

# Alaska Curriculum Matrix Summary

## Standards Based Assessment

The Standards Based Assessment (SBA) is a criterion based assessment. The SBA is aligned to the Alaska academic content standards that include Grade Level Expectations (GLEs).

## English Language Arts

The reading and writing components of the SBAs are composed of items that address GLEs in grades 3 through 10. The reading assessable GLEs for each grade level are distributed among the three major reporting categories: Word Identification Skills, Forming a General Understanding, and Analysis of General Content or Structure. The writing component of the SBAs has three major reporting categories: Write Using a Variety of Forms, Structures and Conventions of Writing, and Revising.

## Testing Priority Designation

Information necessary to make priority designations relative to assessments was obtained from the Alaska Department of Education Web site. The test blueprints found in *Alaska Comprehensive System of Student Assessment (Cssa) Technical Reports* provided the distribution of emphasis for each strand and assessable Grade Level Expectation (GLE). The percent of assessable test items per strand at each grade level was averaged. Standard deviations (STD) were calculated for each grade level and subtracted from the mean. This number established the cut-off point between Medium (M) priority designations and High (H) priority designations. Student learning expectations not tested were assigned a Low (L) priority designation. The results can be found in Table 1 below.

**Table 1: Reading/Writing Designation Data**

Grade	Mean	STD	Mean – STD	Designations		
				L = Low	M = Medium	H = High
3	35.83	12.33	23.50 = 24	0	1-24	>24
4	35.50	10.77	24.73 = 25	0	1-25	>25
5	36.00	11.22	24.78 = 25	0	1-25	>25
6	35.83	11.81	24.02 = 24	0	1-24	>24
7	36.33	11.35	24.98 = 25	0	1-25	>25
8	34.83	9.92	24.91 = 25	0	1-25	>25
9	35.33	16.38	18.95 = 19	0	1-19	>19
10	35.33	15.66	19.67 = 20	0	1-20	>20

English Language Arts summary data are presented in Table 2.

**Table 2. English Language Arts Assessment Data Summary**

English LA			Standards Based Assessment			NESS*		
Grade	Strands	GLE	H	M	L	H 1-19	M 20-38	L 39-50
3	16	34	13	5	16	24	7	3
4	17	43	22	1	20	27	11	5
5	17	45	26	0	19	28	11	6
6	17	46	26	4	16	28	12	6
7	16	51	29	4	18	30	16	5
8	16	51	29	4	18	30	16	5
9	15	55	34	4	17	38	13	4
10	15	54	34	4	16	35	14	5
<b>Totals</b>	129	379	213	26	140	240	100	39

## Mathematics

The mathematics component of the SBAs is composed of items that address GLEs in grades 3 through 10. The assessable GLEs for each grade level are distributed among the six reporting categories: Numeration, Measurement, Estimation and Computation, Functions and Relationships, Geometry, and Statistics and Probability.

### Testing Priority Designation

Information necessary to make priority designations relative to assessments was obtained from the Alaska Department of Education Web site. The test blueprints found in *Alaska Comprehensive System of Student Assessment (Cssa) Technical Reports* provided the distribution of emphasis for each strand and assessable Grade Level Expectation (GLE). The percent of assessable test items per strand at each grade level was averaged. Standard deviations (STD) were calculated for each grade level and subtracted from the mean. This number established the cut-off point between Medium (M) priority designations and High (H) priority designations. Student learning expectations not tested were assigned a Low (L) priority designation. The results can be found in Table 3 below.

**Table 3: Mathematics Priority Designation Data**

Grade	Mean	STD	Mean – STD	Designations		
				L = Low	M = Medium	H = High
3	18.33	3.10	15.23 = 16	0	1-16	>16
4	18.33	3.10	15.23 = 16	0	1-16	>16
5	18.33	3.10	15.23 = 16	0	1-16	>16
6	18.67	1.30	17.29 = 18	0	1-18	>18
7	19.00	2.98	17.02 = 18	0	1-18	>18
8	19.00	3.51	15.49 = 16	0	1-16	>16
9	18.00	2.62	15.38 = 16	0	1-16	>16
10	27	0.00	0.00	0	1-26	>26

Mathematics summary data are presented in Table 4.

**Table 4. Mathematics Assessment Data Summary**

Mathematics			Standards Based Assessment			NESS*		
Grade	Strands	GLE	H	M	L	H 1-16	M 17-42	L 43-70
3	8	47	12	20	15	33	12	2
4	8	48	14	18	16	35	10	3
5	8	46	13	18	15	34	10	2
6	8	48	16	17	15	32	15	1
7	8	47	17	17	13	32	14	1
8	8	45	16	18	11	30	14	1
9	8	38	17	11	10	27	9	2
10	8	40	27	0	13	24	15	1
<b>Totals</b>	72	359	132	119	108	247	99	13

## Science

### Testing Priority Designation

Information necessary to make priority designations relative to assessments was obtained from the Alaska Department of Education Web site. The test blueprints found in *Alaska Comprehensive System of Student Assessment (Cssa) Technical Reports* provided the distribution of emphasis for each strand and assessable Grade Span Expectation (GSE). The percent of assessable test items per strand at each grade span was averaged. Standard deviations (STD) were calculated for each grade span and subtracted from the mean. This number established the cut-off point between Medium (M) priority designations and High (H) priority designations. Grade span expectations not tested were assigned a Low (L) priority designation. The results can be found in Table 5 below.

**Table 5: Science Priority Designation Data**

Grade	Mean	STD	Mean – STD	Designations		
				L = Low	M = Medium	H = High
<b>4</b>	1.84	0.96	0.88 = 1	0	1	>1
<b>8</b>	1.83	0.96	0.87 = 1	0	1	>1
<b>11</b>	1.83	0.96	0.87 = 1	0	1	>1

Science summary data are presented in Table 6.

**Table 6. Science Assessment Data Summary**

Science	Content Domain	GSE	Standards Based Assessment			NESS*		
Grade			H	M	L	H 1-32	M 33-50	L 51-85
<b>3</b>	4	78	7	24	47	49	10	19
<b>7</b>	4	102	8	26	68	54	15	33
<b>10</b>	4	74	6	26	42	42	10	22
<b>Totals</b>	12	254	21	76	157	145	35	74

### Totals for English Language Arts, Mathematics, and Science

Table 7 presents the number of Standards compared to the number of Standards tested. Using this data, the percentage of Student Learning Expectations tested was calculated.

**Table 7. Totals and Percentages for English Language Arts, Mathematics, and Science.**

	Grade Level Expectations	Grade Level Expectations Tested	% Grade Level Expectations Tested
<b>Language Arts</b>	379	239	63.1%
<b>Mathematics</b>	359	251	70.0%
<b>Science</b>	254	97	38.2%
<b>TOTAL</b>	992	584	58.9%

## References

### Alaska Department of Education

<http://www.eed.state.ak.us/>

### Assessment

<http://www.eed.state.ak.us/tls/assessment/>

### Technical Report – Test Blueprints

<http://www.eed.state.ak.us/tls/assessment/techreports.html>

### Standards and Grade Level Expectations

<http://www.eed.state.ak.us/standards/>

<http://www.eed.state.ak.us/tls/assessment/GLEHome.html>

\***The National Essential Skills Study** (NESS) 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.

