

Virginia Curriculum Matrix Summary

Virginia Standards of Learning

Virginia’s Standards of Learning (SOL) delineates the Commonwealth’s student learning expectations in Grades K-12 in English, mathematics, science, history and social science, technology, the fine arts, foreign language, health and physical education, and driver education. The SOL for English, math, and science found in the matrices in this publication represent a consensus of what all stakeholders involved in the educational process in Virginia’s public schools believe should be taught and learned.

English Language Arts

The English language arts curriculum includes strands pertaining to oral language, reading, and writing. Reading and writing standards are end-of-course tested in Grades 3-11. The English Standards of Learning Framework can be accessed at www.pen.k12.va.us/VDOE/Instruction/English/englishCF.html.

Priority Designation

The priority designations for the English SOL were determined by the distribution of test items per strand or reporting category. The information was obtained from Standards of Learning Test Blueprints at www.pen.k12.va.us/VDOE/Assessment.soltest/. The average (mean) number of test items per strand for all SOL tested grade levels and courses was determined (18.13). The standard deviation was calculated (9.69) and subtracted from the mean to establish the cut-off point (8.62) between Medium (M) and High (H). Low designations were only assigned if an SOL objective was not tested. Therefore the priority designations were established as follows: 0=L, 1-8 = M, and >8=H. Table 1 below provides a summary of the data for English.

Table 1. English Reading and Writing SOL Data Summary

Subjects/ Grades	# Reporting Categories	# Standards of Learning (SOL)	Virginia SOL Assessments/ End-of-Course Tests			Curriculum Survey		
			H	M	L	H 1-35	M 36-70	L 71+
English SOL Reading and Writing			H	M	L	H 1-35	M 36-70	L 71+
Grade 3	11	56	22	10	24	42	9	5
Grade 4	8	45	24	6	15	36	9	0
Grade 5	9	44	20	6	18	36	4	4
Grade 6	7	40	28	0	12	28	7	5
Grade 7	9	43	24	1	18	31	5	7
Grade 8	8	39	20	0	19	26	3	10
Grade 9	9	45	28	1	16	35	5	5
Grade 10	11	40	24	1	15	28	8	4
Grade 11	10	47	24	1	22	39	3	5
Totals	82	399	214	26	159	301	53	45

Mathematics

The Virginia Mathematics Standards of Learning focus on these strands: Number and Number Sense; Computation and Estimation; Measurement; Geometry; Probability and Statistics; and Patterns, Functions, and Algebra. These standards can be reviewed at www.pen.k12.va.us/VDOE/Instruction/Math/math_framework.html. Students in Grades 3-8 are tested (SOL tests) in the spring each year. Students in high school are given end-of-course SOL assessments in Algebra I, Algebra II, and Geometry. Mathematics blueprints for all grade levels and courses can be accessed at www.pen.k12.va.us/VDOE/Assessment/MathematicsBlueprints03/.

Priority Designations

The priority designations for the Mathematic SOL were determined by the distribution of test items per strand or reporting category. The information was obtained from Standards of Learning Test Blueprints at www.pen.k12.va.us/VDOE/Assessment.soltest/. The average (mean) number of test items per strand for all SOL tested grade levels and courses was determined (10.3). The standard deviation was calculated (2.9) and subtracted from the mean to establish the cut-off point (7.4) between Medium (M) and High (H). Low designations were only assigned if an SOL was not tested. Therefore the priority designations were established as follows: 0=L, 1-6 = M, and >6=H. Table 2 below provides a summary of the data for mathematics.

Table 2. Mathematics SOL Data Summary

Subjects/ Grades	# Reporting Categories	# Standards of Learning (SOL)	Virginia SOL Assessments/ End-of-Course Tests			Curriculum Survey		
			H	M	L	H 1-35	M 36-70	L 71+
Mathematics SOL			H	M	L	H 1-35	M 36-70	L 71+
Grade 3	6	25	25	0	0	24	1	0
Grade 4	6	22	22	0	0	22	0	0
Grade 5	6	22	22	0	0	22	0	0
Grade 6	6	23	22	0	1	23	0	0
Grade 7	6	22	22	0	0	20	2	0
Grade 8	6	18	18	0	0	16	2	0
Algebra I	4	18	18	0	0	11	7	0
Geometry	5	14	14	0	0	14	0	0
Algebra II	5	20	18	2	0	6	9	5
Totals	50	184	181	2	1	158	21	5

Science

The Virginia Science Standards of Learning in Grades 3-5 focus on: Scientific Investigation, Reasoning, and Logic; Force, Motion, and Energy; Matter; Life Processes; Living Systems; Interrelationships in Earth/Space Systems; Earth Patterns, Cycles, and Change; and Resources. In Grades 6-8 the SOL focus on: Scientific Investigation, Reasoning, and Logic; Force, Motion, and Energy; Matter; Living Systems; Interrelationships in Earth/Space Systems; Resources; Life Science; and Physical Science. High school science SOL pertain to the following courses: Earth Science, Biology, and Chemistry. These standards can be reviewed at www.pen.k12.va.us/VDOE/Instruction/Science/sciCF.html. Students are SOL assessed in Grades 3 & 5 in the spring each year. Students in high school are given end-of-course SOL assessments in Earth Science, Biology,

and Chemistry. Science blueprints for all grade levels and courses can be accessed at www.pen.k12.va.us/VDOE/Assessment/ScienceBlueprints03/.

Priority Designations

The priority designations for the Science SOL were determined by the distribution of test items per strand or reporting category. The information was obtained from Standards of Learning Test Blueprints at www.pen.k12.va.us/VDOE/Assessment.soltest/. The average (mean) number of test items per strand for all SOL tested grade levels and courses was determined (10.4). The standard deviation was calculated (3.4) and subtracted from the mean to establish the cut-off point (7) between Medium (M) and High (H). Low designations were only assigned if an SOL was not tested. Therefore, the priority designations were established as follows: 0=L, 1-6 = M, and >6=H. Table 3 below provides a summary of the data for science.

Table 3. Science SOL Data Summary

Subjects/ Grades	# Reporting Categories	# Standards of Learning (SOL)	Virginia SOL Assessments/ End-of-Course Tests			Curriculum Survey		
			H	M	L	H 1-35	M 36-70	L 71+
Science SOL			H	M	L	H 1-35	M 36-70	L 71+
Grade 3	4	11	11	0	0	10	1	0
Grade 4	4	8	8	0	0	7	1	0
Grade 5	4	7	7	0	0	6	1	0
Grade 6	4	9	9	0	0	8	1	0
Life Science	4	14	14	0	0	13	1	0
Physical Science	4	11	11	0	0	3	5	3
Earth Science	4	14	14	0	0	9	5	0
Biology	4	9	9	0	0	9	0	0
Chemistry	5	6	5	0	1	2	3	1
Totals	37	89	88	0	1	67	18	4

**Virginia Curriculum Matrix
Summary Totals for SOL Tested
English, Mathematics, and Science**

Table 4 below summarizes the data for English, Mathematics, and Science assessed by the Virginia SOL Tests in Grades 3-8 and the end-of-course tests for high school.

Table 4. Totals for All SOL Tested Grade Levels and Courses in English, Mathematics, and Science.

Subjects/ Grades	# Reporting Categories	# Standards of Learning (SOL)	Virginia SOL Assessments/ End-of-Course Tests			Curriculum Survey		
			H	M	L	H 1-35	M 36-70	L 71+
English	82	399	214	26	159	301	53	45
Mathematics	50	184	181	2	1	158	21	5
Science	37	89	88	0	1	67	18	4
Grand Totals	169	672	483	28	161	526	92	54

**Virginia Curriculum Matrix Summary
Total Percentage for SOL Tested
English, Mathematics, and Science**

Table 5 below presents the number of SOL compared to the number of SOL tested. Using this data, the percentage of SOL tested was calculated.

Table 5. Total Percentage for All SOL Tested Grade Levels in English, Mathematics, and Science.

	# Standards of Learning (SOL)	Virginia SOL Assessments/ End-of-Course Tests	% of SOL Tested
English	399	240	60.2%
Mathematics	184	183	99.5%
Science	89	88	98.9%
Totals	672	511	76%

References

Virginia Department of Education (VDOE) home Website <http://www.pen.k12.va.us/>

Navigation within the VDOE is obtained by clicking on the appropriate icon on the left side of the home page. Access to the SOL or SOL Blueprints can be obtained by clicking the SOL icon.

