

Alabama Curriculum Matrix Summary

Alabama Reading and Mathematics Test

The Alabama State Board of Education (SDE) in compliance to the *Education Accountability Act (ECC) of 1998* and the *No Child Left Behind Act of 2001* (NCLB) requires testing in grades 3-8 to assess student achievement based upon the Alabama courses of study in reading and mathematics. Alabama uses the Stanford Achievement Test 10 and the Alabama Reading and Mathematics Test (ARMT) and Alabama Science Assessment (ASA) to measure student achievement. Comprehensive information concerning ARMT can be obtained at www.alsde.edu/html/sections/documents.asp?section=91&sort=10&footer=sections.

Alabama High School Graduation Exam

The Alabama High School Graduation Exam (AHSGE) tests eleventh-grade students on language, reading, mathematics, science, and social studies. To receive a diploma for the State of Alabama, a student must pass all the sections in addition to completing the required Carnegie units of credit as established by the Alabama State Board of Education and the local school district. Comprehensive information concerning ARMT can be obtained at www.alsde.edu/html/sections/documents.asp?section=91&sort=12&footer=sections.

English Language Arts

The *Alabama Course of Study: English Language Arts* provides the framework for the K-12 study of English Language Arts in Alabama's public schools. The content standards in this course of study (COS) reflect the minimum requirements under Alabama law. The standards are aligned with applicable assessments at each grade level. School districts may include additional standards that they feel meet the unique educational needs at the local level. The English language arts course of study is founded on two major goals: to comprehend meaning and to express meaning effectively. To meet these goals, the curriculum framework for English language arts is divided into 6 strands: reading, listening, viewing, writing, speaking, and presenting. For a more comprehensive description of the English language arts course of study, go to www.alsde.edu/html/sections/documents.asp?section=54&sort=5&footer=sections.

Priority Designation

Information necessary to make priority designations relative to test data was obtained from the Alabama State Department of Education Web Site (www.alsde.edu). Blueprints for each ARMT can be accessed at this site from this site at www.alsde.edu/html/sections/documents.asp?section=91&sort=12&footer=sections and blueprints for the AHSGE can be accessed at www.alsde.edu/html/sections/documents.asp?section=91&sort=12&footer=sections.

Blueprints for both tests reveal the number of possible score points for each content standard.

In determining the priority ELA designations for ARMT, the average (mean) numbers of test points for a standard were calculated (14.73). The standard deviation was returned (5.05) and subtracted from the mean to establish the cut-off point (9.68) between Medium (M) and High (H). Each objective was given a rating based on the score for its particular strand. Course of studies objectives aligned to a test standard with 1-9 score points were given a Medium (M) designation. Course of study objectives aligned with a test standard with score points greater than 9 were given a High (H) designation. A Low (L) designation was given to objectives that did not have any score points or if there were no test standards aligned to a course of study standard. The number of score points on the AHSGE was not revealed. However, the item specification for AHSGE provided specific information about the number of test items for each AHSGE standard and objective. All the test standards had 5 items on the test except Standard V, Objective 1. This standard had 10 test items on the test. Therefore, the standard deviation from the mean was not significant and each AHSGE test standard aligned to a course of study

standard was rated High (H). A Low (L) designation was given to any course of study objective that was not aligned with the AHSGE test standards. A summary of these designations are presented in Table 1.below.

Table 1. English Language Arts Data Summary

	Strands	Standards	ARMT/AHSGE			NESS*		
English Language Arts			H	M	L	H 1-19	M 20-38	L 39+
Grade 3	6	35	8	3	24	29	6	0
Grade 4	6	35	9	1	25	28	6	1
Grade 5	6	36	15	0	21	26	10	0
Grade 6	6	30	7	0	23	22	8	0
Grade 7	6	28	7	0	21	19	9	0
Grade 8	6	27	5	0	22	22	5	0
English 10	6	30	5	0	25	21	9	0
English 11	6	32	4	0	28	17	14	1
Totals	48	253	60	4	189	184	67	2

Mathematics

The *Alabama Course of Study: Mathematics* specifies a minimum foundation of mathematics for all students. This course of study incorporates the recommendations from the National Council of Teachers of Mathematics. The five content standards in the mathematics course of study are: Numbers and Operations, Algebra, Geometry, Measurement, and Data Analysis and Probability.

Priority Designations

Information necessary to make priority designations relative to test data was obtained from the Alabama State Department of Education Web Site. The Alabama State Department of Education has provided information concerning possible test points earnable for content standards and objectives. This information can be found at www.alsde.edu/html/sections/documents.asp?section=91&sort=10&footer=sections. The average (mean) number (4.6) of possible test points earnable for content standards was calculated. The standard deviation (1.6) was returned and subtracted from the mean. This number, one standard deviation below the mean (3.0), is the cut-off number for High (H) and Medium (M) priority designations. Therefore, L = 0, 1-3 = M, and >3 = H. A summary of these designations are presented in Table 2.below.

Table 2. Mathematics Data Summary

	Standards	Standards	ARMT/AHSGE			NESS*		
	Mathematics		H	M	L	H 1-16	M 17-42	L 43+
Grade 3	5	15	10	5	0	13	2	0
Grade 4	5	17	13	4	0	11	6	0
Grade 5	5	15	9	6	0	12	3	0
Grade 6	5	11	11	0	0	9	2	0
Grade 7	5	13	13	0	0	12	1	0
Grade 8	5	14	14	0	0	12	2	0
Algebra I	5	15	12	1	2	7	6	2
Geometry	5	18	14	0	4	12	4	2
Totals	40	118	96	16	6	88	26	4

Science

The *Alabama Course of Study: Science* provides the framework for the K-12 science education program in Alabama's public schools. The content standards in this course of study (COS) reflect the minimum requirements under Alabama law. The standards are aligned with applicable assessments at each tested grade level. School districts may include additional standards that they feel meet the unique educational needs at the local level.

The 2004-2005 Science State Course of Study Committee and Task Force was responsible for developing the science course of study, which was adopted by the State Board of Education in 2005. The goal of the science course of study is the achievement of scientific literacy by all Alabama students.

Priority Designations

Information necessary to make priority designations relative to test data was obtained from the Alabama State Department of Education Web Site. The Alabama State Department of Education has provided information concerning possible test points earnable by content standard and objective for the AHSGE. This information can be found at www.alsde.edu/html/sections/documents.asp?section=54&sort=7&footer=sections.

Fifth grade priority designations were determined from the number of points possible for each content standard. Each content standard in fifth grade science has six possible points. All of the content standards are tested. Therefore, all the content standards for fifth grade science were determined High (H) because there was no variance in the number of possible points per content standard in seventh grade science. However, there was a variance in the number of possible points per content standard in seventh grade test blueprints. The average number of points per standard was calculated (6.1). The standard deviation was returned (1.3) and subtracted from the average (4.6). Therefore, content standards with fewer than 4.6 possible score points were designated as Medium (M). High (H) priority designations were given to content standards with five or more possible score points. All the seventh grade content standards were tested. Because of this, no Low (L) priority designations were given. The high school science priority designations were determined by the same method as the seventh

grade science. The average (mean) number (4.6) of possible points was calculated. The standard deviation (1.6) was returned and subtracted from the mean. This number, one standard deviation below the mean (3.0), is the cut-off number for High (H) and Medium (M) priority designations. Therefore, L = 0, 1-3 = M, and >3 = H. A summary of the science data can be reviewed in Table 3. below.

Table 3. Science Data Summary

	Strands	Content Standards	ASA/AHSGE			NESS*		
	Science		H	M	L	H 1-32	M 33-50	L 51+
Grade 5	3	11	11	0	0	6	2	3
Grade 7	3	11	9	2	0	10	0	1
Science 9-12	4	46	29	0	17	33	8	5
Totals	10	68	49	2	17	49	10	9

**Alabama Curriculum Matrix Summary Totals
For ARMT/Standard 10 and AHSGE Tested Grade Levels
In English Language Arts, Mathematics and Science**

Table 4 below summarizes the data for English Language Arts, Mathematics, and Science assessed by the ARMT and AHSGE. English Language Arts and Mathematics ARMT assessments occur in grades 3-8. Science ARMT assessment of the newly adopted science course of studies occurs in grades 5 and 7. Students in grades 10 and 11 are assessed in English Language Arts, Mathematics, and Science with the AHSGE.

Table 4. Totals for All ARMT and AHSGE Tested Grade Levels in English Language Arts, Mathematics and Science.

	Strands	Standards	ARMT/ASA/AHSGE			NESS*		
			H	M	L	H	M	L
English Language Arts	48	253	60	4	189	184	67	2
Mathematics	40	118	96	16	6	88	26	4
Science	8	68	49	2	17	49	10	9
Grand Totals	96	439	205	22	212	321	103	15

**Alabama Curriculum Matrix Summary
Total Percentage for ARMT and AHSGE Tested in
English Language Arts, Mathematics and Science**

Table 5 below presents the number of objectives compared to the number of objectives tested in either/or ARMT or AHSGE tests. Using this data, the percentage of objectives tested was calculated.

Table 5. Total Percentage for ARMT and AHSGE Tested Grade Levels in English Language Arts, Mathematics, and Science.

	Number of Standards	Number of Standards Tested	Percent of Standards Tested
English LA	253	64	25%
Mathematics	110	116	95%
Science	68	51	75%
TOTAL	431	231	54%

Information Sources

Alabama Department of Education home Website

The various offices within the structure of the Alabama Department of Education can be accessed from their home page by clicking on “Sections” on the bar on the left side of the page. A list of the offices (sections) appears. Access to any one of the offices can be made by clicking on the name of the office.

http://www.alsde.edu/html/sections/section_detail.asp?section=54.

Office of the Alabama Student Assessment Program

This office manages the state testing program. Responsibilities from this office include development, administration, scoring and reporting of all required tests for K-12 student in Alabama. The Web site for this office can be accessed at www.alsde.edu/html/sections/section_detail.asp?section=91&footer=sections

Office of the Alabama Classroom Improvement Curriculum and Instruction

This section is responsible for the development, implementation, and assessment of the content standards and course design for K-12 student. It is also responsible for instructional support. The Website for this office can be accessed at www.alsde.edu/html/sections/section_detail.asp?section=54.

***The National Essential Skills Study** asked participants to identify what they believe are the 20 to 30 most important topics in English language arts, mathematics, science, and social studies. The topics compiled for each content area were adapted from national standards as identified by the National Council of Teachers of English, the National Council of Teachers of Mathematics, the National Research Council, and the National Council for the Social Studies, and from various state standards. All topics were reviewed by teams of subject-specialist teachers. In all, 50 English language arts, 70 mathematics, 85 science, and 60 social studies topics were identified for incorporation in NESS.

