74	40	34	37	44	34
DISA	89	73	76	83	85	69	47	94	92	91	94	35	68	24	62	72	43	63	85	79	43	38	44	29	76	69	54	57	50	64	78	59	70	59	78	51	51	47	43	44
DISB	86	58	49	80	85	80	49	95	89	90	91	33	69	17	62	63	35	58	85	77	51	33	37	25	76	75	53	51	54	62	80	55	62	51	72	46	51	57	62	32
DISC	86	67	68	76	86	79	50	93	91	90	90	44	69	23	57	60	39	52	86	80	60	38	38	22	74	73	60	44	61	76	55	65	52	71	61	57	59	53	53	
DISD	86	66	66	87	90	73	50	93	88	88	90	37	71	23	65	63	30	60	89	77	50	35	47	32	81	74	60	68	61	69	81	54	71	59	72	49	60	57	58	44
DISL	84	56	56	74	84	72	31	93	86	86	87	27	54	17	44	60	37	46	85	79	40	36	28	15	63	60	58	53	43	56	76	44	59	46	74	40	34	37	44	34
STUT	86	65	64	80	86	75	46	94	89	89	91	36	67	21	58	64	37	56	86	79	50	36	39	25	74	71	56	58	49	62	78	54	65	53	73	51	52	52	43	

984 500 LEVEL 3 ILCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	TOTAL
2130	29	32	36	52	38	85	19	29	26	58	51
2170	32	32	52	67	69	91	58	56	53	85	67
4570	17	26	39	26	26	69	30	4	13	52	52
2060	21	57	64	71	60	92	67	67	50	85	70
2070	23	64	46	56	62	96	66	60	33	86	67
2240	15	9	41	33	49	80	38	29	20	52	49
D1SA	25	40	46	55	56	89	49	46	35	74	61
2110	86	84	73	89	80	93	76	69	73	89	76
2120	23	40	35	44	46	89	52	47	29	67	57
2140	21	12	60	72	86	93	61	58	63	76	68
2200	34	16	24	29	33	63	12	17	16	34	45
2950	21	39	44	42	63	86	32	36	35	83	56
D1SB	31	33	45	51	61	84	42	42	41	70	59
2030	35	38	39	35	59	87	31	37	35	72	57
2080	44	75	34	66	74	94	64	62	50	57	73
2180	30	20	38	39	52	84	47	41	35	73	55
2090	38	44	47	49	53	88	42	52	7	69	59
2190	43	41	46	52	44	81	57	47	47	73	63
2260	33	54	57	61	71	98	50	47	43	43	67
D1SC	36	40	42	46	57	87	45	45	35	68	60
2010	22	39	48	68	45	93	36	26	30	75	62
2040	31	27	24	28	56	88	31	29	18	50	50
2050	47	63	44	66	55	86	71	64	57	85	70
D1SD	35	46	40	56	52	89	49	42	37	72	62
1240	28	33	23	22	51	88	42	26	23	61	52
2100	28	30	35	40	54	73	35	19	25	71	55
2270	26	8	34	24	34	77	31	19	55	72	45
2980	34	25	33	44	55	91	22	25	17	54	54
D1SE	29	26	31	33	50	82	73	23	28	64	52
D1SA	25	40	46	55	56	89	49	46	35	74	61
D1SB	31	33	45	51	61	84	42	42	41	70	59
D1SC	36	40	42	46	57	87	45	45	35	68	60
D1SD	35	46	40	56	52	89	49	42	37	72	62
D1SF	29	26	31	33	50	82	33	23	28	64	52
STUT	32	38	41	48	56	87	44	41	35	70	59

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL U.S. HISTORY

1985 - 1986

A.9	Describe native Americans in No. America prior to "discovery"	1
A.5	Identify the European countries that engaged in exploration	2
A.12	Identify motivations for Europeans to explore for new lands	3
A.20	Describe rich variety of early multi-cultural & multi-ethnic colonies	4
A.44	Identify existence of slavery in the colonies & what part it played	5
B.4	Identify attempts of England to control colonies through taxation	6
B.1	Define concepts for example: salutatory neglect, boycott, home rule	7
B.13	Describe ideas expressed in the Declaration of Independence	8
B.23	Identify people or groups: Abigail Adams, Thomas Jefferson, Lewis & Clark	9
B.28	Describe the responsibilities of each branch of the new government	0
C.19,27	Define "the West" as changing concept; Identify Texas Revolt & Mex. War	1
C.20	Identify the most important Native American tribes in the United States	1
C.20	during the 1800's	2
D.46	Indicate graphically the change in the U.S. from a rural nation to urban	3
C.24	Describe the US expansion into the Far West: CA, AZ, and New Mexico	4
D.44,61	Define concepts for example: Industrialization, Urbanization, socialism	5
B.13	Describe ideas expressed in the Declaration of Independence	6
C.32,51	Identify what is meant by "Jacksonian Democracy"; Identify persons	7
D.17	Define concepts for example: Frontier, Rural, Urban, Populist, Pioneer	8
C.51	Identify persons & groups: Abraham Lincoln, Ulysses S. Grant, Robert Lee	9
C.50	Define concepts for example: state's rights, secession, war, strategy,	0
C.50	mobilization, Emancipation Proclamation, Copperheads, Border States	1
C.71	Identify the provisions of the 13TH, 14TH, & 15TH Amendments	2
C.67	Define concepts for example: Reconstruction, suffrage, amendments	2
D.6	Identify Plessey vs. Ferguson as establishing "separate but equal"	3
D.12	Identify reasons for founding of Niagra movement, NAACP & Urban League	4
C.71	Identify provisions of the 13TH, 14TH, and 15TH Amendments	5
D.2	Identify people or groups: Booker T. Washington, NAACP, W.E.B. DuBois	6
D.69	Compare organizing, racial & gender composition of unions	7
D.1	Define concepts for example: Reconstruction, Racism, Civil Rights	8
D.45	Identify people or groups: Andrew Carnegie, John D. Rockefeller, Horatio	9
D.45	Alger, Thomas Alva Edison, Henry Ford, Alexander Graham Bell	0
D.44	Define concepts for example: Industrialization, Urbanization, trade	1
D.45	Identify people or groups: Orville and Wilber Wright, Elijah McCoy	2
D.44	Define concepts for example: Competition, Social Darwinism, unionism,	3
D.44	ward politics, socialism, Robber Baron, corporate Capitalism	3
E.1	Define concepts for example: nationalism, militarism, jingoism	4
E.2	Identify people or groups: Theodore Roosevelt, Karl Marx, Bolsheviks	5
E.14	Describe American attempts to remain neutral during war	6
E.2	Identify people or groups: Woodrow Wilson, Leon Trotsky, Hearst	7
E.2	newspapers, Pancho Villa	8
B.22	Define concepts for example: constitutional govt., balance of power	9
F.1	Define concepts for example: Cold War, United Nations, isolationism	0
F.40	Identify people or groups: Gerald Ford, Jesse Jackson, Kevin White	1
D.61	Identify people or groups: Samuel Gompers, Amer. Federation of Labor	2
D.54	Interpret the Black migration to the North	3
E.37	Identify the strategies used to win passage of the 19TH Amendment	4
F.40	Identify people or groups: Jimmy Carter, current local & nat'l reps.	4
E.46	Identify groups in America that did not share in the 20's prosperity	4
F.40	Identify people or groups: Nguyen Van Thieu, Shirley Chisholm, mayor	5



U.S. HISTORY

F.40	Identify people or groups: Caesar Chavez, Andrew Young, city council	1	5
E.29,65	Identify the Sacco & Vansetti case; recognize contradictions in racism	2	5
C.5i	Identify people or groups: 54th & 55th Mass. Regiment, Irish Regiment	3	5
F.36	Identify the Civil Rights movement as leading groups to seek rights	4	5
E.19	Recognize the Treaty of Versailles changed the map of Europe	5	5
D.88,E.45,50	Define concepts: consumer, annexation For E.45,50 see Ques. #60	6	5
A.1	Define concepts for example: economic change, global market, culture	7	5
D.45	Identify people or groups: Henry Ford, Elijah McCoy, Granville T Woods	8	5
E.1	Define concepts for example: missionary, neutrality, imperialism	9	5
D.88,E.45,50	Identify new technology effects; describe effects of the Depression	0	6
E.48	Identify people or groups: Herbert Hoover, Bernard Baruch, The Crisis,	1	6
E.48	Yellow Peril, movie stars, Paul Robeson, Huey P. Long, Ralph Bunche	2	6
E.58	Define concepts for example: Fascism, Third Reich, Gestapo, Allies	3	6
E.61	Narrate w/refs. to maps, events leading up to WWII, identify leaders	4	6
E.58,59	Identify concepts & people or groups: Holocaust, unnamed soldiers	5	6
E.61	Narrate w/refs. to maps, events leading up to WWII, identify leaders	6	6
E.62	Describe selected events of World War II	7	6
E.62	Describe selected events of World War II	8	6
E.77	Determine reasons why Allied Powers divided Germany	9	6
F.1	Define concepts for example: Cold War, middle class, GI Bill, sit-ins	0	7
F.40	Identify people or groups: school committee, Libertarian Party	1	7
F.39	Define concepts for example: historical distance, facts/opinions, draft	2	7
E.72	Determine why the dropping of the A-Bomb in Japan is still debated	3	7
E.58	Define concepts for example: disarmament, occupation forces, War Bonds	4	7
E.66	Analyze reasons why Jap-Am were placed in concentration camps	5	7
E.58	Define concepts for example: Underground Resistance, German-Am Fund,	6	7
E.58	America First, C-Rations, Fifth Column, Lendlease, the blitz	7	7
E.77	Determine reasons why the Allied Powers divided Germany	8	7
E.2	Identify people or groups: Lenin, Leon Trotsky, Pancho Villa	9	7
F.24	Identify Kennedy policies in international affairs	0	8

216 US HISTORY TELCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1040	35	35	32	56	37	62	48	66	79	53	48	61	45	65	49	43	31	33	51	76	50	48	17	67	46	35	52	53	65	42	59	58	63	70	31	50	42	53	38	44
1110	39	32	35	75	30	74	47	87	78	67	71	61	48	68	45	70	88	31	57	80	50	48	11	50	31	38	48	61	51	37	61	70	64	58	34	57	46	36	29	56
DISA	37	34	34	65	33	68	47	76	79	60	60	61	46	66	47	57	84	32	54	78	50	48	14	58	39	37	50	57	58	39	60	64	64	64	32	53	44	44	33	50
1250	36	18	40	68	35	68	53	83	72	57	71	64	41	56	49	64	69	40	63	80	57	52	8	56	16	28	45	48	46	37	62	58	66	77	30	54	52	26	29	46
1100	29	21	28	62	32	61	50	69	72	53	68	53	28	60	41	42	69	34	42	70	54	40	8	65	16	26	41	42	43	39	57	49	66	60	26	49	44	54	23	50
DISB	34	19	36	66	34	65	57	78	72	56	70	60	37	57	46	56	69	38	56	76	56	48	8	59	16	27	44	46	45	38	60	55	66	71	29	52	49	37	27	48
1120	30	35	37	67	20	67	35	75	77	54	64	67	24	62	60	58	71	32	54	73	56	50	29	56	9	28	47	56	58	33	62	39	64	54	26	64	37	16	26	32
1160	30	36	35	74	37	72	58	76	68	51	46	50	30	64	32	33	74	34	53	71	62	63	8	17	37	16	46	70	66	51	76	64	71	71	50	63	66	38	57	40
DISC	30	36	36	72	32	71	50	76	71	57	52	56	28	63	41	42	73	33	54	72	60	59	12	30	28	20	46	66	63	45	71	55	69	66	42	63	56	31	47	37
1250	14	0	0	28	14	71	0	28	14	28	14	14	28	28	0	14	14	28	71	14	28	0	28	28	0	42	57	0	14	71	0	28	14	14	28	28	28	42	42	57
1070	34	36	49	80	18	71	52	86	84	70	66	68	32	71	50	59	80	39	58	79	54	47	16	57	38	47	43	64	55	55	61	56	67	76	40	50	51	53	32	46
DISD	33	35	48	79	18	71	51	84	82	69	64	66	32	70	49	58	78	39	58	77	54	45	16	56	37	47	44	62	54	55	59	55	65	74	39	50	50	53	32	46
1080	54	49	28	59	49	67	44	78	85	61	48	66	29	54	59	43	80	29	49	71	50	43	8	52	26	28	50	54	38	43	57	44	53	58	42	42	42	23	37	36
1170	54	45	54	74	27	81	72	85	92	76	85	83	49	70	56	72	90	32	67	70	74	61	21	81	34	36	52	72	65	50	72	74	76	76	52	41	63	49	47	58
1240	37	33	43	81	38	79	56	78	76	61	65	70	23	79	23	39	79	48	65	78	73	69	14	74	50	31	59	65	56	64	71	56	61	67	27	58	77	43	10	42
DISL	49	43	37	66	42	73	52	80	84	64	60	70	31	65	47	47	82	36	57	73	61	54	12	64	35	30	53	61	48	51	64	53	59	64	39	47	56	34	30	41
DISA	37	34	34	65	33	68	47	76	79	60	60	61	46	66	47	57	84	32	54	78	50	48	14	58	39	37	50	57	58	39	60	64	64	64	32	53	44	44	33	50
DISB	34	19	36	66	34	65	52	78	72	56	70	60	37	57	46	56	69	38	56	76	56	48	8	59	16	27	44	46	45	38	60	55	66	71	29	52	49	37	27	48
DISC	30	36	36	72	32	71	50	76	71	52	52	56	28	63	41	42	73	33	54	72	60	59	12	30	28	20	46	66	63	45	71	55	69	66	42	63	56	31	47	37
DISD	33	35	49	79	18	71	51	84	82	69	64	66	32	70	49	58	78	39	58	77	54	45	16	56	37	47	44	62	54	55	59	55	65	74	39	50	50	53	32	46
DISL	49	43	37	68	42	73	52	80	84	64	60	70	31	65	47	47	82	36	57	73	61	54	12	64	35	30	53	61	48	51	64	53	59	64	39	47	56	34	30	41
STOT	38	33	38	69	33	69	51	79	78	60	62	63	35	64	46	52	77	36	56	75	56	50	12	56	31	32	48	57	52	45	62	56	64	67	35	52	51	40	32	45

216 US HISTORY TELR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	TOTAL
1040	47	36	43	73	64	24	7	84	43	38	47	28	34	62	14	29	22	31	65	20	56	36	50	77	37	75	21	35	61	49	68	33	75	26	53	70	71	40	15	51	48
1110	33	25	64	66	39	22	9	82	37	35	57	28	36	48	25	18	23	42	57	25	46	38	51	74	22	70	22	40	59	58	75	34	64	28	48	73	69	41	25	35	48
DISA	40	31	53	69	52	23	8	83	40	37	52	28	35	55	19	23	23	36	61	23	51	37	50	75	29	73	22	38	60	53	72	33	69	27	50	71	70	41	20	43	48
1250	38	42	51	69	43	26	12	84	23	36	45	23	34	50	22	26	19	38	60	32	66	49	56	80	42	76	23	51	60	60	83	34	73	23	61	75	78	41	27	51	49
1100	33	26	52	66	47	27	16	74	33	46	46	25	26	37	18	34	30	30	57	33	59	34	53	79	37	73	25	47	60	51	80	32	70	16	46	65	67	41	12	44	45
DISB	36	36	51	68	44	27	14	80	27	40	45	24	31	45	21	29	23	35	59	32	63	43	55	79	40	75	24	50	60	57	81	33	72	20	56	71	74	41	22	48	47
1120	32	28	55	67	32	24	16	69	45	49	52	32	45	47	11	28	26	26	60	32	50	30	52	75	32	52	33	33	49	50	69	39	35	24	43	60	56	43	20	45	45
1160	77	62	59	65	54	38	7	79	25	40	51	32	23	39	46	32	51	48	67	32	57	50	69	77	39	82	38	59	71	71	83	57	83	36	66	77	76	42	47	50	53
DISC	62	50	58	66	47	33	10	76	32	43	52	32	30	42	34	30	43	40	65	32	55	43	64	76	37	72	37	50	64	64	79	51	67	32	59	71	69	42	38	48	50
1050	14	42	0	57	14	0	57	14	0	42	0	28	14	57	0	0	14	28	0	28	57	57	28	57	0	14	14	0	28	28	0	28	57	14	0	14	28	0	0	42	23
1070	53	36	58	73	63	26	13	78	37	47	50	37	48	55	32	17	23	61	77	43	74	36	57	79	41	76	24	35	62	54	78	47	80	37	60	71	72	47	29	51	53
DISD	52	37	56	73	62	25	14	76	36	46	48	37	47	55	31	17	23	60	75	43	74	37	56	79	40	74	24	34	61	54	76	46	79	36	58	70	70	45	28	51	52
1080	47	44	73	67	46	26	8	70	41	33	50	32	30	50	14	18	38	25	43	21	45	39	38	54	36	51	19	47	59	41	67	35	70	21	36	57	70	46	12	54	45
1190	52	47	61	67	61	32	10	92	78	47	70	34	43	69	36	65	80	70	69	40	56	43	61	90	49	85	49	49	56	65	87	40	96	34	67	90	85	69	32	60	61
1240	39	29	58	78	63	27	10	89	57	55	49	15	27	57	31	63	63	46	75	49	73	58	56	87	27	70	24	52	70	71	94	27	81	51	71	84	81	45	8	55	55
DISF	46	40	67	71	54	27	9	80	52	42	53	27	32	55	23	40	52	39	57	32	56	46	47	71	36	63	25	49	62	54	79	33	78	32	52	71	76	49	14	55	51
DISA	40	31	53	69	52	23	8	83	40	37	52	28	35	55	19	23	23	36	61	23	51	37	50	75	29	73	22	38	60	53	72	33	69	27	50	71	70	41	20	43	48
DISB	36	36	51	68	44	27	14	80	27	40	45	24	31	45	21	29	23	35	59	32	63	43	55	79	40	75	24	50	60	57	81	33	72	20	56	71	74	41	22	48	47
DISC	62	50	58	66	47	33	10	76	32	43	52	32	30	42	34	30	43	40	65	32	55	43	64	76	37	72	37	50	64	64	79	51	67	32	59	71	69	42	38	48	50
DISD	52	37	56	73	62	25	14	76	36	46	48	37	47	55	31	17	23	60	75	43	74	37	56	79	40	74	24	34	61	54	76	46	79	36	58	70	70	45	28	51	52
DISF	46	40	67	71	54	27	9	80	52	42	53	27	32	55	23	40	52	39	57	32	56	46	47	71	36	63	25	49	62	54	79	33	78	32	52	71	76	49	14	55	51
STOT	45	38	57	69	51	27	11	79	38	41	50	29	35	51	24	29	33	41	63	32	60	42	53	76	36	71	25	44	61	56	78	38	74	29	54	71	72	44	22	49	49

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CIVICS

CURRICULUM REFERENCED FINAL

1985 - 1986

A.5	Why people create governments to prevent anarchy	1
A.24	Explain why a Constitutional Convention was in Phil. in 1787	2
A.33	Define concepts for example; popular sovereignty, federalism	3
A.36	Explain the constitutional principle of separation of powers	4
A.14	Describe procedures for becoming a naturalized citizen of US	5
B.5	Powers of Congress in relation to revenue, taxes, commerce	6
B.1	Define concepts for example; bicameral, Senate, impeach	7
B.17	Constitutional powers and duties of the President and V.P.	8
C.2b	How federal and state govts are related within a fed system	9
B.29	Explain the meaning and uses of judicial review	0
B.34a	How money is raised to pay the cost of the federal govt.	1
C.2	How federal and state govts are related with a fed system	1
C.13	Explain the various roles of the state governors	2
C.30	Organization and operation of county govt in Mass.	3
C.36	Describe metropolitan government agencies	4
C.34	The power and duties of Boston city officials	5
C.33	Organization & operation of govt according to Bos. City Char.	6
D.1	Define concepts for example; interest groups, coalition	7
D.20	Describe rules for voter eligibility	8
F.11	How basic economic decisions are made in a command economy	9
D.33	Identify various techniques of propaganda used in campaigns	0
D.35	Skill of writing letters to influence opinions & decisions	1
E.15	Criminal justice procedures, from arrest to sentence or acq.	2
E.12	Identify and describe major types of crimes	2
E.26	Code of Discipline; rights & responsibilities	3
E.28	Various procedures established by the Code of Discipline	4
F.9	Define concepts for example; capitalism, communism	5
F.17	Advantages & disadvantages of the 3 types of business organ.	6
F.11	How basic economic decisions are made in a command economy	7
F.1	Define concepts for example; depression, inflation, GNP	8
F.8	Identify major problems that may afflict an economic system	9
F.8		0
I.22	Majority rule w/minority rights is a character of dem. soc.	1
I.15	Identify organizations, individuals & events ex., NAACP	2
I.16	Brown vs Board of Educ. & Heart of Atlanta Motel vs U.S.	3
I.17	Passage of federal laws during the 1960's and 1970's	4
I.10, I.16	Dred Scott and Plessy cases I.16 refer to above obj.	5
J.4	The role of the Secretary of State in forming foreign policy	6
J.2	President's roles of chief diplomat and commander in chief	7
J.19	Organization and operation of the United Nations	8
		9
		0
J.11	Major changes in development of American foreign policy; 1945	1
B.7	Special powers of the House of Reps and the Senate	4
C.41	Identify main sources of revenue of state & local govts	4
A.18	Items in terms of the period before the Constitutional Conv.	4
F.1	Define concepts for example; depression, inflation, GNP	1
B.15	Describe how the President is nominated and elected	4
A.42	How judicial review became principle of American govt; 1803	4
A.18	American Revolution, Continental Congress, Declaration of Ind	4
C.13	Explain the various roles of the state governors	4
F.1	Define concepts for example; depression, inflation, GNP	5



CIVICS

B.11	Define concepts for example: chief executive, electoral college	1	5
B.26	Identify & describe the main roles of federal judicial officials	2	5
B.11	Define concepts for example: cabinet, nominate, electoral vote, treaty	3	5
A.32	Explain connection between proposal & ratification of Bill of Rights and ratification of the Constitution	4	5
B.1	Define concepts for example: bicameral, Senate, House of Reps.	5	5
B.26 }	Identify & describe the main roles of federal judicial officials	6	5
B.26 }		7	5
B.14	List qualifications & terms of office of the President & Vice Pres.	8	5
E.11	Define concepts for example: trial, grand jury, plea bargaining	9	5
A.12	Define concepts for example: citizen, alien, immigrant, naturalization	0	6
A.40	Describe importance of "elastic clause" in preserving the Constitution as a living document	1	6
C.6 }	Identify powers and duties of major state agencies	2	6
C.6 }		3	6
B.34	Summarize how the federal govt. gets money to finance activities	4	6
B.1 }	Define concepts for example: Congressional district, political party, majority & minority party, bill, impeach, lobbyist, quorum, veto	5	6
B.1 }		6	6
B.3 }		7	6
B.3 }		8	6
B.3 }	Describe how the Congress is organized	9	6
B.3 }		0	7
A.16,17	Connect rights & responsibilities & describe the responsibilities or duties of citizenship in a democracy, necessary to preserve rights	1	7
E.7	Define concepts for example: civil rights, due process, implied rights	2	7
A.16.17	Connect rights & responsibilities & describe the responsibilities or duties of citizenship in a democracy, necessary to preserve rights	3	7
A.33	Define concepts for example: federalism, popular sovereignty	4	7
D.28,32	Define concepts for example: public opinion poll, pollster, propaganda	5	7
F.9 }	Explain how the mass media of communication might influence the public	6	7
F.9 }	Define concepts for example: capitalism, communism, socialism, market economy, free enterprise, command economy, competition	7	7
F.1 }		8	7
F.1 }	Define concepts for example: business cycle, depression, inflation, recession, recovery, Gross National Product (GNP), consumer goods	9	7
F.15	Define concepts for example: corporation, partnership, monopoly	0	8

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 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
1040	35	78	46	47	94	30	47	35	73	50	64	47	67	51	47	21	87	49	63	73	50	50	59	27	63	51	60	68	63	61	58	36	38	90	60	61	30	40	48	34	
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DISA	46	50	44	50	82	29	50	31	77	54	63	50	63	54	39	17	75	50	48	74	43	45	67	30	59	48	38	66	52	47	60	36	27	81	68	48	33	35	51	35	
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1100	51	31	59	59	91	17	39	24	61	41	49	32	60	62	45	15	77	48	43	85	51	51	74	25	66	51	32	70	44	28	64	35	35	76	53	48	22	30	44	44	
DISB	52	36	51	53	80	28	43	27	59	49	50	31	59	62	45	11	80	45	43	85	57	52	76	31	72	63	29	75	51	38	69	41	30	81	61	47	34	33	51	46	
1120	57	39	57	42	33	27	56	35	72	47	60	40	56	60	41	17	75	46	50	68	42	43	79	34	68	57	27	67	61	36	54	37	15	78	47	36	34	34	57	46	
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DISC	56	38	56	45	74	27	55	33	71	43	56	40	56	62	41	13	76	45	47	69	45	48	81	34	67	57	26	67	62	36	56	37	18	80	47	37	33	34	54	45	
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1070	56	34	66	62	86	27	49	31	67	51	57	42	63	62	32	13	81	52	46	81	50	45	77	29	75	47	26	80	59	43	65	50	23	80	47	39	39	29	57	42	
DISD	56	38	66	61	85	29	53	35	71	52	57	46	65	66	37	15	81	57	50	78	54	51	77	30	75	54	28	77	59	49	64	49	23	84	47	47	42	33	60	43	
1030	**	**	**	**	**	**	0	0	**	0	**	0	**	0	0	0	**	0	0	**	0	0	0	**	**	**	0	**	0	0	**	**	0	0	**	**	**	0	0	**	**
1080	30	72	31	54	66	22	38	11	73	24	39	37	54	28	40	22	49	33	49	69	40	30	41	26	44	40	42	31	38	21	34	22	24	74	48	26	16	22	27	23	
1200	59	57	79	86	77	32	35	27	86	66	71	52	69	64	64	3	86	57	62	84	76	54	77	20	67	61	57	64	45	45	71	32	22	91	64	38	42	47	64	38	
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1240	63	17	40	50	67	20	45	25	62	35	47	24	60	65	46	11	71	50	50	75	41	52	73	25	62	54	20	76	66	36	50	48	30	87	35	40	27	32	46	43	
DISI	52	32	51	62	72	25	42	26	74	43	52	40	61	53	52	15	68	46	54	75	51	46	63	27	58	53	37	56	54	33	53	36	27	83	49	39	29	34	44	36	
DISA	46	50	44	50	82	29	50	31	77	54	63	50	63	54	39	17	75	50	48	74	43	45	67	30	59	48	38	66	52	47	60	36	27	81	68	48	35	51	35		
DISB	52	36	51	53	80	28	43	27	59	49	50	31	59	62	45	11	80	45	43	85	57	52	76	31	72	63	29	75	51	38	69	41	30	81	61	47	34	33	51	46	
DISC	56	38	56	45	74	27	55	33	71	43	56	40	56	62	41	13	76	45	47	69	45	48	81	34	67	57	26	67	62	36	56	37	18	80	47	37	33	34	54	45	
DISD	56	39	66	61	85	29	53	35	71	52	57	46	65	66	37	15	81	57	50	78	54	51	77	30	75	54	28	77	59	49	64	49	23	84	47	47	42	33	60	43	
DISI	52	32	51	62	72	25	42	26	74	43	52	40	61	53	52	16	68	46	54	75	51	46	63	27	58	53	37	56	54	33	53	36	27	83	49	39	29	34	44	36	
S101	52	38	54	56	79	28	48	33	70	49	55	41	62	59	43	15	76	50	49	77	51	49	72	30	67	55	32	68	55	41	61	41	26	82	54	44	35	34	52	41	

206 CIVICS                      TECR5J05                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	TOTAL		
1110	32	13	28	29	72	28	27	50	36	50	88	38	35	33	18	38	39	30	31	67	42	50	44	46	27	50	34	30	48	43	78	54	46	19	27	48	71	68	41	35	48		
DISA	29	16	29	34	56	32	28	43	41	45	82	37	34	40	14	39	49	28	33	60	44	49	52	48	32	51	26	33	40	47	71	42	38	20	37	51	67	57	42	43	46		
1250	30	20	26	33	53	41	48	49	52	63	61	25	37	69	22	36	66	41	39	63	39	47	48	37	36	55	21	29	28	44	68	46	54	29	59	51	80	63	56	58	49		
1100	38	24	24	27	39	50	30	41	55	54	55	39	19	40	20	21	43	21	25	65	38	44	31	32	27	37	22	24	30	45	65	37	31	29	46	50	69	40	37	39	43		
DISC	33	21	25	31	48	44	42	46	53	60	59	30	31	61	21	31	58	34	34	64	38	46	42	35	33	49	21	28	28	44	67	43	46	29	55	51	76	55	50	51	47		
1120	29	25	29	32	44	45	32	45	46	41	65	22	30	52	22	30	47	41	34	38	46	48	37	43	34	48	26	32	30	38	60	31	48	25	58	51	74	52	47	39	45		
1160	31	18	22	22	36	45	22	45	59	54	90	27	18	63	31	31	68	18	45	54	59	50	40	18	36	50	18	22	22	45	59	18	54	36	68	59	77	36	36	54	45		
DISC	30	24	28	31	43	45	31	45	49	43	70	23	28	54	24	31	51	37	36	41	49	49	37	38	34	49	25	31	29	39	60	29	50	27	60	52	75	49	45	42	45		
1050	46	26	26	30	50	49	25	49	60	65	79	31	45	44	30	48	65	40	56	59	49	50	40	45	39	49	29	40	43	35	78	45	49	40	48	57	76	70	61	50	53		
1070	38	20	26	32	53	39	36	52	61	73	37	34	59	23	33	56	46	36	63	49	51	47	47	40	50	36	29	46	44	75	40	36	23	52	56	76	62	48	56	49			
DISD	42	22	26	31	52	42	33	51	62	75	35	37	54	25	37	59	44	42	62	43	51	45	46	40	49	33	33	45	41	76	42	40	28	51	56	76	65	52	54	50			
1030	**	0	0	**	0	0	0	**	0	0	**	0	0	**	0	0	0	0	0	**	0	**	0	**	0	**	**	**	**	**	**	**	**	0	0	0	0	0	**	0	**	0	46
1080	25	16	11	20	41	38	15	28	27	29	49	20	27	12	18	22	33	10	22	45	19	47	36	50	24	47	23	33	19	24	49	45	9	10	49	22	35	24	22	22	32		
1200	38	28	59	55	66	36	28	44	54	50	79	55	37	59	27	44	66	25	44	59	57	59	57	40	50	59	30	49	40	69	67	61	44	57	67	40	71	72	55	37	54		
1210	59	38	38	59	63	31	38	22	61	49	70	36	36	63	17	35	47	52	42	47	38	57	47	26	40	61	28	31	45	52	77	64	42	57	59	52	64	70	43	45	55		
1240	35	15	5	30	41	43	34	46	43	48	73	34	27	45	15	26	39	28	27	50	38	45	33	49	34	52	17	38	25	33	75	40	34	46	44	57	80	65	40	45	43		
DISC	36	21	21	36	49	37	27	36	42	42	65	33	30	40	18	29	43	25	30	49	35	50	40	44	34	53	23	37	29	39	65	49	28	39	52	42	61	53	38	36	43		
DISA	29	16	29	34	56	32	28	43	41	45	82	37	34	40	14	39	49	28	33	60	44	49	42	48	32	51	26	33	40	47	71	42	38	20	37	51	67	57	42	43	46		
DISB	33	21	25	31	48	44	42	46	53	60	59	30	31	61	21	31	58	34	34	64	38	46	42	35	33	49	21	28	28	44	67	43	46	29	55	51	76	55	50	51	47		
DISC	30	24	28	31	43	45	31	45	49	43	70	23	28	54	24	31	51	37	36	41	49	49	37	38	34	49	25	31	29	39	60	29	50	27	60	52	75	49	45	42	45		
DISD	41	22	26	31	52	42	33	51	49	62	75	35	37	54	25	37	59	44	42	62	49	51	45	46	40	49	33	33	45	41	76	42	40	28	51	56	76	65	52	54	50		
DISC	36	21	21	36	49	37	27	36	42	42	65	33	30	40	18	29	43	25	30	49	35	50	40	44	34	53	23	37	29	39	65	49	28	38	52	42	61	53	38	36	43		
STUT	35	21	25	32	50	40	32	44	47	52	70	33	33	50	21	33	52	34	35	57	42	49	42	43	35	50	26	32	35	42	69	43	39	29	50	50	71	57	46	46	46		

**FOREIGN LANGUAGES**



BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL

SPANISH I

1985 - 1986

	GRAMMAR	READING	FUNCTIONAL OBJECTIVES	CULTURE
E.18	Use correct form of the adj. to agree in no. & gender w/noun	4		
H.3	Use gustar & other similar verbs (encantar) correctly	4		
I.1	Use contractions al and del correctly	4		
E.1	Use correct form of the adj. to agree in no. & gender: w/noun	4		
E.16	Use conjugated forms of regular verbs correctly in pres. tense	4		
K.2	Using saber and conocer in correct form	4		
H.3	Using double negatives with negative words such as nadie			
M.8	Use contractions al and del correctly			
G.3	Using idiomatic expressions			
M.7	Use correct forms of pronouns after a preposition			
I.8	Use idiomatic expressions with tener and hacer			
E.17	Use correct forms of demonstrative adjectives			
G.5	Use pedir and preguntar in correct form			
E.13	Use infinitive form of the verb correctly after prepositions			
E.16	Place object pronouns in correct position before conjug. verb			
M.5	Use ir a to describe actions that will occur in the future			
M.5	Use saber and conocer in correct form			
H.1	Use basic time expressions (time, days, months, date, seasons)			
E.15	Use correct definite article to agree in no. & gender w/noun			
I.3	Using ser and estar in correct form			
M.7	Use shortened forms of the masculine singular adjectives			
M.5	Use idiomatic expressions with tener and hacer			
E.15	Use basic time expressions			
L.2	Using ser and estar in correct form			
E.15	Using interrogative words correctly			
I.1	Using ser and estar in correct form			
H.3	Use correct form of the adj. to agree in no. & gender w/noun			
M.6	Use the contractions al and del correctly			
M.6	Using vocabulary i.e., family, everyday objects, animals, etc.			
M.6				
E.1	Use conjugated form of reg. verbs correctly in present tense			
M.6	Using vocabulary			
G.3	Use the correct form of pronouns after a preposition			
G.5	Place object pronouns in correct position before conjug. verbs			
M.7	Use idiomatic expressions with tener and hacer			
I.1	Use correct form of the adj. to agree in no. & gender w/noun			
I.9	Using correct forms of possessive adjectives			
E.6	Use conjugated forms of common irreg. verbs in preterite tense			
C.2		4		
C.2	Reading with sufficient comprehension to interpret set expressions in areas of immediate need	4		
C.1		4		
C.1	Reading with sufficient understanding to interpret highly contextualized words or cognates within predictable areas	4		
C.1		4		
R.9			a	
T.3	Expressing want, desire or intention		b	
R.8	Instructing or directing others to do something		c	
S.2	Expressing gratitude		d	
R.1	Expressing regret		e	
R.1	Expressing likes, dislikes, or preferences			
V & W	Cultural Knowledge			1
	Cultural Attitudes			0

377 SPANISH I                      TECR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
1040	51	62	17	44	13	51	51	31	48	51	31	27	20	55	37	44	31	51	65	31	55	41	20	51	48	58	55	44	62	62	34	68	31	44	51	51	27	37	55	13	
1110	70	73	52	64	68	61	68	73	53	73	59	50	70	58	59	67	55	59	79	64	68	68	59	67	71	70	55	68	67	76	62	70	61	71	68	65	58	68	64	74	
DISA	64	69	41	58	52	58	57	60	57	66	51	43	55	57	53	60	47	57	75	54	64	60	47	62	64	66	55	61	65	71	54	69	52	63	63	61	48	59	61	56	
1250	81	46	46	47	36	54	57	51	35	80	59	20	28	27	30	55	34	17	69	48	37	57	36	50	35	47	39	37	48	46	31	51	42	55	42	42	26	27	61	23	
1100	62	62	17	58	17	20	55	27	31	55	58	34	24	3	10	34	10	68	68	27	27	41	10	34	55	51	17	27	31	20	20	34	31	41	34	37	20	27	51	10	
DISB	76	50	39	50	31	46	57	45	34	74	58	23	27	21	25	50	28	29	69	43	35	53	29	46	40	48	34	35	44	40	29	47	39	52	40	41	26	27	58	20	
1060	58	47	11	35	23	47	52	35	35	58	41	41	11	35	41	35	5	23	70	11	23	64	23	35	76	41	64	64	29	23	35	35	29	23	35	35	29	5	52	17	
1120	87	67	48	77	54	54	70	74	64	70	58	45	51	48	61	51	64	58	77	70	67	64	45	67	80	70	61	67	58	74	51	54	54	70	54	77	51	54	67	61	
1160	95	75	37	62	31	34	34	55	79	55	62	17	34	48	37	56	34	65	68	27	55	65	31	41	48	68	58	48	58	65	27	48	48	62	51	55	55	20	51	34	
DISC	84	66	36	62	38	45	53	58	63	62	55	33	36	45	48	50	40	53	72	41	53	64	35	50	67	63	61	59	51	59	38	48	46	57	49	59	48	31	58	41	
1050	76	72	34	48	32	51	37	48	39	67	41	34	44	25	37	23	16	37	69	53	44	50	20	37	62	32	30	67	69	34	27	25	58	51	44	25	23	46	20		
1070	70	76	41	70	64	64	41	47	70	76	47	23	41	41	52	47	70	47	82	64	52	70	58	64	64	82	70	58	52	76	76	17	70	58	64	41	23	58	82	58	
DISD	75	73	36	55	41	55	38	48	48	70	43	31	43	30	41	30	31	40	73	56	46	63	31	45	63	46	41	65	65	46	41	23	81	58	55	43	25	33	56	31	
1080	58	57	24	71	25	43	32	36	53	64	50	28	30	46	48	45	15	47	59	46	51	62	29	43	50	63	51	51	64	58	28	53	43	54	52	58	42	36	62	41	
1190	**	**	80	**	**	**	80	**	**	**	**	80	80	80	60	**	80	**	**	**	80	**	80	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
1210	82	68	50	69	36	56	43	69	57	59	56	45	56	56	45	60	41	45	71	42	67	71	57	65	73	61	56	48	75	64	54	65	67	67	63	58	44	31	59	69	
1240	88	72	48	74	52	56	38	50	48	70	46	36	34	54	40	44	28	36	72	52	52	52	24	26	42	64	48	46	58	34	40	38	82	52	46	36	32	40	72	32	
DISE	75	65	41	71	37	52	39	54	54	64	52	38	42	52	45	52	30	45	67	47	58	64	40	50	58	63	53	50	68	56	42	56	61	60	55	53	41	36	64	51	
DISA	64	69	41	58	52	58	57	60	52	66	51	43	55	57	53	60	47	57	75	54	64	50	47	62	64	66	55	61	65	71	54	69	52	63	63	61	48	59	61	56	
DISB	76	50	39	50	31	46	57	45	34	74	58	23	27	21	25	50	28	29	69	43	35	53	29	46	40	48	34	35	44	40	29	47	39	52	40	41	26	27	58	20	
DISC	84	66	36	62	38	45	53	58	63	62	55	33	36	45	48	50	40	53	72	41	53	64	35	50	67	63	61	59	51	59	38	48	46	57	49	59	48	31	58	41	
DISD	75	73	36	55	41	55	38	48	48	70	43	31	43	30	41	30	31	40	73	56	46	63	31	45	63	46	41	65	65	46	41	23	81	58	55	43	25	33	56	31	
DISE	75	65	41	71	37	52	39	54	54	64	52	38	42	52	45	52	30	45	67	47	58	64	40	50	58	63	53	50	68	56	42	56	61	60	55	53	41	36	64	51	
STOT	75	64	39	62	39	51	47	53	50	67	53	34	40	43	42	50	34	44	70	47	52	61	38	50	57	59	49	51	60	55	41	52	55	58	52	52	39	37	61	42	

377 SPANISH I                   TECR5005                   11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL   41 47 43 44 45 TOTAL

1040   37 20 48 31 82 43  
 1110   67 50 49 40 82 64  
 DISA   58 41 48 37 82 58

1250   67 59 60 63 75 46  
 1100   6   6 13 13 20 31  
 DISB   52 46 48 51 61 42

1060   35 29 29 23 70 36  
 1120   54 64 61 64 80 63  
 1160   44 17 51 34 82 49  
 DISC   46 38 50 44 79 52

1050   41 32 32 37 69 43  
 1070   52 76 23 76 88 59  
 DISD   45 45 30 48 75 48

1080   39 31 34 41 79 46  
 1190   \*\* 80 \*\* \*\* 80 91  
 1210   57 38 55 51 75 58  
 1200   67 68 42 42 76 49  
 DISE   52 43 45 46 77 53

DISA   58 41 48 37 82 58  
 DISB   52 46 48 51 61 42  
 DISC   46 38 50 44 79 52  
 DISD   45 45 30 48 75 48  
 DISE   52 43 45 46 77 53  
 STOT   51 43 45 45 74 51

BOSTON PUBLIC SCHOOLS  
DEPARTMENT OF EDUCATIONAL TESTING  
CURRICULUM REFERENCED FINAL      SPANISH II  
1985 - 1986

C.1	Reading with sufficient comprehension to understand in printed form the simplest connected material dealing w/basic survival or social needs	5	READING	
E.16	Use irregular affirmative informal commands correctly	6		
E.15	Use regular affirmative informal commands correctly	7		
E.17	Use negative informal commands and affirmative and negative formal commands correctly	8		
E.11	Use conjugated forms of reg. verbs in the present perfect tense	9		
I.5	Use the past participle as an adjective correctly	0		
E.24	Use the infinitive form of the verb after prepositions	1		
J.4	Use pero in positive statements & sino in negative statements	1		
K.2 } K.2 }	Form negative constructions two ways (nadie me habla; no me habla nadie)	2		
		3		
L.2	Use interrogative words correctly	4		
Level I G.9	Use the correct forms of demonstrative pronouns	5		
Level I I.8	Use correct forms of demonstrative adjectives	6		
Level I L.2	Use interrogative words correctly	7		
Level I I.7	Use correct patterns w/tan...como to make comparisons of equality	8		
Level I L.2	Use interrogative words correctly	9		
Level I E.9	Use conjugated forms of reg. verbs in the conditional tense	0		
E.5	Use conjugated forms of reg. & irr. verbs in the imperfect tense	1		
E.21	Use subjunctive mood to express doubt, denial and unreality	2		
E.7	Use conjugated forms of reg. verbs in the future tense	2		
E.3	Use conjugated forms of spell/change verbs in the present tense	3		
G.10 } G.10 }	Use the relative pronouns que and quien correctly	4		
		5		
E.23	Use the passive voice correctly	6		
I.5	Use the past participle as an adjective correctly	7		
H.4	Omit articles w/unmodified nouns of nationality & occupation	8		
M.1	Recognize uninverted questions by intonation	9		GRAMMAR PART A
Level I G.3	Use the correct forms of pronouns after a preposition	0		
Level I I.7	Use correct patterns w/tan...como to make comparisons of equality	1		
Level I H.8	Use other idiomatic expressions (acabar de, por lo menos)	2		
Level I G.10	Use the relative pronouns que and quien correctly	3		

E.3 } Use conjugated forms of regular, irregular and stem-changing verbs correctly in the preterite tense	36 - 45	GRAMMAR PART C
E.8 } Use conjugated forms of irregular verbs correctly in the future tense (decir, hacer, poder, querer, saber, poner, salir, tener, venir)	46 - 55	VERBS
P.10 Report and answer requests for factual information P.5 Report information chronologically related R.4 Inquire about interest or disinterest R.10 Inquire about satisfaction, dissatisfaction, or disappointment R.13 Express want, desire, or intention	5 5 5 5 5 6 6 7 8 9 0	FUNCTIONAL OBJECTIVES
V,W Cultural Knowledge and Cultural Attitudes	1 - 10	CULTURE

379 SPANISH II TECK5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOTE: 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	TOTAL
1040	41	52	35	29	47	17	76	52	11	58	52	23	70	70	70	58	47	47	58	70	23	58	17	29	35	41	47	47	47	88	76	76	76	52	70	50
1110	41	70	83	51	58	67	80	83	80	70	87	64	93	96	83	67	54	80	80	80	67	58	64	90	87	45	51	87	77	87	90	96	74	54	87	75
DISA	41	64	66	43	54	50	79	72	50	79	75	50	85	87	79	77	52	68	72	77	52	58	47	68	68	43	50	72	66	87	85	89	75	54	81	66
1250	83	77	77	72	81	40	64	62	66	68	61	66	66	55	40	74	42	66	74	57	57	74	40	62	24	55	25	55	72	83	77	87	79	75	79	64
1100	40	43	25	34	28	15	46	28	40	71	34	21	31	21	71	37	28	21	34	21	40	34	40	28	40	34	34	46	40	62	28	43	43	31	31	36
DISB	67	65	58	58	61	31	58	50	56	69	51	50	53	43	52	60	37	50	59	44	51	59	40	50	30	47	29	52	60	75	59	70	66	59	61	54
1060	42	64	21	28	57	35	64	57	14	57	21	14	42	28	50	35	42	64	35	24	28	21	7	28	42	42	14	42	42	85	71	64	57	21	50	40
1120	75	63	58	44	66	47	66	38	52	77	47	50	61	47	63	55	36	50	61	50	27	50	47	33	63	52	41	58	66	75	61	61	58	33	41	53
1160	23	41	29	29	11	88	70	35	29	23	35	17	29	35	64	52	35	35	35	47	11	23	35	35	47	11	17	64	64	88	88	82	88	47	23	42
DISC	55	58	43	37	50	55	67	41	38	59	38	34	47	40	61	50	37	49	49	41	23	37	35	32	55	40	29	56	61	80	70	67	65	34	38	48
1050	39	46	35	25	46	60	71	60	14	53	32	17	64	46	60	50	25	53	53	35	17	25	10	14	25	42	32	57	46	92	67	78	60	78	71	46
1070	83	83	50	66	66	66	66	50	83	66	83	66	**	**	83	83	50	83	66	**	50	50	50	66	0	83	33	83	83	83	83	83	83	66	83	70
DISD	47	52	38	32	50	61	70	58	26	55	41	26	70	55	64	55	29	58	55	47	23	29	17	23	20	50	32	61	52	91	70	79	64	76	73	50
1080	43	48	27	37	62	45	51	40	29	56	51	27	56	45	54	56	45	56	51	48	32	45	27	40	29	29	29	54	67	75	54	75	64	62	70	48
1210	82	58	60	38	62	40	74	42	36	66	58	28	66	64	44	60	42	64	56	64	26	24	54	24	52	52	22	48	60	90	76	82	48	74	62	54
1240	33	72	33	22	50	44	83	55	27	72	77	27	38	33	44	74	50	55	61	66	27	33	0	44	16	38	44	66	44	66	77	44	88	66	77	50
DISF	60	57	43	35	60	42	67	43	32	63	59	27	52	47	64	44	60	55	59	28	33	35	33	38	41	28	53	60	80	68	73	60	68	67	51	
DISA	41	64	66	43	54	50	79	72	56	79	75	50	85	87	79	77	52	68	72	77	52	58	47	68	68	43	50	72	66	87	85	89	75	54	81	66
DISB	67	65	58	58	61	31	59	50	56	69	51	50	53	43	52	60	37	50	59	44	51	59	40	50	30	47	29	52	60	75	59	70	66	59	61	54
DISC	55	58	43	37	50	55	57	41	38	59	38	34	49	40	61	50	37	49	49	41	23	37	35	32	55	40	29	56	61	80	70	67	65	34	38	48
DISD	47	57	38	37	50	61	70	58	26	55	41	26	70	55	64	55	29	50	55	47	23	29	17	23	20	50	32	61	52	91	70	79	64	76	73	50
DISF	60	57	43	35	60	42	67	43	32	63	59	27	52	47	64	44	60	55	59	28	33	35	33	38	41	28	53	60	80	68	73	60	68	67	51	
STOT	57	60	50	47	56	45	67	50	42	65	53	37	52	57	61	40	56	57	53	36	43	36	41	42	44	32	57	60	81	69	74	65	58	62	53	

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

FRENCH I

1985 - 1986

I.5	Using correct forms of interrogative adjective quel	1	GRAMMAR
H.9	Using the partitive de in negative statements	2	
M.8	Use idiomatic expressions w/avoir, faire & locutions like à cote	3	
I.2	Correctly placing descriptive adjective after noun	4	
E 10	Using aller plus infinitive to describe actions occurring in future	5	
M.8	Using idiomatic expressions with avoir, faire, jouer a, jouer de,	6	
M.8	and locutions like a cote de & common prepositions & pts. compass	7	
G.8	Place object pronouns before an infinitive when conjugated verb is followed by an infinitive	8	
H.8	Use the correct form of partitive (du, de l', des, de la)	9	
I.7	Use correct forms of possessive adjectives	0	
E.6	Use conj. forms of reg. verbs correctly in the passe compose tense	1	
I.4	Use correct comparative forms of adjectives	1	
I.7	Use correct forms of possessive adjectives	2	
G.7	Place indirect object pronouns in position before conj. verb	3	
M.8	Use idiomatic expressions w/avoir & locutions like a cote	4	
G.11	Use forms of disjunctive pronouns alone, after prepositions	5	
I.6	Use correct forms of demonstrative adjectives	6	
J.2	Use adverbs of quantity with de and nouns	7	
I.1	Use forms of reg. adjectives to agree in no. & gender w/the noun	8	
I.5	Use correct forms of interrogative adjective quel	9	
E.5	Use commands correctly	0	
E.6	Use conjugated forms of reg. verbs in the passe compose tense	1	
G.12	Use y and en correctly and placing before verb	2	
J.1	Use & place adverbs correctly in a sentence	2	
E.7	Use conj. forms of common irregular verbs in passe compose tense	3	
H.10	Use de before plural adjectives that precede the noun	4	
G.10	In affirmative command, place obj. pronouns after verb w/hyphen	5	
M.8	Use idiomatic expressions with avoir, faire, jouer a, jouer de,	6	
M.8	locutions like a cote de & points of the compass	7	
G.12	Use y and en correctly and placing before verb	8	
G.5	Place direct obj. pronouns in position before conjugated verbs	9	
E.7	Use conj. forms of common irr. verbs in the passe compose tense	0	
H.3	Use the contractions au, aux, du, des correctly	1	
K.2	Use interrogative words correctly	2	
M.7	Use vocabulary from areas for example: human body, geography	3	
I.6	Use correct forms of demonstrative adjectives	3	
L.1	Form negative sentences by placing ne & pas around verb/present	3	
K.2	Use interrogative words correctly	3	
L.3	Use ne...jamais in the present, by placing around the verb	4	
M.7	Use vocabulary from areas for example: dishes & utensils	4	
C.1	Reading with sufficient understanding	4	READING
C.2	Reading with sufficient comprehension to interpret set	4	
C.2	expressions in areas of immediate need	4	
C.2		5	
E.2	Using conjugated forms of common irregular verbs correctly in the present tense: etre, avoir, aller, faire, dire, pouvoir	1 - 10	IRREG. VERBS

FRENCH I

R.3 P.9 P.7 Q.5 S.1b	Express interest or lack of interest Report and answer requests for factual information Request objects or information Express & inquire about permission to do something Apologizing & granting forgiveness; accepting the apology	a b c d e	FUNCTIONAL OBJECTIVES
V,W	Cultural Knowledge and Cultural Attitudes	1 - 10	CULTURE



309 FRENCH I TCCR5005 11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
 NOT 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY \*\*

SCHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
1040	54	54	40	32	21	51	18	16	35	40	21	18	54	43	24	29	13	24	27	48	29	27	16	43	45	11	35	40	24	2	24	21	45	51	48	59	59	18	64	93		
1110	72	68	84	60	44	68	78	40	60	44	52	60	56	52	60	58	48	23	40	72	24	36	20	36	32	8	52	32	24	10	40	24	60	60	80	48	76	28	44	64		
DISA	61	59	53	43	30	58	22	25	45	41	33	35	54	46	39	37	27	25	32	58	27	30	17	40	40	16	41	37	17	30	22	51	54	61	54	66	22	56	75			
1250	56	26	41	39	48	56	29	31	46	41	43	51	51	36	29	65	26	19	51	60	75	36	56	60	36	17	43	29	21	13	26	34	60	48	73	39	68	14	48	36		
1100	50	75	67	54	54	50	16	45	58	45	70	58	70	25	70	66	54	54	41	66	75	62	4	75	50	8	75	58	25	8	12	62	79	66	70	50	79	58	66	54		
D1SB	53	44	49	44	50	53	24	36	50	43	53	53	58	32	44	66	36	32	47	63	75	46	36	66	41	13	55	40	23	15	21	44	67	55	72	43	72	30	55	43		
1060	80	40	80	40	60	40	40	60	40	40	60	40	40	60	60	80	20	40	20	60	80	20	40	60	40	0	80	0	0	20	0	60	60	60	60	0	**	40	**	20		
1120	84	23	23	7	53	61	23	7	7	30	23	23	15	30	23	23	7	15	30	38	15	23	15	7	46	53	53	23	30	30	23	15	53	23	53	61	53	38	53	15		
1160	90	67	78	68	65	71	53	68	59	59	68	62	66	59	62	43	78	46	56	62	50	46	46	65	65	37	68	43	43	62	43	43	65	62	75	68	81	40	75	46		
D1SC	88	50	64	50	62	66	44	52	44	50	56	50	52	52	52	42	54	38	46	56	44	38	38	50	58	38	66	34	36	50	34	38	62	52	68	60	76	40	72	36		
1080	54	39	42	45	32	26	21	32	47	45	26	43	63	35	45	54	36	27	35	58	26	43	23	64	20	17	60	20	12	13	28	28	63	35	53	50	63	35	47	36		
1210	93	67	33	70	66	37	20	58	58	29	16	41	45	45	25	70	20	12	70	58	41	29	4	41	16	16	87	12	16	8	45	12	70	50	37	41	54	41	45	50		
D1SE	61	45	44	51	41	28	21	39	50	41	23	43	58	38	40	58	32	23	44	58	29	40	18	58	19	17	67	18	13	12	32	24	64	39	49	48	60	37	47	40		
D1SA	61	59	53	43	30	58	22	25	45	41	33	35	54	46	38	37	27	25	32	58	27	30	17	40	40	16	41	37	24	17	30	22	51	54	61	54	66	22	56	75		
D1SB	53	44	49	44	50	53	24	36	50	43	53	53	58	32	44	66	36	32	47	63	75	46	36	66	41	13	55	40	23	15	21	44	67	55	72	43	72	30	55	43		
D1SC	88	50	64	50	62	66	44	52	44	50	56	50	52	52	52	42	54	38	46	56	44	38	38	50	58	38	66	34	36	50	34	38	62	52	68	60	76	40	72	36		
D1SD																																										
D1SE	61	45	44	51	41	28	21	39	50	41	23	43	58	38	40	58	32	23	44	58	29	40	18	58	19	17	67	18	13	12	32	24	64	39	49	48	60	37	47	40		
STDT	64	49	52	47	44	48	26	37	48	43	39	45	56	41	43	52	36	28	42	59	42	39	26	54	36	20	58	30	22	21	29	31	62	48	60	50	67	32	55	48		



309 FRENCH I                      TECR5005                      11/07/86  
 PERCENTAGE OF CORRECT ANSWERS PER ITEM  
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SCHL	41	42	43	44	45	TOTAL
1040	62	43	29	8	45	36
1110	68	36	20	8	32	46
DISA	64	40	25	8	40	40
1250	75	78	78	58	56	45
1100	83	79	45	50	54	54
DISB	78	78	66	55	55	48
1060	80	60	60	20	20	46
1120	23	15	30	15	30	30
1160	93	75	71	43	28	60
DISC	74	58	60	34	28	51
1080	36	12	30	9	20	37
1210	66	41	50	12	25	41
DISD	44	19	35	10	21	38
DISA	64	40	25	8	40	40
DISB	78	78	66	55	55	48
DISC	74	58	60	34	28	51
DISD						
DISD	44	19	35	10	21	38
DISD	44	19	35	10	21	38
STOT	62	45	44	24	35	43