VIRGINIA ALTERNATE ASSESSMENT PROGRAM

2006-2007

VAAP

Virginia Alternate Assessment Program

Procedural Manual

TABLE OF CONTENTS

1. INTRODUCTION 5

2. ALIGNED STANDARDS OF LEARNING 6

3. ASSESSMENT ADMINISTRATION 7

4. SUBMISSION OF STUDENT EVIDENCE 7

5. AUDITS 7

6. STEP-BY-STEP REVIEW 8

7. EVIDENCE AND SCORING STUDENT ENTRIES 9
- 7.1 Individual Achievement 9
- 7.2 Evidence Quantity 9
- 7.3 Evidence Types 9
- 7.4 Evidence Examples 10

8. ALIGNED STANDARDS OF LEARNING CONSIDERATIONS. 12

9. SCORING RUBRICS 13
- **Table 1.** Scoring Rubric for Student Performance 13

APPENDICES

APPENDIX A. Affidavit of Student Performance 15

APPENDIX B. Reading Aligned Standards of Learning 17
- Mathematics Aligned Standards of Learning 22
- Science Aligned Standards of Learning 36
- History and Social Science Aligned Standards of Learning 48

APPENDIX C. Blueprints for Reading Tests 61
- Blueprints for Mathematics Tests 97
- Blueprints for Science Tests 143
- Blueprints for History Tests 173

1. INTRODUCTION

All students must show access and progress in state established standards.

The authority for the Virginia Alternate Assessment Program is *The Individuals with Disabilities Education Improvement Act of 2004 (IDEIA)*. Under the IDEIA, students with the most significant cognitive disabilities may be assessed on state established content standards through an alternate assessment. Only students having significant cognitive disabilities and working on knowledge and/or skills different from the general knowledge and skills expressed in Virginia's Standards of Learning on the grade level in which the student is enrolled may be considered appropriate participants in the VAAP. Identification of students eligible to participate in Virginia's Alternate Assessment program, participation criteria, learner characteristics, and other instructional programming information may be found in the *Virginia Alternate Assessment Program (VAAP) Instructional Manual: A Teaching Resource* available from the Virginia Department of Education Division of Special Education Instructional Services.

The IDEIA states further that students with disabilities must have "access to the general curriculum." Recognition that students with significant cognitive disabilities have instructional needs that are beyond the regular standards adopted for the general population is an accepted fact by researchers in the field of severe disabilities. However, NCLB and IDEIA require that general grade level state standards be accessible for all students, including those with the most significant cognitive disabilities. This has been problematic for some states with high academic standards. NCLB guidance has allowed states to address instruction in grade level state standards that have been "reduced in complexity and/or modified." This concept has been referred to as aligning content level standards. The concept of aligned content level standards for students with significant cognitive disabilities has been addressed in the design and implementation of the revised assessment component of the VAAP.

2. ALIGNED STANDARDS OF LEARNING

VAAP students will use Aligned Standards of Learning documents to select standards in reading, mathematics, science, and history/social science for which they will present evidence.

Virginia's Standards of Learning were examined by teams of teachers and education professionals from the Commonwealth of Virginia in order to align content standards across grade levels for students with significant cognitive disabilities. Appropriate content level standards were chosen based on reduced complexity in skill/knowledge statements from each reporting category in each content area across grade levels. Students and teachers will select appropriate Aligned Standards of Learning on which to collect representative evidence of student achievement.

Virginia's Aligned Standards of Learning are listed in Appendix B. These Aligned Standards of Learning, across content areas (reading, mathematics, science and history/social science), provide ways for students with significant cognitive disabilities to work on cross-grade level Standards of Learning statements.

Students taking the VAAP will demonstrate levels of individual achievement. Students in the VAAP are required to select **one** Aligned Standards of Learning (see Appendix B) from each reporting category in the Virginia Alternate Assessment program blueprints (See Appendix C).

Reporting Categories

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

Aligned Standards of Learning related to grade level Standards

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

Choose an Aligned Standard of Learning Reporting Category

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet must be selected and defended.

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from a higher or lower grade level blueprint to select one ASOL statement for each reporting category.

Example:
ENGLISH CONTENT AREA ENTRY

Reporting Category: Use word analysis strategies and information resources

E-R17(b) The student will apply word analysis skills when reading, use knowledge of homophones.

Reporting Category: Demonstrate comprehension of printed materials

E-R8 The student will read familiar stories, poems, and passages with fluency and expression.

3. ASSESSMENT ADMINISTRATION

Students in the VAAP will collect evidence of student performance demonstrating aligned state standards beginning in October of each assessment administration.

The VAAP requires students and teachers to collect evidence of individual achievement throughout the school year. Evidence collected should reflect student performance of selected Aligned Standards of Learning. See "Evidence and Scoring Student Entries" for more information about the types of evidence that might be submitted.

4. SUBMISSION OF STUDENT EVIDENCE

Student evidence will be submitted to the local school division and scored by locally identified scorers using the VAAP Online Scoring System.

After the student has completed all required content area entries, the student and teacher submit the student's collection of evidence for scoring to the local school Division Director of Testing (DDOT). The DDOT will ensure that scorers are available and trained to score submitted collections of student evidence.

Local scorers will rate student evidence using established rubrics and then enter scores using the online scoring system. The VAAP online entries are submitted via secure Internet connections. The system will calculate the student's total score for each content area submitted and use predetermined cut points to assign proficiency levels. Manuals with scoring information will be distributed during scoring training.

5. AUDITS

An audit institute will be established and conducted each year. The audit institute will be composed of trained auditors who will audit approximately 10-15% of submitted entries. School divisions will be required to provide the actual evidence used to rate all sections of the rubric for content for selected audited entries. Auditors will use evidence submitted to rescore and confirm ratings assigned by scorers.

6. STEP-BY-STEP REVIEW

1) The teacher and student review and select one Aligned Standards of Learning from each reporting category on the blueprint (see Appendix B) for the required test (see Step 2 below) in each of the four content areas: reading, mathematics, science, and history/social science.

2) The tests the students are required to take are determined by the grade of the student and the required tests administered within each local school division. For example, in grades 4, 6, and 7, students taking the VAAP will submit content area entries in reading and mathematics. If a school division administers history tests at various grade levels (i.e., a school division administers Virginia Studies SOL test at grade 4), then students taking the VAAP within that division will be required to submit a history content area entry at grade 4, along with reading and mathematics.

3) The student and teacher plan evidence that will demonstrate individual achievement in the selected Aligned Standards of Learning. Different types of evidence such as videotape, audiotape, or work samples may be used to demonstrate student achievement. Scorers will assign student proficiency ratings based on the evidence using the online scoring system.

   Example:

   The teacher and student select VAAP *Aligned Standard of Learning*

   E-R2 The student will demonstrate an understanding that print makes sense.

   and choose to defend:

   c) Read ten high-frequency words.

   (If an ASOL has multiple bullets, the teacher must select only ONE bullet to evidence.)

   The student will be expected to read ten (10) high-frequency words with a degree of skill and proficiency by the end of the assessment window for the VAAP.

   If the student cannot perform the skills being assessed, he/she CANNOT receive maximum score points as assigned from the scoring rubric.

4) The teacher will instruct the student in the selected Aligned Standard of Learning and the student will generate evidence of individual achievement related to skills and/or knowledge listed in the Aligned Standard of Learning selected. **After instruction and throughout the school year,** the student and teacher select the most appropriate evidence to prove that the student can perform all or part of the stated skill.[1]

   Example:

   The teacher and student decide to use videotape as evidence. After the student has been instructed in the Aligned Standard of Learning being assessed and prior to the end of the assessment window, the teacher videotapes the student reading the 10 high-frequency words. The student is able to read 7 of the 10 high-frequency words.

5) After selecting evidence of student performance of the Aligned Standards of Learning, the evidence is submitted to the local Division Director of Testing. (Based on #2 above.)

6) Locally identified scorers use a state-developed rubric to rate individual achievement for the student(s) on the Aligned Standards of Learning selected in each VAAP submitted. Ratings will be entered in the online scoring system.

7) After scoring, the Division Director of Testing and/or designee may print copies of the student's Official Score Report.

---

[1] *Note: It is important for the student and teacher to discuss possible evidence they might submit for selected Aligned Standards of Learning.*

7. EVIDENCE AND SCORING STUDENT ENTRIES

7.1 Individual Achievement

Students in the VAAP must be able to demonstrate individual achievement on the selected Aligned Standards of Learning.

Evidence submitted must demonstrate knowledge and/or skills in the Aligned Standards of Learning being assessed.

7.2 Evidence Quantity

Students may submit any quantity of evidence to defend selected Aligned Standards of Learning, but evidence MUST demonstrate student performance of knowledge and/or skill(s).

The selection of evidence used to demonstrate student performance on Aligned Standards of Learning is the responsibility of the student and submitting teacher. Evidence submitted must demonstrate the *student's level of individual achievement* with the selected Aligned Standard of Learning. Evidence should be viewed from a qualitative, not quantitative, perspective; more is not necessarily better. A single piece/type of evidence may demonstrate the student's abilities.

Evidence submitted should clearly demonstrate to the scorer the level of competency the student has in regard to each Aligned Standard of Learning being defended.

7.3 Evidence Types

Students may submit any "type" of evidence to demonstrate their individual achievement of the selected Aligned Standards of Learning.

The student and teacher may submit as many different types of evidence as they think are necessary to demonstrate student performance and individual achievement. All evidence submitted must have been completed by the student in the presence of a teacher and/or paraprofessional. A signed affidavit (see Appendix A) must accompany each content area submission certifying that the work is that of the student alone using his/her accommodations.

Types of Evidence may include, but are not limited to, the following:

- Work Samples
- Audiotape
- Videotape
- Anecdotal Records
- Interviews
- Photographs
- Charts/Graphs

Keep in mind that **all** evidence should be related to the student's performance of the selected Aligned Standard of Learning skill and/or knowledge being defended.

Anecdotal records, observations, interviews, and other evidence that are an "observation" of student skills and/or knowledge should be written in such a manner that the scorer can determine the level of student individual achievement of the Aligned Standard of Learning demonstrated. Evidence submitted should defend the Aligned Standards of Learning for a content area entry.

Note: It is required that a Data Identification System (DIS) sticker be affixed to each piece of evidence submitted. The DIS template is available on the VDOE website at

www.doe.virginia.gov/VDOE/Assessment/home.shtml

7.4 Evidence Examples

The following are three examples that defend the **same** Aligned Standard of Learning using the Scoring Rubric for Student Performance:

EXAMPLE A

A student is defending the reading standard:

E-R5 The student will apply knowledge of how print is organized and read.

a) Read from left to right and from top to bottom.

Student and teacher "A" submit four worksheets that demonstrate the student's ability to listen to stories read aloud, a videotape of a reading activity where the student is able to identify the main character using a communication board, and a series of photographs showing the student looking at a book as the teacher turns the pages.

Using the Scoring Rubric for Student Performance, the scorer rates the evidence submitted as:

"1 - There is *little evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed." (See *Scoring Rubrics.*)

Based on all the evidence submitted in the example above, it is unclear to the scorer as to whether the student is able to "apply knowledge of how print is organized and read by demonstrating the ability to read from left to right and from top to bottom."

Although all of the evidence submitted relates to the student's instruction in reading content, the evidence does NOT demonstrate the level of the student's performance or express the knowledge and/or skill stated in the Aligned Standard of Learning. Further, multiple examples that do not demonstrate the knowledge and/or skill stated in the Aligned Standard of Learning may still receive a low score.

EXAMPLE B

A student is defending the reading standard:

E-R5 The student will apply knowledge of how print is organized and read.

a) Read from left to right and from top to bottom.

Student and teacher "B" submit a videotape of the student reading a book from left to right and from top to bottom. When the student completes a page, the teacher turns the page and the student continues to read the book. Along with the videotape are copies of the pages from the book that the student read on the videotape.

Using the Scoring Rubric for Student Performance, the scorer rates the evidence submitted as:

"4 - There is *ample evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed." (See *Scoring Rubrics.*)

Although there are only two samples of evidence, both demonstrate that the student is able to perform the entire Aligned Standard of Learning being measured.

EXAMPLE C

A student is defending the reading standard:

E-R5 The student will apply knowledge of how print is organized and read.

a) Read from left to right and from top to bottom.

Student and teacher "C" submit a videotape of the student reading a book. However, when the student reaches the end of each sentence, the teacher is shown pointing to and prompting the student to read the next line. When the student completes a page, the teacher turns the page and prompts the student to continue reading the book and the teacher points to and says, "Begin with this line." Along with the videotape are copies of the pages from the book that the student read on the videotape.

Using the Scoring Rubric for Student Performance, the scorer rates the evidence submitted as:

"3 - There is *adequate evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed." (See *Scoring Rubrics.*)

Although the student is clearly reading each sentence when directed, he still needs prompting to complete the full requirements of the Aligned Standard of Learning as listed. Had the student been unable to follow the prompts and directions of the teacher to continue to read from top to bottom, this evidence might have been rated a "2" for student performance.

8. ALIGNED STANDARDS OF LEARNING CONSIDERATIONS

Students must defend only one bullet within the Aligned Standards of Learning that contain multiple bullets.

The *Aligned Standards of Learning* blueprints in each content area provide students participating in the revised VAAP with skills and/or knowledge statements. These statements are the expected performance measures used in the assessment component of the program. Instruction in the content area skills contained in these frameworks will be supported by the Division of Special Education Instructional Services. When selecting a content area skill to defend in the **assessment component** of the Virginia Alternate Assessment Program, students must *defend only one bullet* contained within Aligned Standards of Learning that have multiple bullets.

Example:

The student and teacher select reading SOL:

E-R4 The student will demonstrate comprehension of fiction and nonfiction.

a) Use pictures to make predictions about content.
b) Retell familiar stories, using beginning, middle, and end.
c) Discuss characters, setting, and events.
d) Use story language in discussions and retellings.
e) Identify what an author does and what an illustrator does.
f) Identify the topics of nonfiction selections.

In reviewing the content skills and knowledge expressed within the standard, the student and teacher choose to defend the specific bullet:

a) Use pictures to make predictions about content.

For the assessment component of the revised VAAP, the student and teacher will be required to submit evidence of individual achievement with:

E-R4 The student will demonstrate comprehension of fiction and nonfiction.

a) Use pictures to make predictions about content.

If the selected Aligned Standard of Learning does not contain multiple statements/bullets of skills and/or knowledge, the student is expected to defend the Aligned Standard of Learning statement in its entirety.

9. SCORING RUBRICS

Student submitted evidence will be rated on an established scoring rubric.

Student Performance

The Virginia Standards of Learning articulate the core academic areas of English/Language Arts, mathematics, science, and history/social sciences. These standards are organized by grade level to reflect student learning outcomes. Virginia's Aligned Standards of Learning articulate the same core academic areas of reading, mathematics, science, and history/social science for students with significant cognitive disabilities. Aligned standards are organized across grade levels to reflect appropriate student learning outcomes. When a student submits evidence of individual achievement of skills and/or knowledge listed in Virginia's Aligned Standards of Learning, the following rubric will be used to rate the level of student individual achievement.

Table 1: Scoring Rubric for Student Performance

Point	Descriptor
1	There is *little evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed.
2	There is *some evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed.
3	There is *adequate evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed.
4	There is *ample evidence* that the student has demonstrated the skills and knowledge stated in the Aligned Standard(s) of Learning being addressed.

A scorer may assign a score point of "0" if he or she thinks the evidence submitted does not show any level of individual achievement with the Aligned Standard of Learning being defended.

NOTE

Hand-over-hand instruction, although a valid introductory teaching method, does not provide evidence of the student's performance and can not be considered during scoring.

APPENDIX A

Virginia Alternate Assessment Program
AFFIDAVIT OF STUDENT PERFORMANCE

Student Information

Student Name: _____ **Date of Birth:** _____

School Name:_____

Subject/Course Submission: _____

Affidavit of Student Performance

I, the undersigned, do attest that all work contained in this Virginia Alternate Assessment Program was performed, to the best of my knowledge, by the student using allowed accommodations as noted in his/her current IEP and in the presence of a teacher and/or paraprofessional.

Further, in compiling this evidence with the student and/or on his/her behalf, I did not:

- Fabricate, alter, or modify student work samples, products, or data.
- Describe student behaviors that provide a negative image of the student.
- Provide any accommodation/assistive device that is not a regular part of the student's daily instruction.

Nor am I aware that others have provided inappropriate assistance or described student behavior that provide a negative image of the student.

Teacher: _____

Signature

Date: _____

APPENDIX B

READING ALIGNED STANDARDS OF LEARNING

Reading

E-R1 The student will understand how print is organized and read.
- a) Hold print materials in the correct position.
- b) Identify the front cover, back cover, and title page of a book.
- c) Follow words from left to right and from top to bottom on a printed page.
- d) Match voice with print: syllables, words, and phrases.

E-R2 The student will demonstrate an understanding that print makes sense.
- a) Explain that printed materials provide information.
- b) Identify common signs and logos.
- c) Read ten high-frequency words.
- d) Read and explain own writing and drawings.

E-R3 The student will develop an understanding of basic phonetic principles.
- a) Identify and name the uppercase and lowercase letters of the alphabet.
- b) Match consonant and short vowel sounds to appropriate letters.
- c) Identify beginning consonant sounds in single-syllable words.

E-R4 The student will demonstrate comprehension of fiction and nonfiction.
- a) Use pictures to make predictions about content.
- b) Retell familiar stories, using beginning, middle, and end.
- c) Discuss characters, setting, and events.
- d) Use story language in discussions and retellings.
- e) Identify what an author does and what an illustrator does.
- f) Identify the topics of nonfiction selections.

E-R5 The student will apply knowledge of how print is organized and read.
- a) Read from left to right and from top to bottom.
- b) Match spoken words with print.
- c) Identify letters, words, and sentences.

E-R6 The student will apply phonetic principles to read and spell.
- a) Use beginning and ending consonants to decode and spell single-syllable words.
- b) Use two-letter consonant blends to decode and spell single-syllable words.
- c) Use beginning consonant digraphs to decode and spell single-syllable words.
- d) Use short vowel sounds to decode and spell single-syllable words.
- e) Blend beginning, middle, and ending sounds to recognize and read words.
- f) Use word patterns to decode unfamiliar words.
- g) Use compound words.
- h) Read and spell common, high-frequency sight words, including *the*, *said*, and *come*.

E-R7 The student will use meaning clues and language structure to expand vocabulary when reading.
- a) Use titles and pictures.
- b) Use knowledge of the story and topic to read words.
- c) Use knowledge of sentence structure.
- d) Reread and self-correct.

APPENDIX B, continued

Reading (continued)

E-R8 The student will read familiar stories, poems, and passages with fluency and expression.

E-R9 The student will read and demonstrate comprehension of a variety of fiction and nonfiction.
a) Preview the selection.
b) Set a purpose for reading.
c) Relate previous experiences to what is read.
d) Make predictions about content.
e) Ask and answer who, what, when, where, why, and how questions about what is read.
f) Identify characters, setting, and important events.
g) Retell stories and events, using beginning, middle, and end.
h) Identify the topic or main idea.

E-R10 The student will use simple reference materials.
a) Use knowledge of alphabetical order by first letter.
b) Use a picture dictionary to find meanings of unfamiliar words.

E-R11 The student will use phonetic strategies when reading and spelling.
a) Use knowledge of consonants, consonant blends, and consonant digraphs to decode and spell words.
b) Use knowledge of short, long, and r-controlled vowel patterns to decode and spell words.
c) Decode regular multisyllabic words.

E-R12 The student will use meaning clues and language structure when reading.
a) Use information in the story to read words.
b) Use knowledge of sentence structure.
c) Use knowledge of story structure and sequence.

E-R13 The student will use language structure to expand vocabulary when reading.
a) Use knowledge of prefixes and suffixes.
b) Use knowledge of contractions and singular possessives.
c) Use knowledge of simple abbreviations.
d) Use knowledge of antonyms and synonyms.

E-R14 The student will read fiction and nonfiction, using a variety of strategies independently.
a) Preview the selection by using pictures, diagrams, titles, and headings.
b) Set purpose for reading.
c) Read stories, poems, and passages with fluency and expression.
d) Reread and self-correct when necessary.

E-R15 The student will read and demonstrate comprehension of fiction and nonfiction.
a) Make predictions about content.
b) Read to confirm predictions.
c) Relate previous experiences to the topic.
d) Ask and answer questions about what is read.
e) Locate information to answer questions.
f) Describe characters, setting, and important events in fiction and poetry.
g) Identify the problem, solution, and main idea.

APPENDIX B, continued

Reading (continued)

E-R16 The student will demonstrate comprehension of information in reference materials.
- a) Use a table of contents.
- b) Use pictures and charts.
- c) Use dictionaries and indices.

E-R17 The student will apply word-analysis skills when reading.
- a) Use knowledge of all vowel patterns.
- b) Use knowledge of homophones.
- c) Decode regular multisyllabic words.

E-R18 The student will use strategies to read a variety of fiction and nonfiction materials.
- a) Preview and use text formats.
- b) Set a purpose for reading.
- c) Apply meaning clues, language structure, and phonetic strategies.
- d) Use context to clarify meaning of unfamiliar words.
- e) Read fiction and nonfiction fluently and accurately.
- f) Reread and self-correct when necessary.

E-R19 The student will read and demonstrate comprehension of fiction.
- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author's purpose.
- f) Ask and answer questions.
- g) Draw conclusions about character and plot.
- h) Organize information and events logically.
- i) Summarize major points found in fiction materials.
- j) Understand basic plots of fairy tales, myths, folktales, legends, and fables.

E-R20 The student will continue to read and demonstrate comprehension of nonfiction.
- a) Identify the author's purpose.
- b) Make connections between previous experiences and reading selections.
- c) Ask and answer questions about what is read.
- d) Draw conclusions.
- e) Organize information and events logically.
- f) Summarize major points found in nonfiction materials.
- g) Identify the characteristics of biographies and autobiographies.
- h) Compare and contrast the lives of two persons as described in biographies and/or autobiographies.

E-R21 The student will demonstrate comprehension of information from a variety of print resources.
- a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials.
- b) Use available technology.

Reading (continued)

E-R22 The student will read fiction and nonfiction with fluency and accuracy.
- a) Use context to clarify meanings of unfamiliar words.
- b) Explain words with multiple meanings.
- c) Use knowledge of word origins; synonyms, antonyms, and homonyms; and multiple meanings of words.
- d) Use word-reference materials, including the glossary, dictionary, and thesaurus.

E-R23 The student will read and demonstrate comprehension of fiction.
- a) Explain the author's purpose.
- b) Describe how the choice of language, setting, and information contributes to the author's purpose.
- c) Compare the use of fact and fantasy in historical fiction with other forms of literature.
- d) Identify major events and supporting details.
- e) Describe the relationship between text and previously read materials.
- f) Identify sensory words.

E-R24 The student will read and demonstrate comprehension of nonfiction.
- a) Use text organizers, such as type, headings, and graphics, to predict and categorize information.
- b) Formulate questions that might be answered in the selection.
- c) Explain the author's purpose.
- d) Make simple inferences, using information from texts.
- e) Draw conclusions, using information from texts.
- f) Summarize content of selection, identifying important ideas and providing details for each important idea.
- g) Describe relationship between content and previously learned concepts or skills.
- h) Distinguish between cause and effect and between fact and opinion.
- i) Identify new information gained from reading.

E-R25 The student will demonstrate comprehension of information resources to research a topic.
- a) Construct questions about a topic.
- b) Collect information, using the resources of the media center, including online, print, and media resources.
- c) Evaluate and synthesize information.

E-R26 The student will read fiction and nonfiction with fluency and accuracy.
- a) Use context to clarify meaning of unfamiliar words.
- b) Use knowledge of root words, prefixes, and suffixes.
- c) Use dictionary, glossary, thesaurus, and other word-reference materials.

E-R27 The student will read and demonstrate comprehension of fiction.
- a) Describe the relationship between text and previously read materials.
- b) Describe character development in fiction and poetry selections.
- c) Describe the development of plot and explain how conflicts are resolved.
- d) Describe the characteristics of free verse, rhymed, and patterned poetry.
- e) Describe how an author's choice of vocabulary and style contributes to the quality and enjoyment of selections.

Reading (continued)

E-R28 The student will read and demonstrate comprehension of nonfiction.

a) Use text organizers, such as type, headings, and graphics, to predict and categorize information.
b) Identify structural patterns found in nonfiction.
c) Locate information to support opinions, predictions, and conclusions.
d) Identify cause-and-effect relationships.
e) Identify compare-and-contrast relationships.
f) Skim materials to develop a general overview of content and to locate specific information.
g) Identify new information gained from reading.

E-R29 The student will demonstrate comprehension of information from a variety of print resources.

a) Develop notes that include important concepts, summaries, and identification of information sources.
b) Organize information on charts, maps, and graphs.

MATHEMATICS ALIGNED STANDARDS OF LEARNING

Number and Number Sense

M-NS 1 The student, given two sets containing 10 or fewer concrete items, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of one-to-one correspondence.

M-NS 2 The student, given a set containing 10 or fewer concrete items, will
a) tell how many are in the set by counting the number of items orally;
b) select the corresponding numeral from a given set; and
c) write the numeral to tell how many are in the set.

M-NS 3 The student, given an ordered set of three objects and/or pictures, will indicate the ordinal position of each item, first through third, and the ordered position of each item from left-to-right, right-to-left, top-to-bottom, and/or bottom-to-top.

M-NS 4 The student will investigate and recognize patterns from counting by fives and tens to 30, using concrete objects and a calculator.

M-NS 5 The student will count forward to 30 and backward from 10.

M-NS 6 The student will count objects in a given set containing between 1 and 100 objects and write the corresponding numeral.

M-NS 7 The student will group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.

M-NS 8 The student will count forward by ones, fives, and tens to 100, by twos to 20, and backward by ones from 20.

M-NS 9 The student will recognize and write numerals 0 through 100.

M-NS 10 The student will identify the ordinal positions first through tenth, using an ordered set of objects.

M-NS 11 The student will identify and represent the concepts of one-half and one-fourth, using appropriate materials or a drawing.

M-NS 12 The student will
a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models; and
b) round two-digit numbers to the nearest ten.

M-NS 13 The student will compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (greater than, less than, or equal to).

M-NS 14 The student will identify the ordinal positions first through twentieth, using an ordered set of objects.

M-NS 15 The student will identify the part of a set and/or region that represents fractions for one-half, one-third, one-fourth, one-eighth, and one-tenth and write the corresponding fraction.

Number and Number Sense (continued)

M-NS 16 The student will
a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10, using mental mathematics, paper and pencil, hundred chart, calculators, and/or concrete objects, as appropriate;
b) count backward by tens from 100;
c) group objects by threes and fours; and
d) recognize even and odd numbers, using objects.

M-NS 17 The student will read and write six-digit numerals and identify the place value for each digit.

M-NS 18 The student will round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand.

M-NS 19 The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (greater than, less than, or equal to).

M-NS 20 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. Students will use these relationships to solve problems such as 5 + 3 = 8 and 8 – 3 = ____.

M-NS 21 The student will
a) divide regions and sets to represent a fraction; and
b) name and write the fractions represented by a given model (area/region, length/measurement, and set). Fractions (including mixed numbers) will include halves, thirds, fourths, eighths, and tenths.

M-NS 22 The student will compare the numerical value of two fractions having like and unlike denominators, using concrete or pictorial models involving areas/regions, lengths/measurements, and sets.

M-NS 23 The student will read and write decimals expressed as tenths and hundredths, using concrete materials and models.

M-NS 24 The student will
a) identify (orally and in writing) the place value for each digit in a whole number expressed through millions;
b) compare two whole numbers expressed through millions, using symbols (>, <, or =); and
c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.

M-NS 25 The student will
a) identify, model, and compare rational numbers (fractions and mixed numbers), using concrete objects and pictures;
b) represent equivalent fractions; and
c) relate fractions to decimals, using concrete objects.

M-NS 26 The student will compare the numerical value of fractions (with like and unlike denominators) having denominators of 12 or less, using concrete materials.

M-NS 27 The student will
a) read, write, represent, and identify decimals expressed through thousandths;
b) round to the nearest whole number, tenth, and hundredth; and
c) compare the value of two decimals, using symbols (<, >, or =), concrete materials, drawings, and calculators.

Number and Number Sense (continued)

M-NS 28 The student will
a) read, write, and identify the place values of decimals through thousandths;
b) round decimal numbers to the nearest tenth or hundredth; and
c) compare the values of two decimals through thousandths, using the symbols >, <, or =.

M-NS 29 The student will
a) recognize and name commonly used fractions (halves, fourths, fifths, eighths, and tenths) in their equivalent decimal form and vice versa; and
b) order a given set of fractions and decimals from least to greatest. Fractions will include like and unlike denominators limited to 12 or less, and mixed numbers.

M-NS 30 The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.

M-NS 31 The student will describe and compare two sets of data, using ratios, and will use appropriate notations, such as a/b, a to b, and a:b.

M-NS 32 The student will
a) find common multiples and factors, including least common multiple and greatest common factor;
b) identify and describe prime and composite numbers; and identify and describe the characteristics of even and odd integers.

M-NS 33 The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.

M-NS 34 The student will identify, represent, order, and compare integers.

Computation and Estimation

M-CE 1 The student will add and subtract whole numbers, using up to 10 concrete items.

M-CE 2 The student, given a familiar problem situation involving magnitude, will
a) select a reasonable magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, and 500); and
b) explain the reasonableness of his/her choice.

M-CE 3 The student will recall basic addition facts — i.e., sums to 10 or less — and the corresponding subtraction facts.

M-CE 4 The student will create and solve story and picture problems involving one-step solutions, using basic addition and subtraction facts.

M-CE 5 The student will recall basic addition facts — i.e., sums to 18 or less — and the corresponding subtraction facts.

M-CE 6 The student, given two whole numbers whose sum is 99 or less, will
a) estimate the sum; and
b) find the sum, using various methods of calculation (mental computation, concrete materials, and paper and pencil).

M-CE 7 The student, given two whole numbers, each of which is 99 or less, will
a) estimate the difference; and
b) find the difference, using various methods of calculation (mental computation, concrete materials, and paper and pencil).

M-CE 8 The student will create and solve one-step addition and subtraction problems using data from simple tables, picture graphs, bar graphs, and practical situations.

M-CE 9 The student, given a simple addition or subtraction fact, will recognize and describe the related facts which represent and describe the inverse relationship between addition and subtraction (e.g., 3 + __ = 7, ___ + 3 = 7; 7 – 3 = __, and 7 – __ = 3).

M-CE 10 The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

M-CE 11 The student will recall the multiplication and division facts through the nines table.

M-CE 12 The student will represent multiplication and division, using area and set models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.

M-CE 13 The student will add and subtract with proper fractions having like denominators of 10 or less, using concrete materials and pictorial models representing areas/regions, lengths/measurements, and sets.

M-CE 14 The student will add and subtract with decimals expressed as tenths, using concrete materials, pictorial representations, and paper and pencil.

M-CE 15 The student will estimate whole-number sums and differences and describe the method of estimation. Students will refine estimates, using terms such as *closer to, between*, and *a little more than*.

M-CE 16 The student will add and subtract whole numbers written in vertical and horizontal form, choosing appropriately between paper and pencil methods and calculators.

M-CE 17 The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.

M-CE 18 The student will estimate and find the quotient of two whole numbers, given a one-digit divisor.

M-CE 19 The student will
a) add and subtract with fractions having like and unlike denominators of 12 or less, using concrete materials, pictorial representations, and paper and pencil;
b) add and subtract with decimals through thousandths, using concrete materials, pictorial representations, and paper and pencil; and
c) solve problems involving addition and subtraction with fractions having like and unlike denominators of 12 or less and with decimals expressed through thousandths, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

Computation and Estimation (continued)

M-CE 20 The student will create and solve problems involving addition, subtraction, multiplication, and division of whole numbers, using paper and pencil, estimation, mental computation, and calculators.

M-CE 21 The student will find the sum, difference, and product of two numbers expressed as decimals through thousandths, using an appropriate method of calculation, including paper and pencil, estimation, mental computation, and calculators.

M-CE 22 The student, given a dividend of four digits or fewer and a divisor of two digits or fewer, will find the quotient and remainder.

M-CE 23 The student, given a dividend expressed as a decimal through thousandths and a single-digit divisor, will find the quotient.

M-CE 24 The student will add and subtract with fractions and mixed numbers, with and without regrouping, and express answers in simplest form. Problems will include like and unlike denominators limited to 12 or less.

M-CE 25 The student will
a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and
b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.

M-CE 26 The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).

M-CE 27 The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.

Measurement

M-M 1 The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.

M-M 2 The student will identify the instruments used to measure length (ruler), weight (scale), time (clock: digital and analog; calendar: day, month, and season), and temperature (thermometer).

M-M 3 The student will tell time to the hour, using an analog or digital clock.

M-M 4 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block.

M-M 5 The student will
a) identify the number of pennies equivalent to a nickel, a dime, and a quarter; and
b) determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.

M-M 6 The student will tell time to the half-hour, using an analog or digital clock.

APPENDIX B, continued

Measurement (continued)

M-M 7 The student will use nonstandard units to measure length and weight.

M-M 8 The student will compare the volumes of two given containers by using concrete materials (e.g., jelly beans, sand, water, rice).

M-M 9 The student will compare the weights of two objects, using a balance scale.

M-M 10 The student will
a) count and compare a collection of pennies, nickels, dimes, and quarters whose total value is $2.00 or less; and
b) identify the correct usage of the cent symbol (¢), dollar symbol ($), and decimal point (.).

M-M 11 The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including measuring the distance around a polygon in order to determine perimeter.

M-M 12 The student, given grid paper, will estimate and then count the number of square units needed to cover a given surface in order to determine area.

M-M 13 The student will estimate and then count the number of cubes in a rectangular box in order to determine volume.

M-M 14 The student will estimate and then determine weight/mass of familiar objects in pounds and/or kilograms, using a scale.

M-M 15 The student will tell and write time to the quarter hour, using analog and digital clocks.

M-M 16 The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of *more, less*, and *equivalent*.

M-M 17 The student will
a) use calendar language appropriately (e.g., months, *today, yesterday, next week, last week*);
b) determine past and future days of the week; and
c) identify specific dates on a given calendar.

M-M 18 The student will read the temperature on a Celsius and/or Fahrenheit thermometer to the nearest 10 degrees.

M-M 19 The student will determine by counting the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the coins or bills, and make change.

M-M 20 The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure
a) length — inches, feet, yards, centimeters, and meters;
b) liquid volume — cups, pints, quarts, gallons, and liters; and
c) weight/mass — ounces, pounds, grams, and kilograms.

M-M 21 The student will tell time to the nearest five-minute interval and to the nearest minute, using analog and digital clocks.

M-M 22 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.

M-M 23 The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.

M-M 24 The student will
a) estimate and measure weight/mass, using actual measuring devices, and describe the results in U.S. Customary/metric units as appropriate, including ounces, pounds, grams, and kilograms;
b) identify equivalent measurements between units within the U.S. Customary system (ounces and pounds) and between units within the metric system (grams and kilograms); and
c) estimate the conversion of ounces and grams and pounds and kilograms, using approximate comparisons (1 ounce is about 28 grams, or 1 gram is about the weight of a paper clip; 1 kilogram is a little more than 2 pounds).*

* *The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 25 The student will
a) estimate and measure length, using actual measuring devices, and describe the results in both metric and U.S. Customary units, including part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, millimeters, centimeters, and meters;
b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters); and
c) estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons (1 inch is about 2.5 centimeters, 1 meter is a little longer than 1 yard, 1 mile is slightly farther than 1.5 kilometers, or 1 kilometer is slightly farther than half a mile).*

* *The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 26 The student will
a) estimate and measure liquid volume, using actual measuring devices and using metric and U.S. Customary units, including cups, pints, quarts, gallons, milliliters, and liters;
b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons) and between units within the metric system (milliliters and liters); and
c) estimate the conversion of quarts and liters, using approximate comparisons (1 quart is a little less than 1 liter, 1 liter is a little more than 1 quart).*

* *The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U. S. Customary and metric units.*

M-M 27 The student will
a) identify and describe situations representing the use of perimeter and area; and
b) use measuring devices to find perimeter in both standard and nonstandard units of measure.

M-M 28 The student will describe and determine the perimeter of a polygon and the area of a square, rectangle, and right triangle, given the appropriate measures.

M-M 29 The student will identify and describe the diameter, radius, chord, and circumference of a circle.

Measurement (continued)

M-M 30 The student will differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

M-M 31 The student will choose an appropriate measuring device and unit of measure to solve problems involving measurement of

a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;
b) weight/mass — ounces, pounds, tons, grams, and kilograms;
c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters;
d) area — square units; and
e) temperature — Celsius and Fahrenheit units.

Problems also will include estimating the conversion of Celsius and Fahrenheit units relative to familiar situations (water freezes at 0°C and 32°F, water boils at 100°C and 212°F, normal body temperature is about 37°C and 98.6°F).

M-M 32 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.

M-M 33 The student will measure and draw right, acute, and obtuse angles and triangles, using appropriate tools.

M-M 34 The student will compare and convert units of measure for length, area, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system:

a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;
b) weight/mass — ounces, pounds, tons, grams, and kilograms;
c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters; and
d) area — square units.*

**The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 35 The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure.

M-M 36 The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula.

M-M 37 The student will

a) solve problems involving the circumference and/or area of a circle when given the diameter or radius;
b) derive approximations for pi (π) from measurements for circumference and diameter, using concrete materials or computer models.

M-M 38 The student will

a) estimate angle measures, using 45°, 90°, and 180° as referents, and use the appropriate tools to measure the given angles;
b) measure and draw right, acute, and obtuse angles and triangles.

Geometry

M-G 1 The student will identify, describe, and draw two-dimensional (plane) geometric figures (circle, triangle, square, and rectangle).

M-G 2 The student will describe the location of one object relative to another (above, below, next to) and identify representations of plane geometric figures (circle, triangle, square, and rectangle) regardless of their position and orientation in space.

M-G 3 The student will compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).

M-G 4 The student will describe the proximity of objects in space (*near, far, close by, below, above, up, down, beside,* and *next to*).

M-G 5 The student will draw, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, corners, and square corners.

M-G 6 The student will identify and describe objects in his/her environment that depict plane geometric figures (triangle, rectangle, square, and circle).

M-G 7 The student will identify, describe, and sort three-dimensional (solid) concrete figures, including a cube, rectangular solid (prism), square pyramid, sphere, cylinder, and cone, according to the number and shape of the solid's faces, edges, and corners.

M-G 8 The student will identify and create figures, symmetric along a line, using various concrete materials.

M-G 9 The student will compare and contrast plane and solid geometric shapes (circle/sphere, square/cube, and rectangle/rectangular solid).

M-G 10 The student will analyze two-dimensional (plane) and three-dimensional (solid) geometric figures (circle, square, rectangle, triangle, cube, rectangular solid [prism], square pyramid, sphere, cone, and cylinder) and identify relevant properties, including the number of corners, square corners, edges, and the number and shape of faces, using concrete models.

M-G 11 The student will identify and draw representations of line segments and angles, using a ruler or straightedge.

M-G 12 The student, given appropriate drawings or models, will identify and describe congruent and symmetrical, two-dimensional (plane) figures, using tracing procedures.

M-G 13 The student will investigate and describe the relationships between and among points, lines, line segments, and rays.

M-G 14 The student will
a) identify and draw representations of points, lines, line segments, rays, and angles, using a straightedge or ruler; and
b) describe the path of shortest distance between two points on a flat surface.

M-G 15 The student will identify and draw representations of lines that illustrate intersection, parallelism, and perpendicularity.

Geometry (continued)

M-G 16 The student will
a) analyze and compare the properties of two-dimensional (plane) geometric figures (circle, square, rectangle, triangle, parallelogram, and rhombus) and three-dimensional (solid) geometric figures (sphere, cube, and rectangular solid [prism]);
b) identify congruent and noncongruent shapes; and
c) investigate congruence of plane figures after geometric transformations such as reflection (flip), translation (slide) and rotation (turn), using mirrors, paper folding, and tracing.

M-G 17 The student will identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane.

M-G 18 The student will classify angles and triangles as right, acute, or obtuse.

M-G 19 The student, using two-dimensional (plane) figures (square, rectangle, triangle, parallelogram, rhombus, kite, and trapezoid) will
a) recognize, identify, describe, and analyze their properties in order to develop definitions of these figures;
b) identify and explore congruent, noncongruent, and similar figures;
c) investigate and describe the results of combining and subdividing shapes;
d) identify and describe a line of symmetry; and
e) recognize the images of figures resulting from geometric transformations such as translation (slide), reflection (flip), or rotation (turn).

M-G 20 The student will identify, compare, and analyze properties of three-dimensional (solid) geometric shapes (cylinder, cone, cube, square pyramid, and rectangular prism).

M-G 21 The student will identify, classify, and describe the characteristics of plane figures, describing their similarities, differences, and defining properties.

M-G 22 The student will determine congruence of segments, angles, and polygons by direct comparison, given their attributes. Examples of noncongruent and congruent figures will be included.

M-G 23 The student will construct the perpendicular bisector of a line segment and an angle bisector.

M-G 24 The student will sketch, construct models of, and classify solid figures (rectangular prism, cone, cylinder, and pyramid).

Probability and Statistics

M-PS 1 The student will gather data relating to familiar experiences by counting and tallying.

M-PS 2 The student will display objects and information, using objects graphs, pictorial graphs, and tables.

M-PS 3 The student will investigate and describe the results of dropping a two-colored counter or using a multicolored spinner.

M-PS 4 The student will investigate, identify, and describe various forms of data collection in his/her world (e.g., recording daily temperature, lunch count, attendance, and favorite ice cream), using tables, picture graphs, and object graphs.

Probability and Statistics (continued)

M-PS 5 The student will interpret information displayed in a picture or object graph, using the vocabulary *more, less, fewer, greater than, less than*, and *equal to*.

M-PS 6 The student will read, construct, and interpret a simple picture and bar graph.

M-PS 7 The student will record data from experiments, using spinners and colored tiles/cubes, and use the data to predict which of two events is more likely to occur if the experiment is repeated.

M-PS 8 The student, given grid paper, will
a) collect and organize data on a given topic of his/her choice, using observations, measurements, surveys, or experiments; and
b) construct a line plot, a picture graph, or a bar graph to represent the results. Each graph will include an appropriate title and key.

M-PS 9 The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

M-PS 10 The student will investigate and describe the concept of probability as chance and list possible results of a given situation.

M-PS 11 The student will
a) predict the likelihood of outcomes of a simple event, using the terms *certain, likely, unlikely, impossible*; and
b) determine the probability of a given simple event, using concrete materials.

M-PS 12 The student will collect, organize, and display data in line and bar graphs with scale increments of one or greater than one and use the display to interpret the results, draw conclusions, and make predictions.

M-PS 13 The student will
a) solve problems involving the probability of a single event by using tree diagrams or by constructing a sample space representing all possible results;
b) predict the probability of outcomes of simple experiments, representing it with fractions or decimals from 0 to 1, and test the prediction; and
c) create a problem statement involving probability and based on information from a given problem situation. Students will not be required to solve the created problem statement.

M-PS 14 The student will, given a problem situation, collect, organize, and display a set of numerical data in a variety of forms, using bar graphs, stem-and-leaf plots, and line graphs, to draw conclusions and make predictions.

M-PS 15 The student will find the mean, median, mode, and range of a set of data.

M-PS 16 The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including
a) line, bar, and circle graphs;
b) stem-and-leaf plots;
c) box-and-whisker plots.
Circle graphs will be limited to halves, fourths, and eighths.

Probability and Statistics (continued)

M-PS 17 The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.

M-PS 18 The student will
a) make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram;
b) determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation.

Patterns, Functions, and Algebra

M-PFA 1 The student will sort and classify objects according to similar attributes (size, shape, and color).

M-PFA 2 The student will identify, describe, and extend a repeating relationship (pattern) found in common objects, sounds, and movements.

M-PFA 3 The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.

M-PFA 4 The student will recognize, describe, extend, and create a wide variety of patterns, including rhythmic, color, shape, and numerical. Patterns will include both growing and repeating patterns. Concrete materials and calculators will be used by students.

M-PFA 5 The student will identify, create and extend a wide variety of patterns, using numbers, concrete objects and pictures.

M-PFA 6 The student will solve by completing a numerical sentence involving the basic facts for addition and subtraction. Examples include: 3 = __ = 7, or 9 - __ = 2. Students will create story problems, using the numerical sentences.

M-PFA 7 The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, tables, and pictures).

M-PFA 8 The student will
a) investigate and create patterns involving numbers, operations (addition and multiplication), and relations that model the identity and commutative properties for addition and multiplication; and
b) demonstrate an understanding of equality by recognizing that the equal sign (=) links equivalent quantities, such as 4 • 3 = 2 • 6.

M-PFA 9 The student will recognize, create, and extend numerical and geometric patterns, using concrete materials, number lines, symbols, tables, and words.

M-PFA 10 The student will recognize and demonstrate the meaning of equality, using symbols representing numbers, operations, and relations [e.g., 3 + 5 = 5 + 3 and 15 + (35 + 16) = (15 + 35) + 16].

M-PFA 11 The student will analyze the structure of numerical and geometric patterns (how they change or grow) and express the relationship, using words, tables, graphs, or a mathematical sentence. Concrete materials and calculators will be used.

APPENDIX B, continued

Patterns, Functions, and Algebra (continued)

M-PFA 12 The student will

a) investigate and describe the concept of variable;
b) use a variable expression to represent a given quantitative expression involving one operation; and
c) write an open sentence to represent a given mathematical relationship, using a variable.

M-PFA 13 The student will create a problem situation based on a given open sentence using a single variable.

M-PFA 14 The student will investigate, describe, and extend numerical and geometric patterns, including triangular numbers, patterns formed by powers of 10, and arithmetic sequences.

M-PFA 15 The student will investigate and describe concepts of positive exponents, perfect squares, square roots, and, for numbers greater than 10, scientific notation. Calculators will be used to develop exponential patterns.

M-PFA 16 The student will

a) model and solve algebraic equations, using concrete materials;
b) solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions;
c) use the following algebraic terms appropriately: *variable*, *coefficient*, *term*, and *equation*.

* If ASOL statements are not appropriate for the selected student, consult lower grade level ASOL blueprints.

SCIENCE ALIGNED STANDARDS OF LEARNING

Scientific Investigation, Reasoning, and Logic

S-SI 1 The student will conduct investigations in which
a) basic properties of objects are identified by direct observation;
b) observations are made from multiple positions to achieve different perspectives;
c) objects are described both pictorially and verbally;
d) a set of objects is sequenced according to size;
e) a set of objects is separated into two groups based on a single physical attribute;
f) nonstandard units are used to measure common objects;
g) a question is developed from one or more observations;
h) picture graphs are constructed using 10 or fewer units;
i) an unseen member in a sequence of objects is predicted; and
j) unusual or unexpected results in an activity are recognized.

S-SI 2 Students will investigate and understand that humans have senses that allow one to seek, find, take in, and react or respond to information in order to learn about one's surroundings. Key concepts include
a) five senses and corresponding sensing organs (taste – tongue, touch – skin, smell – nose, hearing – ears, and sight – eyes); and
b) sensory descriptors (sweet, sour, bitter, salty, rough/smooth, hard/soft, cold, warm, hot, loud/soft, high/low, bright/dull).

S-SI 3 The student will conduct investigations in which
a) differences in physical properties are observed using the senses;
b) simple tools are used to enhance observations;
c) objects or events are classified and arranged according to attributes or properties;
d) observations and data are communicated orally and with simple graphs, pictures, written statements, and numbers;
e) length, mass, and volume are measured using standard and nonstandard units;
f) predictions are based on patterns of observation rather than random guesses;
g) simple experiments are conducted to answer questions; and
h) inferences are made and conclusions are drawn about familiar objects and events.

S-SI 4 The student will conduct investigations in which
a) observation is differentiated from personal interpretation, and conclusions are drawn based on observations;
b) observations are repeated to ensure accuracy;
c) two or more attributes are used to classify items;
d) conditions that influence a change are defined;
e) length, volume, mass, and temperature measurements are made in metric units (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, cups, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds);
f) pictures and bar graphs are constructed using numbered axes;
g) unexpected or unusual quantitative data are recognized; and
h) simple physical models are constructed.

Scientific Investigation, Reasoning, and Logic (continued)

S-SI 5 The student will plan and conduct investigations in which
a) predictions and observations are made;
b) objects with similar characteristics are classified into at least two sets and two subsets;
c) questions are developed to formulate hypotheses;
d) volume is measured to the nearest milliliter and liter;
e) length is measured to the nearest centimeter;
f) mass is measured to the nearest gram;
g) data are gathered, charted, and graphed (line plot, picture graph, and bar graph);
h) temperature is measured to the nearest degree Celsius;
i) time is measured to the nearest minute;
j) inferences are made and conclusions are drawn; and
k) natural events are sequenced chronologically.

S-SI 6 The student will plan and conduct investigations in which
a) distinctions are made among observations, conclusions, inferences, and predictions;
b) hypotheses are formulated based on cause-and-effect relationships;
c) variables that must be held constant in an experimental situation are defined;
d) appropriate instruments are selected to measure linear distance, volume, mass, and temperature;
e) appropriate metric measures are used to collect, record, and report data;
f) data are displayed using bar and basic line graphs;
g) numerical data that are contradictory or unusual in experimental results are recognized; and
h) predictions are made based on data from picture graphs, bar graphs, and basic line graphs.

S-SI 7 The student will plan and conduct investigations in which
a) rocks, minerals, and organisms are identified using a classification key;
b) estimations of length, mass, and volume are made;
c) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time;
d) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder);
e) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams);
f) predictions are made using patterns, and simple graphical data are extrapolated;
g) manipulated and responding variables are identified; and
h) an understanding of the nature of science is developed and reinforced.

Force, Motion, and Energy

S-FME 1 The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications. Key concepts include
a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal; and
b) useful applications (refrigerator magnet, can opener, magnetized screwdriver, and magnetic games).

S-FME 2 The student will investigate and understand that moving objects exhibit different kinds of motion. Key concepts include
a) objects may have straight, circular, and back-and-forth motions;
b) objects may vibrate and produce sound;
c) pushes or pulls can change the movement of an object; and
d) the motion of objects may be observed in toys and in playground activities.

Force, Motion, and Energy (continued)

S-FME 3 The student will investigate and understand that natural and artificial magnets have certain characteristics and attract specific types of metals. Key concepts include
a) magnetism, iron, magnetic/nonmagnetic, poles, attract/repel; and
b) important applications of magnetism including the magnetic compass.

S-FME 4 The student will investigate and understand simple machines and their uses. Key concepts include
a) types of simple machines (lever, screw, pulley, wheel and axle, inclined plane, and wedge);
b) how simple machines function;
c) compound machines (scissors, wheelbarrow, and bicycle); and
d) examples of simple and compound machines found in the school, home, and work environment.

S-FME 5 The student will investigate and understand characteristics and interaction of moving objects. Key concepts include
a) motion is described by an object's direction and speed;
b) forces cause changes in motion;
c) friction is a force that opposes motion; and
d) moving objects have kinetic energy.

S-FME 6 The student will investigate and understand the characteristics of electricity. Key concepts include
a) conductors and insulators;
b) basic circuits (open/closed, parallel/series);
c) static electricity;
d) the ability of electrical energy to be transformed into heat, light, and mechanical energy;
e) simple electromagnets and magnetism; and
f) historical contributions in understanding electricity.

S-FME 7 The student will investigate and understand how sound is transmitted and is used as a means of communication. Key concepts include
a) frequency, waves, wavelength, vibration;
b) the ability of different media (solids, liquids, and gases) to transmit sound; and
c) uses and applications (voice, sonar, animal sounds, and musical instruments).

S-FME 8 The student will investigate and understand basic characteristics of visible light and how it behaves. Key concepts include
a) the visible spectrum and light waves;
b) refraction of light through water and prisms;
c) reflection of light from reflective surfaces (mirrors);
d) opaque, transparent, and translucent; and
e) historical contributions in understanding light.

Matter

S-M 1 The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include
a) colors (red, orange, yellow, green, blue, purple), white, and black;
b) shapes (circle, triangle, square, and rectangle) and forms (flexible/stiff, straight/curved);
c) textures (rough/smooth) and feel (hard/soft);
d) relative size and weight (big/little, large/small, heavy/light, wide/thin, long/short); and
e) position (over/under, in/out, above/below, left/right) and speed (fast/slow).

Matter (continued)

S-M 2 The student will investigate and understand that water flows and has properties that can be observed and tested. Key concepts include
a) water occurs in different states (solid, liquid, gas);
b) the natural flow of water is downhill; and
c) some materials float in water, while others sink.

S-M 3 The student will investigate and understand how different common materials interact with water. Key concepts include
a) some liquids will separate when mixed with water, but others will not;
b) some common solids will dissolve in water, but others will not; and
c) some substances will dissolve more readily in hot water than in cold water.

S-M 4 The student will investigate and understand basic properties of solids, liquids, and gases. Key concepts include
a) mass and volume; and
b) processes involved with changes in matter from one state to another (condensation, evaporation, melting, and freezing).

S-M 5 The student will investigate and understand that objects are made of materials that can be described by their physical properties. Key concepts include
a) objects are made of one or more materials;
b) materials are composed of parts that are too small to be seen without magnification; and
c) physical properties remain the same as the material is reduced in size.

S-M 6 The student will investigate and understand that matter is anything that has mass, takes up space, and occurs as a solid, liquid, or gas. Key concepts include
a) atoms, elements, molecules, and compounds;
b) mixtures including solutions; and
c) the effect of heat on the states of matter.

Life Processes

S-LP 1 The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include
a) living things change as they grow, and they need food, water, and air to survive;
b) plants and animals live and die (go through a life cycle); and
c) offspring of plants and animals are similar but not identical to their parents and to one another.

S-LP 2 The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics. Key concepts include
a) needs (food, air, water, light, and a place to grow);
b) parts (seeds, roots, stems, leaves, blossoms, fruits); and
c) characteristics (edible/nonedible, flowering/nonflowering, evergreen/deciduous).

S-LP 3 The student will investigate and understand that animals, including people, have life needs and specific physical characteristics and can be classified according to certain characteristics. Key concepts include
a) life needs (air, food, water, and a suitable place to live);
b) physical characteristics (body coverings, body shape, appendages, and methods of movement); and
c) other characteristics (wild/tame, water homes/land homes).

Life Processes (continued)

S-LP 4 The student will investigate and understand that plants and animals undergo a series of orderly changes in their life cycles. Key concepts include
a) some animals (frogs and butterflies) undergo distinct stages during their lives, while others generally resemble their parents; and
b) flowering plants undergo many changes, from the formation of the flower to the development of the fruit.

S-LP 5 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include
a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young; and
b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.

S-LP 6 The student will investigate and understand basic plant anatomy and life processes. Key concepts include
a) the structures of typical plants (leaves, stems, roots, and flowers);
b) processes and structures involved with reproduction (pollination, stamen, pistil, sepal, embryo, spore, and seed);
c) photosynthesis (sunlight, chlorophyll, water, carbon dioxide, oxygen, and sugar); and
d) dormancy.

Living Systems

S-LS 1 The student will investigate and understand that living things are part of a system. Key concepts include
a) living organisms are interdependent with their living and nonliving surroundings; and
b) habitats change over time due to many influences.

S-LS 2 The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include
a) producer, consumer, decomposer;
b) herbivore, carnivore, omnivore; and
c) predator and prey.

S-LS 3 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include
a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments);
b) dry-land environments (desert, grassland, rain forest, and forest environments); and
c) population and community.

S-LS 4 The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment. Key concepts include
a) behavioral and structural adaptations;
b) organization of communities;
c) flow of energy through food webs;
d) habitats and niches;
e) life cycles; and
f) influence of human activity on ecosystems.

Living Systems (continued)

S-LS 5 The student will investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include
a) basic cell structures and functions;
b) kingdoms of living things;
c) vascular and nonvascular plants; and
d) vertebrates and invertebrates.

Interrelationships in Earth/Space Systems

S-IE 1 The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include
a) shadows occur in nature when sunlight is blocked by an object; and
b) shadows can be produced by blocking artificial light sources.

S-IE 2 The student will investigate and understand the basic relationships between the sun and the Earth. Key concepts include
a) the sun is the source of heat and light that warms the land, air, and water; and
b) night and day are caused by the rotation of the Earth.

S-IE 3 The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include
a) temperature, wind, precipitation, drought, flood, and storms; and
b) the uses and importance of measuring and recording weather data.

S-IE 4 The student will investigate and understand the major components of soil, its origin, and importance to plants and animals including humans. Key concepts include
a) soil provides the support and nutrients necessary for plant growth;
b) topsoil is a natural product of subsoil and bedrock;
c) rock, clay, silt, sand, and humus are components of soils; and
d) soil is a natural resource and should be conserved.

S-IE 5 The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include
a) weather measurements and meteorological tools (air pressure – barometer, wind speed – anemometer, rainfall – rain gauge, and temperature – thermometer); and
b) weather phenomena (fronts, clouds, and storms).

S-IE 6 The student will investigate and understand characteristics of the ocean environment. Key concepts include
a) geological characteristics (continental shelf, slope, rise);
b) physical characteristics (depth, salinity, major currents); and
c) biological characteristics (ecosystems).

Interrelationships in Earth/Space Systems (continued)

S-IE 7 The student will investigate and understand the organization of the solar system and the relationships among the various bodies that comprise it. Key concepts include
a) the sun, moon, Earth, other planets and their moons, meteors, asteroids, and comets;
b) relative size of and distance between planets;
c) the role of gravity;
d) revolution and rotation;
e) the mechanics of day and night and the phases of the moon;
f) the unique properties of Earth as a planet;
g) the relationship of the Earth's tilt and the seasons;
h) the cause of tides; and
i) the history and technology of space exploration.

Earth Patterns, Cycles, and Change

S-EP 1 The student will investigate and understand simple patterns in his/her daily life. Key concepts include
a) weather observations;
b) the shapes and forms of many common natural objects including seeds, cones, and leaves;
c) animal and plant growth; and
d) home and school routines.

S-EP 2 The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include
a) natural and human-made things may change over time; and
b) changes can be noted and measured.

S-EP 3 The student will investigate and understand the relationship of seasonal change and weather to the activities and life processes of plants and animals. Key concepts include how temperature, light, and precipitation bring about changes in
a) plants (growth, budding, falling leaves, and wilting);
b) animals (behaviors, hibernation, migration, body covering, and habitat); and
c) people (dress, recreation, and work).

S-EP 4 The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include
a) effects on growth and behavior of living things (migration, hibernation, camouflage, adaptation, dormancy); and
b) weathering and erosion of the land surface.

S-EP 5 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include
a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides); and
b) animal and plant life cycles.

S-EP 6 The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include
a) the energy from the sun drives the water cycle;
b) processes involved in the water cycle (evaporation, condensation, precipitation);
c) water is essential for living things; and
d) water supply and water conservation.

Earth Patterns, Cycles, and Change (continued)

S-EP 7 The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include
a) the motions of the Earth, moon, and sun (revolution and rotation);
b) the causes for the Earth's seasons and phases of the moon;
c) the relative size, position, age, and makeup of the Earth, moon, and sun; and
d) historical contributions in understanding the Earth-moon-sun system.

S-EP 8 The student will investigate and understand how the Earth's surface is constantly changing. Key concepts include
a) the rock cycle including identification of rock types;
b) Earth history and fossil evidence;
c) the basic structure of the Earth's interior;
d) plate tectonics (earthquakes and volcanoes);
e) weathering and erosion; and
f) human impact.

Resources

S-R 1 The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include
a) materials and objects can be used over and over again;
b) everyday materials can be recycled; and
c) water and energy conservation at home and in school helps preserve resources for future use.

S-R 2 The student will investigate and understand that natural resources are limited. Key concepts include
a) identification of natural resources (plants and animals, water, air, land, minerals, forests, and soil);
b) factors that affect air and water quality; and
c) recycling, reusing, and reducing consumption of natural resources.

S-R 3 The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include
a) important plant products (fiber, cotton, oil, spices, lumber, rubber, medicines, and paper);
b) the availability of plant products affects the development of a geographic area; and
c) plants provide homes and food for many animals and prevent soil from washing away.

S-R 4 The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include
a) the interdependency of plants and animals;
b) the effects of human activity on the quality of air, water, and habitat;
c) the effects of fire, flood, disease, and erosion on organisms; and
d) conservation and resource renewal.

S-R 5 The student will investigate and understand different sources of energy. Key concepts include
a) the sun's ability to produce light and heat energy;
b) sources of energy (sunlight, water, wind);
c) fossil fuels (coal, oil, natural gas) and wood; and
d) renewable and nonrenewable energy resources.

Resources (continued)

S-R 6 The student will investigate and understand important Virginia natural resources. Key concepts include
a) watershed and water resources;
b) animals and plants;
c) minerals, rocks, ores, and energy sources; and
d) forests, soil, and land.

Life Science

S-LFS 1 The student will plan and conduct investigations in which
a) data are organized into tables showing repeated trials and means;
b) variables are defined;
c) metric units (SI—International System of Units) are used;
d) models are constructed to illustrate and explain phenomena;
e) sources of experimental error are identified;
f) dependent variables, independent variables, and constants are identified;
g) variables are controlled to test hypotheses, and trials are repeated;
h) continuous line graphs are constructed, interpreted, and used to make predictions;
i) interpretations from a set of data are evaluated and defended; and
j) an understanding of the nature of science is developed and reinforced.

S-LFS 2 The student will investigate and understand that all living things are composed of cells. Key concepts include
a) cell structure and organelles (cell membrane, cell wall, cytoplasm, vacuole, mitochondrion, endoplasmic reticulum, nucleus, and chloroplast);
b) similarities and differences between plant and animal cells;
c) development of cell theory; and
d) cell division (mitosis and meiosis).

S-LFS 3 The student will investigate and understand that living things show patterns of cellular organization. Key concepts include
a) cells, tissues, organs, and systems; and
b) life functions and processes of cells, tissues, organs, and systems (respiration, removal of wastes, growth, reproduction, digestion, and cellular transport).

S-LFS 4 The student will investigate and understand that the basic needs of organisms must be met in order to carry out life processes. Key concepts include
a) plant needs (light, water, gases, and nutrients);
b) animal needs (food, water, gases, shelter, space); and
c) factors that influence life processes.

S-LFS 5 The student will investigate and understand how organisms can be classified. Key concepts include
a) the distinguishing characteristics of kingdoms of organisms;
b) the distinguishing characteristics of major animal and plant phyla; and
c) the characteristics of the species.

S-LFS 6 The student will investigate and understand the basic physical and chemical processes of photosynthesis and its importance to plant and animal life. Key concepts include
a) energy transfer between sunlight and chlorophyll;
b) transformation of water and carbon dioxide into sugar and oxygen; and
c) photosynthesis as the foundation of virtually all food webs.

Life Science (continued)

S-LFS 7 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include
a) the carbon, water, and nitrogen cycles;
b) interactions resulting in a flow of energy and matter throughout the system;
c) complex relationships within terrestrial, freshwater, and marine ecosystems; and
d) energy flow in food webs and energy pyramids.

S-LFS 8 The student will investigate and understand that interactions exist among members of a population. Key concepts include
a) competition, cooperation, social hierarchy, territorial imperative; and
b) influence of behavior on a population.

S-LFS 9 The student will investigate and understand interactions among populations in a biological community. Key concepts include
a) the relationships among producers, consumers, and decomposers in food webs;
b) the relationship between predators and prey;
c) competition and cooperation;
d) symbiotic relationships; and
e) niches.

S-LFS 10 The student will investigate and understand how organisms adapt to biotic and abiotic factors in an ecosystem. Key concepts include
a) differences between ecosystems and biomes;
b) characteristics of land, marine, and freshwater ecosystems; and
c) adaptations that enable organisms to survive within a specific ecosystem.

S-LFS 11 The student will investigate and understand that organisms reproduce and transmit genetic information to new generations. Key concepts include
a) the role of DNA;
b) the function of genes and chromosomes;
c) genotypes and phenotypes;
d) factors affecting the expression of traits;
e) characteristics that can and cannot be inherited;
f) genetic engineering and its applications; and
g) historical contributions and significance of discoveries related to genetics.

Earth Science

S-ES 1 The student will plan and conduct investigations in which
a) volume, area, mass, elapsed time, direction, temperature, pressure, distance, density, and changes in elevation/depth are calculated utilizing the most appropriate tools;
b) technologies including computers, probeware, and global positioning systems (GPS), are used to collect, analyze, and report data and to demonstrate concepts and simulate experimental conditions;
c) scales, diagrams, maps, charts, graphs, tables, and profiles are constructed and interpreted;
d) variables are manipulated with repeated trials; and
e) a scientific viewpoint is constructed and defended (the nature of science).

Earth Science (continued)

S-ES 2 The student will demonstrate scientific reasoning and logic by
a) analyzing how science explains and predicts the interactions and dynamics of complex Earth systems;
b) recognizing that evidence is required to evaluate hypotheses and explanations;
c) comparing different scientific explanations for a set of observations about the Earth;
d) explaining that observation and logic are essential for reaching a conclusion; and
e) evaluating evidence for scientific theories.

S-ES 3 The student will investigate and understand how to read and interpret maps, globes, models, charts, and imagery. Key concepts include
a) maps (bathymetric, geologic, topographic, and weather) and star charts;
b) imagery (aerial photography and satellite images);
c) direction and measurements of distance on any map or globe; and
d) location by latitude and longitude and topographic profiles.

S-ES 4 The student will investigate and understand the characteristics of the Earth and the solar system. Key concepts include
a) position of the Earth in the solar system;
b) sun-Earth-moon relationships (seasons, tides, and eclipses);
c) characteristics of the sun, planets and their moons, comets, meteors, and asteroids; and
d) the history and contributions of the space program.

S-ES 5 The student will investigate and understand how to identify major rock-forming and ore minerals based on physical and chemical properties. Key concepts include
a) hardness, color and streak, luster, cleavage, fracture, and unique properties; and
b) uses of minerals.

S-ES 6 The student will investigate and understand the differences between renewable and nonrenewable resources. Key concepts include
a) fossil fuels, minerals, rocks, water, and vegetation;
b) advantages and disadvantages of various energy sources;
c) resources found in Virginia;
d) making informed judgments related to resource use and its effects on Earth systems; and
e) environmental costs and benefits.

S-ES 7 The student will investigate and understand that many aspects of the history and evolution of the Earth and life can be inferred by studying rocks and fossils. Key concepts include
a) traces and remains of ancient, often extinct, life are preserved by various means in many sedimentary rocks;
b) superposition, cross-cutting relationships, index fossils, and radioactive decay are methods of dating bodies of rock;
c) absolute and relative dating have different applications but can be used together to determine the age of rocks and structures; and
d) rocks and fossils from many different geologic periods and epochs are found in Virginia.

Earth Science (continued)

S-ES 8 The student will investigate and understand that oceans are complex, interactive physical, chemical, and biological systems and are subject to long- and short-term variations. Key concepts include

a) physical and chemical changes (tides, waves, currents, sea level and ice cap variations, upwelling, and salinity variations);
b) importance of environmental and geologic implications;
c) systems interactions (density differences, energy transfer, weather, and climate);
d) features of the sea floor (continental margins, trenches, mid-ocean ridges, and abyssal plains) as reflections of tectonic processes; and
e) economic and public policy issues concerning the oceans and the coastal zone including the Chesapeake Bay.

S-ES 9 The student will investigate and understand that energy transfer between the sun and the Earth and its atmosphere drives weather and climate on Earth. Key concepts include

a) observation and collection of weather data;
b) prediction of weather patterns;
c) severe weather occurrences, such as tornadoes, hurricanes, and major storms; and
d) weather phenomena and the factors that affect climate including radiation and convection.

HISTORY AND SOCIAL SCIENCE ALIGNED STANDARDS OF LEARNING

History

HS-H1 The student will recognize that history describes events and people of other times and places by
a) identifying examples of past events in legends, stories, and historical accounts of Pocahontas, George Washington, Betsy Ross, and Abraham Lincoln; and
b) identifying the people and events honored by the holidays of Thanksgiving Day, Martin Luther King, Jr. Day, Presidents' Day, and Independence Day (Fourth of July).

HS-H2 The student will describe everyday life in the present and in the past and begin to recognize that things change over time.

HS-H3 The student will interpret information presented in picture time lines to show sequence of events and will distinguish between past and present.

HS-H4 The student will describe the stories of American leaders and their contributions to our country, with emphasis on George Washington, Benjamin Franklin, Abraham Lincoln, and George Washington Carver.

HS-H5 The student will discuss the lives of people associated with Presidents' Day, Columbus Day, and the events of Independence Day (Fourth of July).

HS-H6 The student will explain how the contributions of ancient China and Egypt have influenced the present world in terms of architecture, inventions, the calendar, and written language.

HS-H7 The student will compare the lives and contributions of American Indians (First Americans), with emphasis on the Powhatan of the Eastern Woodlands, the Sioux of the Plains, and the Pueblo people of the Southwest.

HS-H8 The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.

HS-H9 The student will explain how the contributions of ancient Greece and Rome have influenced the present world in terms of architecture, government (direct and representative democracy), and sports.

HS-H10 The student will study the early West African empire of Mali by describing its oral tradition (storytelling), government (kings), and economic development (trade).

HS-H11 The student will study the exploration of the Americas by
a) describing the accomplishments of Christopher Columbus, Juan Ponce de Léon, Jacques Cartier, and Christopher Newport; and
b) identifying reasons for exploring, the information gained, and the results from the travels.

HS-H12 The student will demonstrate knowledge of the first permanent English settlement in America by explaining the reasons for English colonization.

HS-H13 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the arrival of Africans and women to the Jamestown settlement.

History (continued)

HS-H14 The student will demonstrate knowledge of the first permanent English settlement in America by describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival.

HS-H15 The student will demonstrate knowledge of the first permanent English settlement in America by describing the interactions between the English settlers and the Powhatan people, including the contributions of the Powhatans to the survival of the settlers.

HS-H16 The student will demonstrate knowledge of life in the Virginia colony by describing how European (English, Scotch-Irish, German) immigrants, Africans, and American Indians (First Americans) influenced the cultural landscape and changed the relationship between the Virginia colony and England.

HS-H17 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the various roles played by Virginians in the Revolutionary War era, with emphasis on George Washington, Thomas Jefferson, and Patrick Henry.

HS-H18 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the importance of the American victory at Yorktown.

HS-H19 The student will demonstrate knowledge of the role of Virginia in the establishment of the new American nation by identifying the ideas of George Mason and Thomas Jefferson as expressed in the Virginia Declaration of Rights and the Virginia Statute for Religious Freedom.

HS-H20 The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by identifying the events and differences between northern and southern states that divided Virginians and led to secession, war, and the creation of West Virginia.

HS-H21 The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by describing Virginia's role in the war, including identifying major battles that took place in Virginia.

HS-H22 The student will demonstrate knowledge of twentieth century Virginia by the political, social, and/or economic contributions made by Maggie L. Walker, Harry F. Byrd, Sr., Arthur R. Ashe, Jr., and L. Douglas Wilder.

HS-H23 The student will demonstrate knowledge of European exploration in North America and West Africa by describing cultural interactions between Europeans and American Indians (First Americans) that led to cooperation and conflict.

HS-H24 The student will demonstrate knowledge of the factors that shaped colonial America by describing the religious and economic events and conditions that led to the colonization of America.

HS-H25 The student will demonstrate knowledge of the factors that shaped colonial America by describing colonial life in America from the perspectives of large landowners, farmers, artisans, women, indentured servants, and slaves.

HS-H26 The student will demonstrate knowledge of the factors that shaped colonial America by identifying the political and economic relationships between the colonies and England.

History (continued)

HS-H27 The student will demonstrate knowledge of the causes and results of the American Revolution by identifying the issues of dissatisfaction that led to the American Revolution.

HS-H28 The student will demonstrate knowledge of the causes and results of the American Revolution by describing key events and the roles of key individuals in the American Revolution, with emphasis on George Washington, Benjamin Franklin, Thomas Jefferson, Patrick Henry, and Thomas Paine.

HS-H29 The student will demonstrate knowledge of the causes and results of the American Revolution by explaining reasons why the colonies were able to defeat Britain.

HS-H30 The student will demonstrate knowledge of the challenges faced by the new nation by describing the major accomplishments of the first five presidents of the United States.

HS-H31 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by describing territorial expansion and how it affected the political map of the United States, with emphasis on the Louisiana Purchase, the Lewis and Clark expedition, and the acquisitions of Florida, Texas, Oregon, and California.

HS-H32 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by identifying the main ideas of the abolitionist and suffrage movements.

HS-H33 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by explaining how the issues of states' rights and slavery increased sectional tensions.

HS-H34 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the roles of Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, Robert E. Lee, Thomas "Stonewall" Jackson, and Frederick Douglass in events leading to and during the war.

HS-H35 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the effects of war from the perspectives of Union and Confederate soldiers (including black soldiers), women, and slaves.

HS-H36 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the impact of Reconstruction policies on the South.

HS-H37 The student will demonstrate knowledge of how life changed after the Civil War by identifying the reasons for westward expansion.

HS-H38 The student will demonstrate knowledge of how life changed after the Civil War by explaining the reasons for the increase in immigration, growth of cities, new inventions, and challenges arising from this expansion.

HS-H39 The student will demonstrate knowledge of how life changed after the Civil War by describing racial segregation, the rise of "Jim Crow," and other constraints faced by African Americans in the post-Reconstruction South.

HS-H40 The student will demonstrate knowledge of the changing role of the United States from the late nineteenth century through World War I by explaining the reasons for and results of the Spanish American War.

History (continued)

HS-H41 The student will demonstrate knowledge of the changing role of the United States from the late nineteenth century through World War I by explaining the reasons for the United States' involvement in World War I and its leadership role at the conclusion of the war.

HS-H42 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by describing the social changes that took place, including Prohibition and the Great Migration north.

HS-H43 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by examining art, literature, and music from the 1920s and 1930s, emphasizing Langston Hughes, Duke Ellington, and Georgia O'Keefe and including the Harlem Renaissance.

HS-H44 The student will demonstrate knowledge of the major causes and effects of American involvement in World War II by describing the impact of World War II on the home front.

HS-H45 The student will demonstrate knowledge of the key domestic issues during the second half of the twentieth century by describing the development of new technologies and their impact on American life.

HS-H46 The student will demonstrate knowledge of early development of humankind from the Paleolithic Era to the agricultural revolution by listing characteristics of hunter-gatherer societies, including their use of tools and fire.

HS-H47 The student will demonstrate knowledge of early development of humankind from the Paleolithic Era to the agricultural revolution describing technological and social advancements that gave rise to stable communities.

HS-H48 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by explaining the development of religious traditions.

HS-H49 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by describing the origins, beliefs, traditions, customs, and spread of Judaism.

HS-H50 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by the development of language and writing.

HS-H51 The student will demonstrate an understanding of the political, cultural, and economic conditions in the world about 1500 A.D. by describing artistic, literary, and intellectual ideas of the Renaissance.

HS-H52 The student will demonstrate an understanding of the political, cultural, and economic conditions in the world about 1500 A.D. by major technological and scientific exchanges in the Eastern Hemisphere.

HS-H53 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by explaining the roles of explorers and conquistadors.

HS-H54 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by describing the influence of religion.

History (continued)

HS-H55 The student will demonstrate knowledge of scientific, political, economic, and religious changes during the sixteenth, seventeenth, and eighteenth centuries by describing the Scientific Revolution and its effects.

HS-H56 The student will demonstrate knowledge of scientific, political, economic, and religious changes during the sixteenth, seventeenth, and eighteenth centuries by describing the expansion of the arts, philosophy, literature, and new technology.

HS-H57 The student will demonstrate knowledge of the worldwide impact of World War II by examining the Holocaust and other examples of genocide in the twentieth century.

HS-H58 The student will demonstrate knowledge of the influence of Judaism, Christianity, Islam, Buddhism, and Hinduism in the contemporary world by describing their beliefs, sacred writings, traditions, and customs.

Geography

HS-G1 The student will describe the relative location of people, places, and things by using positional words, with emphasis on near/far, above/below, left/right, and behind/in front.

HS-G2 The student will use simple maps and globes to
a) develop an awareness that a map is a drawing of a place to show where things are located and that a globe is a round model of the Earth;
b) describe places referenced in stories and real-life situations; and
c) locate land and water features.

HS-G3 The student will develop an awareness that maps and globes
a) show a view from above;
b) show things in smaller size; and
c) show the position of objects.

HS-G4 The student will develop map skills by
a) recognizing basic map symbols, including references to land, water, cities, and roads;
b) using cardinal directions on maps;
c) identifying the physical shape of the United States and Virginia on maps and globes; and
d) locating Washington, D.C., the capital of the United States, and Richmond, the capital of Virginia, on a United States map.

HS-G5 The student will construct a simple map of a familiar area, using basic map symbols in the map legend.

HS-G6 The student will describe how location, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.

HS-G7 The student will develop map skills by
a) locating China and Egypt on world maps;
b) locating the regions of the Powhatan, Sioux, and Pueblo Indians on United States maps;
c) comparing the climate, land, and plant life of these regions; and
d) describing how people in these regions adapt to their environment.

Geography (continued)

HS-G8 The student will develop map skills by
a) locating the equator, the seven continents, and the four oceans on maps and globes; and
b) locating selected rivers (James River, Mississippi River, Rio Grande), mountain ranges (Appalachian Mountains and Rocky Mountains), and lakes (Great Lakes) in the United States.

HS-G9 The student will demonstrate map skills by constructing simple maps, using title, map legend, and compass rose.

HS-G10 The student will develop map skills by
a) positioning and labeling the seven continents and four oceans to create a world map;
b) using the equator and prime meridian to identify the four hemispheres;
c) locating the countries of Spain, England, and France;
d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de Léon (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia); and
e) locating specific places on a simple letter-number grid system.

HS-G11 The student will interpret geographic information from maps, tables, graphs, and charts.

HS-G12 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating Virginia and its bordering states on maps of the United States.

HS-G13 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating and describing Virginia's Coastal Plain (Tidewater), Piedmont, Blue Ridge Mountains, Valley and Ridge, and Appalachian Plateau.

HS-G14 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, and Rappahannock River).

HS-G15 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by how American Indians (First Americans) adapted to the climate and their environment to secure food, clothing, and shelter.

HS-G16 The student will use maps, globes, photographs, pictures, and tables to locate the seven continents.

HS-G17 The student will use maps, globes, photographs, pictures, and tables to locate and identify the water features important to the early history of the United States: Great Lakes, Mississippi River, Missouri River, Ohio River, Columbia River, Colorado River, Rio Grande, Atlantic Ocean, Pacific Ocean, and Gulf of Mexico.

HS-G18 The student will demonstrate knowledge of how early cultures developed in North America by where the American Indians (First Americans) settled, with emphasis on Arctic (Inuit), Northwest (Kwakiutl), Plains (Sioux), Southwest (Pueblo), and Eastern Woodland (Iroquois).

HS-G19 The student will demonstrate knowledge of how early cultures developed in North America by describing how the American Indians (First Americans) used their environment to obtain food, clothing, and shelter.

Geography (continued)

HS-G20 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by identifying on a map the states that seceded from the Union and those that remained in the Union.

HS-G21 The student will use maps, globes, photographs, pictures, and tables for locating the 50 states and the cities most significant to the historical development of the United States.

HS-G22 The student will use maps, globes, photographs, and pictures in order to obtain geographical information and apply the concepts of location, scale, and orientation.

HS-G23 The student will use maps, globes, photographs, and pictures in order to develop and refine his or her mental maps of world regions.

HS-G24 The student will analyze how selected physical and ecological processes shape the Earth's surface by describing how humans influence the environment and are influenced by it.

HS-G25 The student will analyze how selected physical and ecological process shape the Earth's surface by explaining how technology affects one's ability to modify the environment and adapt to it.

HS-G26 The student will apply geography to interpret the past, understand the present, and plan for the future by relating current events to the physical and human characteristics of places and regions.

HS-G27 The student will demonstrate knowledge of the influence of Judaism, Christianity, Islam, Buddhism, and Hinduism in the contemporary world by locating the geographic distribution of religions in the contemporary world.

Economics

HS-E1 The student will match simple descriptions of work that people do with the names of those jobs.

HS-E2 The student will
a) identify the difference between basic needs (food, clothing, and shelter) and wants (things people would like to have); and
b) recognize that people use money to purchase goods.

HS-E3 The student will explain the difference between goods and services and will describe how people are both buyers and sellers of goods and services.

HS-E4 The student will explain that people make choices because they cannot have everything they want.

HS-E5 The student will recognize that people save money for the future to purchase goods and services.

HS-E6 The student will describe the differences between natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings).

HS-E7 The student will distinguish between the use of barter and money in the exchange for goods and services.

HS-E8 The student will explain that scarcity (limited resources) requires people to make choices about producing and consuming goods and services.

Economics (continued)

HS-E9 The student will explain how producers use natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings) to produce goods and services for consumers.

HS-E10 The student will recognize the concepts of specialization (being an expert in one job, product, or service) and interdependence (depending on others) in the production of goods and services (in ancient Greece, Rome, the West African empire of Mali, and in the present).

HS-E11 The student will identify examples of making an economic choice and will explain the idea of opportunity cost (what is given up when making a choice).

HS-E12 The student will demonstrate knowledge of life in the Virginia colony by explaining the importance of agriculture and its influence on the institution of slavery.

HS-E13 The student will demonstrate knowledge of life in the Virginia colony by how money, barter, and credit were used.

HS-E14 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by identifying the effects of Reconstruction on life in Virginia.

HS-E15 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by describing the importance of railroads, new industries, and the growth of cities to Virginia's economic development.

HS-E16 The student will demonstrate knowledge of twentieth century Virginia by describing the economic and social transition from a rural, agricultural society to a more urban, industrialized society, including the reasons people came to Virginia from other states and countries.

HS-E17 The student will demonstrate knowledge of government, geography, and economics by describing the major products and industries of Virginia's five geographic regions.

HS-E18 The student will demonstrate knowledge of government, geography, and economics by explaining how advances in transportation, communications, and technology have contributed to Virginia's prosperity and role in the global economy.

HS-E19 The student will demonstrate knowledge of European exploration in North America and West Africa by identifying the location and describing the characteristics of West African societies (Ghana, Mali, and Songhai) and their interactions with traders.

HS-E20 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by identifying the geographic and economic factors that influenced the westward movement of settlers.

HS-E21 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by describing the impact of inventions, including the cotton gin, the reaper, the steamboat, and the steam locomotive, on life in America.

HS-E22 The student will demonstrate knowledge of the effects of Reconstruction on American life by identifying the provisions of the 13th, 14th, and 15th Amendments to the Constitution of the United States of America and their impact on the expansion of freedom in America.

Economics (continued)

HS-E23 The student will demonstrate knowledge of how life changed after the Civil War by explaining the rise of big business, the growth of industry, and life on American farms.

HS-E24 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by explaining how developments in transportation (including the use of the automobile), communication, and electrification changed American life.

HS-E25 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by identifying the causes of the Great Depression, its impact on Americans, and the major features of Franklin D. Roosevelt's New Deal.

HS-E26 The student will demonstrate knowledge of the economic, social, and political transformation of the United States and the world between the end of World War II and the present by describing the conversion from a wartime to a peacetime economy.

HS-E27 The student will identify natural, human, and capital resources and explain their significance by showing patterns of economic activity and land use.

HS-E28 The student will distinguish between developed and developing countries and relate the level of economic development to the standard of living and quality of life.

HS-E29 The student will demonstrate knowledge of ancient Greece in terms of its impact on Western civilization by identifying the social structure and role of slavery, explaining the significance of citizenship and the development of democracy, and comparing the city-states of Athens and Sparta.

HS-E30 The student will demonstrate knowledge of ancient Rome from about 700 B.C. to 500 A.D. in terms of its impact on Western civilization by explaining the social structure and role of slavery, significance of citizenship, and the development of democratic features in the government of the Roman Republic.

HS-E31 The student will demonstrate knowledge of civilizations and empires of the Eastern Hemisphere and their interactions through regional trade patterns by identifying technological advances and transfers, networks of economic interdependence, and cultural interactions.

HS-E32 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by describing the impact of precious metal exports from the Americas.

HS-E33 The student will demonstrate knowledge of the status and impact of global trade on regional civilizations of the world after 1500 A.D. by describing Africa and its increasing involvement in global trade.

HS-E34 The student will demonstrate knowledge of the effects of the Industrial Revolution during the nineteenth century by the evolution of the nature of work and the labor force, including its effects on families, the status of women and children, the slave trade, and the labor union movement.

HS-E35 The student will demonstrate knowledge of cultural, economic, and social conditions in developed and developing nations of the contemporary world by assessing the impact of economic development and global population growth on the environment and society, including an understanding of the links between economic and political freedom.

Economics (continued)

HS-E36 The student will demonstrate knowledge of how the nation grew and changed from the end of Reconstruction through the early twentieth century by describing the transformation of the American economy from a primarily agrarian to a modern industrial economy and identifying major inventions that improved life in the United States.

Civics

HS-C1 The student will demonstrate that being a good citizen involves
a) taking turns and sharing;
b) taking responsibility for certain classroom chores;
c) taking care of personal belongings and respecting what belongs to others;
d) following rules and understanding the consequence of breaking rules; and
e) practicing honesty, self-control, and kindness to others.

HS-C2 The student will recognize the American flag, the Pledge of Allegiance, and that the President is the leader of the United States.

HS-C3 The student will apply the traits of a good citizen by
a) focusing on fair play, exhibiting good sportsmanship, helping others, and treating others with respect;
b) recognizing the purpose of rules and practicing self-control;
c) working hard in school;
d) taking responsibility for one's own actions; and
e) valuing honesty and truthfulness in oneself and others.

HS-C4 The student will recognize the symbols and traditional practices that honor and foster patriotism in the United States by
a) identifying the American flag, bald eagle, Washington Monument, and Statue of Liberty; and
b) demonstrating respect for the American flag by learning the Pledge of Allegiance.

HS-C5 The student will recognize that communities in Virginia include people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.

HS-C6 The student will explain the responsibilities of a good citizen, with emphasis on
a) respecting and protecting the rights and property of others;
b) taking part in the voting process when making classroom decisions;
c) describing actions that can improve the school and community;
d) demonstrating self-discipline and self-reliance; and
e) practicing honesty and trustworthiness.

HS-C7 The student will identify George Washington, Abraham Lincoln, Susan B. Anthony, Helen Keller, Jackie Robinson, and Martin Luther King, Jr. as Americans whose contributions improved the lives of other Americans.

HS-C8 The student will understand that the United States is a land of people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.

Civics (continued)

HS-C9 The student will recognize why government is necessary in the classroom, school, and community by
a) explaining the purpose of rules and laws;
b) explaining that the basic purposes of government are to make laws, carry out laws, and decide if laws have been broken; and
c) explaining that government protects the rights and property of individuals.

HS-C10 The student will explain the importance of the basic principles that form the foundation of a republican form of government by
a) describing the individual rights to life, liberty, and the pursuit of happiness and equality under the law;
b) identifying the contributions of George Washington, Thomas Jefferson, Abraham Lincoln, Rosa Parks, Thurgood Marshall, and Martin Luther King, Jr.; and
c) recognizing that Veterans Day and Memorial Day honor people who have served to protect the country's freedoms.

HS-C11 The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.

HS-C12 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement.

HS-C13 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the Virginia Assembly (1619) as the first representative legislative body in English America.

HS-C14 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the reasons why the colonies went to war with England as expressed in the Declaration of Independence.

HS-C15 The student will demonstrate knowledge of the role of Virginia in the establishment of the new American nation by identifying the ideas of George Mason and Thomas Jefferson as expressed in the Virginia Declaration of Rights and the Virginia Statute for Religious Freedom.

HS-C16 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by identifying the effects of segregation and "Jim Crow" on life in Virginia.

HS-C17 The student will demonstrate knowledge of twentieth-century Virginia by identifying the social and political events in Virginia linked to desegregation and Massive Resistance and their relationship to national history.

HS-C18 The student will demonstrate knowledge of government, geography, and economics by identifying the three branches of Virginia government and the function of each.

HS-C19 The student will demonstrate knowledge of the causes and results of the American Revolution by identifying how political ideas shaped the revolutionary movement in America and led to the Declaration of Independence, with emphasis on the ideas of John Locke.

Civics (continued)

HS-C20 The student will demonstrate knowledge of the challenges faced by the new nation by identifying the basic principles of the new government established by the Constitution of the United States of America and the Bill of Rights.

HS-C21 The student will demonstrate knowledge of the challenges faced by the new nation by identifying the conflicts that resulted in the emergence of two political parties.

HS-C22 The student will demonstrate knowledge of the key domestic issues during the second half of the twentieth century by examining the Civil Rights Movement and the changing role of women.

Virginia

Standards of Learning Assessments

Blueprints for Reading Tests

for the

Aligned Standards of Learning

Virginia

Standards of Learning Assessments

Blueprints Grade 3 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 3 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R1 E-R2 E-R3
Demonstrate comprehension of printed materials	E-R4

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R1 The student will understand how print is organized and read.
- a) Hold print materials in the correct position.
- b) Identify the front cover, back cover, and title page of a book.
- c) Follow words from left to right and from top to bottom on a printed page.
- d) Match voice with print: syllables, words, and phrases.

E-R2 The student will demonstrate an understanding that print makes sense.
- a) Explain that printed materials provide information.
- b) Identify common signs and logos.
- c) Read ten high-frequency words.
- d) Read and explain own writing and drawings.

E-R3 The student will develop an understanding of basic phonetic principles.
- a) Identify and name the uppercase and lowercase letters of the alphabet.
- b) Match consonant and short vowel sounds to appropriate letters.
- c) Identify beginning consonant sounds in single-syllable words.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R4 The student will demonstrate comprehension of fiction and nonfiction.
- a) Use pictures to make predictions about content.
- b) Retell familiar stories, using beginning, middle, and end.
- c) Discuss characters, setting, and events.
- d) Use story language in discussions and retellings.
- e) Identify what an author does and what an illustrator does.
- f) Identify the topics of nonfiction selections.

* If ASOL statements are not appropriate for the selected student, consult higher grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 4 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 4 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R5 E-R6 E-R7 E-R8 E-R10
Demonstrate comprehension of printed materials	E-R9

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R5 The student will apply knowledge of how print is organized and read.
- a) Read from left to right and from top to bottom.
- b) Match spoken words with print.
- c) Identify letters, words, and sentences.

E-R6 The student will apply phonetic principles to read and spell.
- a) Use beginning and ending consonants to decode and spell single-syllable words.
- b) Use two-letter consonant blends to decode and spell single-syllable words.
- c) Use beginning consonant digraphs to decode and spell single-syllable words.
- d) Use short vowel sounds to decode and spell single-syllable words.
- e) Blend beginning, middle, and ending sounds to recognize and read words.
- f) Use word patterns to decode unfamiliar words.
- g) Use compound words.
- h) Read and spell common, high-frequency sight words, including the, said, and come.

E-R7 The student will use meaning clues and language structure to expand vocabulary when reading.
- a) Use titles and pictures.
- b) Use knowledge of the story and topic to read words.
- c) Use knowledge of sentence structure.
- d) Reread and self-correct.

E-R8 The student will read familiar stories, poems, and passages with fluency and expression.

E-R10 The student will use simple reference materials.
- a) Use knowledge of alphabetical order by first letter.
- b) Use a picture dictionary to find meanings of unfamiliar words.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R9 The student will read and demonstrate comprehension of a variety of fiction and nonfiction.

a) Preview the selection.
b) Set a purpose for reading.
c) Relate previous experiences to what is read.
d) Make predictions about content.
e) Ask and answer who, what, when, where, why, and how questions about what is read.
f) Identify characters, setting, and important events.
g) Retell stories and events, using beginning, middle, and end.
h) Identify the topic or main idea.

* If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 5 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 5 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R11 E-R12 E-R13 E-R16
Demonstrate comprehension of printed materials	E-R14 E-R15

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R11 The student will use phonetic strategies when reading and spelling.
- a) Use knowledge of consonants, consonant blends, and consonant digraphs to decode and spell words.
- b) Use knowledge of short, long, and r-controlled vowel patterns to decode and spell words.
- c) Decode regular multisyllabic words.

E-R12 The student will use meaning clues and language structure when reading.
- a) Use information in the story to read words.
- b) Use knowledge of sentence structure.
- c) Use knowledge of story structure and sequence.

E-R13 The student will use language structure to expand vocabulary when reading.
- a) Use knowledge of prefixes and suffixes.
- b) Use knowledge of contractions and singular possessives.
- c) Use knowledge of simple abbreviations.
- d) Use knowledge of antonyms and synonyms.

E-R16 The student will demonstrate comprehension of information in reference materials.
- a) Use a table of contents.
- b) Use pictures and charts.
- c) Use dictionaries and indices.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R14 The student will read fiction and nonfiction, using a variety of strategies independently.
- a) Preview the selection by using pictures, diagrams, titles, and headings.
- b) Set purpose for reading.
- c) Read stories, poems, and passages with fluency and expression.
- d) Reread and self-correct when necessary.

E-R15 The student will read and demonstrate comprehension of fiction and nonfiction.

a) Make predictions about content.
b) Read to confirm predictions.
c) Relate previous experiences to the topic.
d) Ask and answer questions about what is read.
e) Locate information to answer questions.
f) Describe characters, setting, and important events in fiction and poetry.
g) Identify the problem, solution, and main idea.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 6 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 6 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R17 E-R18 E-R21
Demonstrate comprehension of printed materials	E-R19 E-R20

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R17 The student will apply word-analysis skills when reading.
- a) Use knowledge of all vowel patterns.
- b) Use knowledge of homophones.
- c) Decode regular multisyllabic words.

E-R18 The student will use strategies to read a variety of fiction and nonfiction materials.
- a) Preview and use text formats.
- b) Set a purpose for reading.
- c) Apply meaning clues, language structure, and phonetic strategies.
- d) Use context to clarify meaning of unfamiliar words.
- e) Read fiction and nonfiction fluently and accurately.
- f) Reread and self-correct when necessary.

E-R21 The student will demonstrate comprehension of information from a variety of print resources.
- a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials.
- b) Use available technology.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R19 The student will read and demonstrate comprehension of fiction.
- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author's purpose.
- f) Ask and answer questions.
- g) Draw conclusions about character and plot.
- h) Organize information and events logically.
- i) Summarize major points found in fiction materials.
- j) Understand basic plots of fairy tales, myths, folktales, legends, and fables.

E-R20 The student will continue to read and demonstrate comprehension of nonfiction.

a) Identify the author's purpose.
b) Make connections between previous experiences and reading selections.
c) Ask and answer questions about what is read.
d) Draw conclusions.
e) Organize information and events logically.
f) Summarize major points found in nonfiction materials.
g) Identify the characteristics of biographies and autobiographies.
h) Compare and contrast the lives of two persons as described in biographies and/or autobiographies.

* If ASOL statements are not appropriate for the selected student, consult higher grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 7 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 7 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R22 E-R25
Demonstrate comprehension of printed materials	E-R23 E-R24

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R22 The student will read fiction and nonfiction with fluency and accuracy.
- a) Use context to clarify meanings of unfamiliar words.
- b) Explain words with multiple meanings.
- c) Use knowledge of word origins; synonyms, antonyms, and homonyms; and multiple meanings of words.
- d) Use word-reference materials, including the glossary, dictionary, and thesaurus.

E-R25 The student will demonstrate comprehension of information resources to research a topic.
- a) Construct questions about a topic.
- b) Collect information, using the resources of the media center, including online, print, and media resources.
- c) Evaluate and synthesize information.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R23 The student will read and demonstrate comprehension of fiction.
- a) Explain the author's purpose.
- b) Describe how the choice of language, setting, and information contributes to the author's purpose.
- c) Compare the use of fact and fantasy in historical fiction with other forms of literature.
- d) Identify major events and supporting details.
- e) Describe the relationship between text and previously read materials.
- f) Identify sensory words.

E-R24 The student will read and demonstrate comprehension of nonfiction.
- a) Use text organizers, such as type, headings, and graphics, to predict and categorize information.
- b) Formulate questions that might be answered in the selection.
- c) Explain the author's purpose.
- d) Make simple inferences, using information from texts.
- e) Draw conclusions, using information from texts.
- f) Summarize content of selection, identifying important ideas and providing details for each important idea.
- g) Describe relationship between content and previously learned concepts or skills.
- h) Distinguish between cause and effect and between fact and opinion.
- i) Identify new information gained from reading.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 8 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 8 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R26 E-R29
Demonstrate comprehension of printed materials	E-R27 E-R28

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R26 The student will read fiction and nonfiction with fluency and accuracy.
- a) Use context to clarify meaning of unfamiliar words.
- b) Use knowledge of root words, prefixes, and suffixes.
- c) Use dictionary, glossary, thesaurus, and other word-reference materials.

E-R29 The student will demonstrate comprehension of information from a variety of print resources.
- a) Develop notes that include important concepts, summaries, and identification of information sources.
- b) Organize information on charts, maps, and graphs.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R27 The student will read and demonstrate comprehension of fiction.
- a) Describe the relationship between text and previously read materials.
- b) Describe character development in fiction and poetry selections.
- c) Describe the development of plot and explain how conflicts are resolved.
- d) Describe the characteristics of free verse, rhymed, and patterned poetry.
- e) Describe how an author's choice of vocabulary and style contributes to the quality and enjoyment of selections.

E-R28 The student will read and demonstrate comprehension of nonfiction.
- a) Use text organizers, such as type, headings, and graphics, to predict and categorize information.
- b) Identify structural patterns found in nonfiction.
- c) Locate information to support opinions, predictions, and conclusions.
- d) Identify cause-and-effect relationships.
- e) Identify compare-and-contrast relationships.
- f) Skim materials to develop a general overview of content and to locate specific information.
- g) Identify new information gained from reading.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 11 Reading Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 11 ASOL Reading Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Use word analysis strategies and information resources	E-R30 E-R32
Demonstrate comprehension of printed materials	E-R31

Aligned Standards of Learning for Word Analysis and Information Strategies

E-R30 The student will read and learn the meanings of unfamiliar words and phrases.

a) Identify word origins, derivations, and inflections.
b) Identify analogies and figurative language.
c) Use context and sentence structure to determine meanings and differentiate among multiple meanings of words.
d) Use word-reference materials.

E-R32 The student will read and demonstrate comprehension of a variety of informational selections.

a) Identify questions to be answered.
b) Make, confirm, or revise predictions.
c) Use context to determine meanings of unfamiliar words and technical vocabulary.
d) Draw conclusions and make inferences based on explicit and implied information.
e) Organize the main idea and details to form a summary.
f) Compare and contrast information about one topic contained in different selections.
g) Select informational sources appropriate for a given purpose.

Aligned Standards of Learning for Comprehension of Printed Materials

E-R31 The student will read and demonstrate comprehension of a variety of fiction, narrative nonfiction, and poetry.

a) Identify the elements of narrative structure, including setting, character, plot, conflict, and theme.
b) Use knowledge of narrative and poetic structures to aid comprehension and predict outcomes.
c) Describe the images created by language.
d) Describe how word choice and imagery contribute to the meaning of a text.
e) Describe cause-effect relationships and their impact on plot.
f) Use information stated explicitly in the text to draw conclusions and make inferences.
g) Explain how character and plot development are used in a selection to support a central conflict or story line.
h) Paraphrase and summarize the main points in the text.

* If ASOL statements are not appropriate for the selected student, consult lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints for Mathematics Test

for the

Aligned Standards of Learning

Virginia

Standards of Learning Assessments

Blueprints Grade 3 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 3 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS1 M-NS2 M-NS3 M-NS4 M-NS5
Computation and Estimation	M-CE1
Measurement and Geometry	M-M1 M-M2 M-M3 M-M4 M-G1 M-G2 M-G3
Probability and Statistics	M-PS1 M-PS2 M-PS3
Patterns, Functions, and Algebra	M-PFA1 M-PFA2 M-PFA3

Aligned Standards of Learning for Number and Number Sense

M-NS 1 The student, given two sets containing 10 or fewer concrete items, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of one - to - one correspondence.

M-NS 2 The student, given a set containing 10 or fewer concrete items, will
a) tell how many are in the set by counting the number of items orally;
b) select the corresponding numeral from a given set; and
c) write the numeral to tell how many are in the set.

M-NS 3 The student, given an ordered set of three objects and/or pictures, will indicate the ordinal position of each item, first through third, and the ordered position of each item from left-to-right, right-to-left, top-to-bottom, and/or bottom-to-top.

M-NS 4 The student will investigate and recognize patterns from counting by fives and tens to 30, using concrete objects and a calculator.

M-NS 5 The student will count forward to 30 and backward from 10.

Aligned Standards of Learning for Computation and Estimation

M-CE 1 The student will add and subtract whole numbers, using up to 10 concrete items.

Aligned Standards of Learning for Measurement and Geometry

M-M 1 The student will recognize a penny, nickel, dime, and quarter and will determine the value of a collection of pennies and/or nickels whose total value is 10 cents or less.

M-M 2 The student will identify the instruments used to measure length (ruler), weight (scale), time (clock: digital and analog; calendar: day, month, and season), and temperature (thermometer).

M-M 3 The student will tell time to the hour, using an analog or digital clock.

M-M 4 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block.

M-G 1 The student will identify, describe, and draw two-dimensional (plane) geometric figures (circle, triangle, square, and rectangle).

M-G 2 The student will describe the location of one object relative to another (above, below, next to) and identify representations of plane geometric figures (circle, triangle, square, and rectangle) regardless of their position and orientation in space.

M-G 3 The student will compare the size (larger, smaller) and shape of plane geometric figures (circle, triangle, square, and rectangle).

Aligned Standards of Learning for Probability and Statistics

M-PS 1 The student will gather data relating to familiar experiences by counting and tallying.

M-PS 2 The student will display objects and information, using objects graphs, pictorial graphs, and tables.

M-PS 3 The student will investigate and describe the results of dropping a two-colored counter or using a multicolored spinner.

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 1 The student will sort and classify objects according to similar attributes (size, shape, and color).

M-PFA 2 The student will identify, describe, and extend a repeating relationship (pattern) found in common objects, sounds, and movements.

*If ASOL statements are not appropriate for the selected student, consult higher grade level ASOL statements.

Virginia

Standards of Learning Assessments

Blueprints Grade 4 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 4 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS6 M-NS7 M-NS8 M-NS9 M-NS10 M-NS11
Computation and Estimation	M-CE2 M-CE3 M-CE4
Measurement and Geometry	M-M5 M-M6 M-M7 M-M8 M-G4 M-G5 M-G6
Probability and Statistics	M-PS4 M-PS5
Patterns, Functions, and Algebra	M-PFA3 M-PFA4

Aligned Standards of Learning for Number and Number Sense

M-NS 6 The student will count objects in a given set containing between 1 and 100 objects and write the corresponding numeral.

M-NS 7 The student will group a collection of up to 100 objects into tens and ones and write the corresponding numeral to develop an understanding of place value.

M-NS 8 The student will count forward by ones, fives, and tens to 100, by twos to 20, and backward by ones from 20.

M-NS 9 The student will recognize and write numerals 0 through 100.

M-NS 10 The student will identify the ordinal positions first through tenth, using an ordered set of objects.

M-NS 11 The student will identify and represent the concepts of one-half and one fourth, using appropriate materials or a drawing.

Aligned Standards of Learning for Computation and Estimation

M-CE 2 The student, given a familiar problem situation involving magnitude, will
a) select a reasonable magnitude from three given quantities: a one-digit numeral, a two-digit numeral, and a three-digit numeral (e.g., 5, 50, and 500);
b) explain the reasonableness of his/her choice.

M-CE 3 The student will recall basic addition facts — i.e., sums to 10 or less — and the corresponding subtraction facts.

M-CE 4 The student will create and solve story and picture problems involving one-step solutions, using basic addition and subtraction facts.

Aligned Standards of Learning for Measurement and Geometry

M-M 5 The student will
a) identify the number of pennies equivalent to a nickel, a dime, and a quarter;
b) determine the value of a collection of pennies, nickels, and dimes whose total value is 100 cents or less.

M-M 6 The student will tell time to the half-hour, using an analog or digital clock.

M-M 7 The student will use nonstandard units to measure length and weight.

M-M 8 The student will compare the volumes of two given containers by using concrete materials (e.g., jelly beans, sand, water, rice).

M-M 9 The student will compare the weights of two objects, using a balance scale.

M-G 4 The student will describe the proximity of objects in space (*near*, *far*, *close by*, *below*, *above*, *up*, *down*, *beside*, and *next to*).

M-G 5 The student will draw, describe, and sort plane geometric figures (triangle, square, rectangle, and circle) according to number of sides, corners, and square corners.

M-G 6 The student will identify and describe objects in his/her environment that depict plane geometric figures (triangle, rectangle, square, and circle).

Aligned Standards of Learning for Probability and Statistics

M-PS 4 The student will investigate, identify, and describe various forms of data collection in his/her world (e.g., recording daily temperature, lunch count, attendance, and favorite ice cream), using tables, picture graphs, and object graphs.

M-PS 5 The student will interpret information displayed in a picture or object graph, using the vocabulary *more*, *less*, *fewer*, *greater than*, *less than*, and *equal to*.

Aligned Standards of Learning for Patterns, Functions and Algebra

M-PFA 3 The student will sort and classify concrete objects according to one or more attributes, including color, size, shape, and thickness.

M-PFA 4 The student will recognize, describe, extend, and create a wide variety of patterns, including rhythmic, color, shape, and numerical. Patterns will include both growing and repeating patterns. Concrete materials and calculators will be used by students.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL statements.

Virginia

Standards of Learning Assessments

Blueprints Grade 5 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 5 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS12 M-NS13 M-NS14 M-NS15 M-NS16
Computation and Estimation	M-CE2 M-CE3 M-CE4
Measurement and Geometry	M-M10 M-M11 M-M12 M-M13 M-M14 M-M15 M-M16 M-M17 M-M18 M-G7 M-G8 M-G9
Probability and Statistics	M-PS6 M-PS7
Patterns, Functions, and Algebra	M-PFA5 M-PFA6

Aligned Standards of Learning for Number and Number Sense

M-NS 12 The student will
a) read, write, and identify the place value of each digit in a three-digit numeral, using numeration models;
b) round two-digit numbers to the nearest ten.

M-NS 13 The student will compare two whole numbers between 0 and 999, using symbols (>, <, or =) and words (*greater than*, *less than*, or *equal to*).

M-NS 14 The student will identify the ordinal positions first through twentieth, using an ordered set of objects.

M-NS 15 The student will identify the part of a set and/or region that represents fractions for one-half, one-third, one-fourth, one-eighth, and one-tenth and write the corresponding fraction.

M-NS 16 The student will

a) count forward by twos, fives, and tens to 100, starting at various multiples of 2, 5, or 10, using mental mathematics, paper and pencil, hundred chart, calculators, and/or concrete objects, as appropriate;
b) count backward by tens from 100;
c) group objects by threes and fours;
d) recognize even and odd numbers, using objects

Aligned Standards of Learning for Computation and Estimation

M-CE 5 The student will recall basic addition facts — ¬i.e., sums to 18 or less — and the corresponding subtraction facts.

M-CE 6 The student, given two whole numbers whose sum is 99 or less, will

a) estimate the sum;
b) find the sum, using various methods of calculation (mental computation, concrete materials, and paper and pencil).

M-CE 7 The student, given two whole numbers, each of which is 99 or less, will

a) estimate the difference;
b) find the difference, using various methods of calculation (mental computation, concrete materials, and paper and pencil).

M-CE 8 The student will create and solve one-step addition and subtraction problems using data from simple tables, picture graphs, bar graphs, and practical situations.

M-CE 9 The student, given a simple addition or subtraction fact, will recognize and describe the related facts which represent and describe the inverse relationship between addition and subtraction (e.g., 3 + __ = 7, ___ + 3 = 7; 7 – 3 = __, and 7 – __ = 3).

Aligned Standards of Learning for Measurement and Geometry

M-M 10 The student will

a) count and compare a collection of pennies, nickels, dimes, and quarters whose total value is $2.00 or less;
b) identify the correct usage of the cent symbol (¢), dollar symbol ($), and decimal point (.).

M-M 11 The student will estimate and then use a ruler to make linear measurements to the nearest centimeter and inch, including measuring the distance around a polygon in order to determine perimeter.

M-M 12 The student, given grid paper, will estimate and then count the number of square units needed to cover a given surface in order to determine area.

M-M 13 The student will estimate and then count the number of cubes in a rectangular box in order to determine volume.

M-M 14 The student will estimate and then determine weight/mass of familiar objects in pounds and/or kilograms, using a scale.

M-M 15 The student will tell and write time to the quarter hour, using analog and digital clocks.

M-M 16 The student will use actual measuring devices to compare metric and U.S. Customary units (cups, pints, quarts, gallons, and liters) for measuring liquid volume, using the concepts of *more*, *less*, and *equivalent*.

M-M 17 The student will
a) use calendar language appropriately (e.g., *months*, *today*, *yesterday*, *next week*, *last week*);
b) determine past and future days of the week;
c) identify specific dates on a given calendar.

M-M 18 The student will read the temperature on a Celsius and/or Fahrenheit thermometer to the nearest 10 degrees.

M-G7 The student will identify, describe, and sort three-dimensional (solid) concrete figures, including a cube, rectangular solid (prism), square pyramid, sphere, cylinder, and cone, according to the number and shape of the solid's faces, edges, and corners.

M-G 8 The student will identify and create figures, symmetric along a line, using various concrete materials.

M-G 9 The student will compare and contrast plane and solid geometric shapes (circle/sphere, square/cube, and rectangle/rectangular solid).

Aligned Standards of Learning for Probability and Statistics

M-PS 6 The student will read, construct, and interpret a simple picture and bar graph.

M-PS 7 The student will record data from experiments, using spinners and colored tiles/cubes, and use the data to predict which of two events is more likely to occur if the experiment is repeated.

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 5 The student will identify, create and extend a wide variety of patterns, using numbers concrete objects and pictures.

M-PFA 6 The student will solve by completing a numerical sentence involving the basic facts for addition and subtraction. Examples include: 3=__=7, or 9-__=2. Students will create story problems, using the numerical sentences.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL statements.

Virginia

Standards of Learning Assessments

Blueprints Grade 6 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 6 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS17 M-NS18 M-NS19 M-NS20 M-NS21 M-NS22 M-NS23
Computation and Estimation	M-CE10 M-CE11 M-CE12 M-CE13 M-CE14
Measurement and Geometry	M-M19 M-M20 M-M21 M-M22 M-M23 M-G10 M-G11 M-G12
Probability and Statistics	M-PS8 M-PS9 M-PS10
Patterns, Functions, and Algebra	M-PFA7 M-PFA8

Aligned Standards of Learning for Number and Number Sense

M-NS 17 The student will read and write six-digit numerals and identify the place value for each digit.

M-NS 18 The student will round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand.

M-NS 19 The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or =) and words (*greater than*, *less than*, or *equal to*).

M-NS 20 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact sentences. Students will use these relationships to solve problems such as 5 + 3 = 8 and 8 – 3 = ____.

M-NS 21 The student will
a) divide regions and sets to represent a fraction;
b) name and write the fractions represented by a given model (area/region, length/measurement, and set). Fractions (including mixed numbers) will include halves, thirds, fourths, eighths, and tenths.

M-NS 22 The student will compare the numerical value of two fractions having like and Unlike denominators, using concrete or pictorial models involving areas/regions, lengths/measurements, and sets.

M-NS 23 The student will read and write decimals expressed as tenths and hundredths, using concrete materials and models.

Aligned Standards of Learning for Computation and Estimation

M-CE 10 The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

M-CE 11 The student will recall the multiplication and division facts through the nines table.

M-CE 12 The student will represent multiplication and division, using area and set models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.

M-CE 13 The student will add and subtract with proper fractions having like denominators of 10 or less, using concrete materials and pictorial models representing areas/regions, lengths/measurements, and sets.

M-CE 14 The student will add and subtract with decimals expressed as tenths, using concrete materials, pictorial representations, and paper and pencil.

Aligned Standards of Learning for Measurement and Geometry

M-M 19 The student will determine by counting the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the coins or bills, and make change.

M-M 20 The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure
a) length — inches, feet, yards, centimeters, and meters;
b) liquid volume — cups, pints, quarts, gallons, and liters;
c) weight/mass — ounces, pounds, grams, and kilograms.

M-M 21 The student will tell time to the nearest five-minute interval and to the nearest minute, using analog and digital clocks.

M-M 22 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.

M-M 23 The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers will be used.

M-G 10 The student will analyze two-dimensional (plane) and three-dimensional (solid) geometric figures (circle, square, rectangle, triangle, cube, rectangular solid [prism], square pyramid, sphere, cone, and cylinder) and identify relevant properties, including the number of corners, square corners, edges, and the number and shape of faces, using concrete models.

M- G 11 The student will identify and draw representations of line segments and angles, using a ruler or straightedge.

M-G 12 The student, given appropriate drawings or models, will identify and describe congruent and symmetrical, two-dimensional (plane) figures, using tracing procedures.

Aligned Standards of Learning for Probability and Statistics

M-PS 8 The student, given grid paper, will
a) collect and organize data on a given topic of his/her choice, using observations, measurements, surveys, or experiments; and
b) construct a line plot, a picture graph, or a bar graph to represent the results. Each graph will include an appropriate title and key.

M-PS 9 The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

M-PS 10 The student will investigate and describe the concept of probability as chance and list possible results of a given situation

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 7 The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, tables, and pictures).

M-PFA 8 The student will
a) investigate and create patterns involving numbers, operations (addition and multiplication), and relations that model the identity and commutative properties for addition and multiplication;
b) demonstrate an understanding of equality by recognizing that the equal sign (=) links equivalent quantities, such as $4 \bullet 3 = 2 \bullet 6$.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL statements.

Virginia

Standards of Learning Assessments

Blueprints Grade 7 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 7 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS24 M-NS25 M-NS26 M-NS27
Computation and Estimation	M-CE15 M-CE16 M-CE17 M-CE18 M-CE19
Measurement and Geometry	M-M24 M-M25 M-M26 M-M27 M-G13 M-G14 M-G15 M-G16 M-G17
Probability and Statistics	M-PS11 M-PS12
Patterns, Functions, and Algebra	M-PFA9 M-PFA10

Aligned Standards of Learning for Number and Number Sense

M-NS 24 The student will

a) identify (orally and in writing) the place value for each digit in a whole number expressed through millions;

b) compare two whole numbers expressed through millions, using symbols (>, <, or =);

c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand.

M-NS 25 The student will

a) identify, model, and compare rational numbers (fractions and mixed numbers), using concrete objects and pictures;

b) represent equivalent fractions;

c) relate fractions to decimals, using concrete objects.

M-NS 26 The student will compare the numerical value of fractions (with like and unlike denominators) having denominators of 12 or less, using concrete materials.

M-NS 27 The student will
a) read, write, represent, and identify decimals expressed through thousandths;
b) round to the nearest whole number, tenth, and hundredth;
c) compare the value of two decimals, using symbols (<, >, or =), concrete materials, drawings, and calculators.

Aligned Standards of Learning for Computation and Estimation

M-CE 15 The student will estimate whole-number sums and differences and describe the method of estimation. Students will refine estimates, using terms such as *closer to*, *between*, and *a little more than*.

M-CE 16 The student will add and subtract whole numbers written in vertical and horizontal form, choosing appropriately between paper and pencil methods and calculators.

M-CE 17 The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.

M-CE 18 The student will estimate and find the quotient of two whole numbers, given a one-digit divisor.

M-CE 19 The student will
a) add and subtract with fractions having like and unlike denominators of 12 or less, using concrete materials, pictorial representations, and paper and pencil;
b) add and subtract with decimals through thousandths, using concrete materials, pictorial representations, and paper and pencil;
c) solve problems involving addition and subtraction with fractions having like and unlike denominators of 12 or less and with decimals expressed through thousandths, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

Aligned Standards of Learning for Measurement and Geometry

M-M 24 The student will
a) estimate and measure weight/mass, using actual measuring devices, and describe the results in U.S. Customary/metric units as appropriate, including ounces, pounds, grams, and kilograms;
b) identify equivalent measurements between units within the U.S. Customary system (ounces and pounds) and between units within the metric system (grams and kilograms);
c) estimate the conversion of ounces and grams and pounds and kilograms, using approximate comparisons (1 ounce is about 28 grams, or 1 gram is about the weight of a paper clip; 1 kilogram is a little more than 2 pounds).*

**The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 25 The student will

a) estimate and measure length, using actual measuring devices, and describe the results in both metric and U.S. Customary units, including part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, millimeters, centimeters, and meters;
b) identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters);
c) estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons (1 inch is about 2.5 centimeters, 1 meter is a little longer than 1 yard, 1 mile is slightly farther than 1.5 kilometers, or 1 kilometer is slightly farther than half a mile). *

**The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 26 The student will

a) estimate and measure liquid volume, using actual measuring devices and using metric and U.S. Customary units, including cups, pints, quarts, gallons, milliliters, and liters;
b) identify equivalent measurements between units within the U.S. Customary system (cups, pints, quarts, and gallons) and between units within the metric system (milliliters and liters);
c) estimate the conversion of quarts and liters, using approximate comparisons (1 quart is a little less than 1 liter, 1 liter is a little more than 1 quart).*

**The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U. S. Customary and metric units.*

M-M 27 The student will

a) identify and describe situations representing the use of perimeter and area; and
b) use measuring devices to find perimeter in both standard and nonstandard units of measure.

M-G 13 The student will investigate and describe the relationships between and among points, lines, line segments, and rays.

M-G 14 The student will

a) identify and draw representations of points, lines, line segments, rays, and angles, using a straightedge or ruler;
b) describe the path of shortest distance between two points on a flat surface.

M-G 15 The student will identify and draw representations of lines that illustrate intersection, parallelism, and perpendicularity.

M-G 16 The student will

a) analyze and compare the properties of two-dimensional (plane) geometric figures (circle, square, rectangle, triangle, parallelogram, and rhombus) and three-dimensional (solid) geometric figures (sphere, cube, and rectangular solid [prism]);
b) identify congruent and noncongruent shapes;
c) investigate congruence of plane figures after geometric transformations such as reflection (flip), translation (slide) and rotation (turn), using mirrors, paper folding, and tracing.

M-G 17 The student will identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane.

Aligned Standards of Learning for Probability and Statistics

M-PS 11 The student will
a) predict the likelihood of outcomes of a simple event, using the terms *certain*, *likely*, *unlikely*, *impossible*;
b) determine the probability of a given simple event, using concrete materials.

M-PS 12 The student will collect, organize, and display data in line and bar graphs with scale increments of one or greater than one and use the display to interpret the results, draw conclusions, and make predictions.

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 9 The student will recognize, create, and extend numerical and geometric patterns, using concrete materials, number lines, symbols, tables, and words.

M-PFA 10 The student will recognize and demonstrate the meaning of equality, using symbols representing numbers, operations, and relations [e.g., 3 + 5 = 5 + 3 and 15 + (35 + 16) = (15 + 35) + 16].

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL statements.

Virginia

Standards of Learning Assessments

Blueprints Grade 8 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 8 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS28 M-NS29
Computation and Estimation	M-CE20 M-CE21 M-CE22 M-CE23 M-CE24
Measurement and Geometry	M-M28 M-M29 M-M30 M-M31 M-M32 M-M33 M-G18 M-G19 M-G20
Probability and Statistics	M-PS13 M-PS14 M-PS15
Patterns, Functions, and Algebra	M-PFA11 M-PFA12 M-PFA13

Aligned Standards of Learning for Number and Number Sense

M-NS 28 The student will

a) read, write, and identify the place values of decimals through thousandths;
b) round decimal numbers to the nearest tenth or hundredth;
c) compare the values of two decimals through thousandths, using the symbols >, <, or =.

M-NS 29 The student will

a) recognize and name commonly used fractions (halves, fourths, fifths, eighths, and tenths) in their equivalent decimal form and vice versa;
b) order a given set of fractions and decimals from least to greatest. Fractions will include like and unlike denominators limited to 12 or less, and mixed numbers.

Aligned Standards of Learning for Computation and Estimation

M-CE 20 The student will create and solve problems involving addition, subtraction, multiplication, and division of whole numbers, using paper and pencil, estimation, mental computation, and calculators.

M-CE 21 The student will find the sum, difference, and product of two numbers expressed as decimals through thousandths, using an appropriate method of calculation, including paper and pencil, estimation, mental computation, and calculators.

M-CE 22 The student, given a dividend of four digits or fewer and a divisor of two digits or fewer, will find the quotient and remainder.

M-CE 23 The student, given a dividend expressed as a decimal through thousandths and a single-digit divisor, will find the quotient.

M-CE 24 The student will add and subtract with fractions and mixed numbers, with and without regrouping, and express answers in simplest form. Problems will include like and unlike denominators limited to 12 or less.

Aligned Standards of Learning for Measurement and Geometry

M-M 28 The student will describe and determine the perimeter of a polygon and the area of a square, rectangle, and right triangle, given the appropriate measures.

M-M 29 The student will identify and describe the diameter, radius, chord, and circumference of a circle.

M-M 30 The student will differentiate between perimeter, area, and volume and identify whether the application of the concept of perimeter, area, or volume is appropriate for a given situation.

M-M 31 The student will choose an appropriate measuring device and unit of measure to solve problems involving measurement of

a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;
b) weight/mass — ounces, pounds, tons, grams, and kilograms;
c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters;
d) area — square units;
e) temperature — Celsius and Fahrenheit units.

Problems also will include estimating the conversion of Celsius and Fahrenheit units relative to familiar situations (water freezes at 0°C and 32°F, water boils at 100°C and 212°F, normal body temperature is about 37°C and 98.6°F).

M-M 32 The student will determine an amount of elapsed time in hours and minutes within a 24-hour period.

M-M 33 The student will measure and draw right, acute, and obtuse angles and triangles, using appropriate tools.

M-G 18 The student will classify angles and triangles as right, acute, or obtuse.

M-G 19 The student, using two-dimensional (plane) figures (square, rectangle, triangle, parallelogram, rhombus, kite, and trapezoid) will

a) recognize, identify, describe, and analyze their properties in order to develop definitions of these figures;
b) identify and explore congruent, noncongruent, and similar figures;
c) investigate and describe the results of combining and subdividing shapes;
d) identify and describe a line of symmetry;
e) recognize the images of figures resulting from geometric transformations such as translation (slide), reflection (flip), or rotation (turn).

M-G 20 The student will identify, compare, and analyze properties of three-dimensional (solid) geometric shapes (cylinder, cone, cube, square pyramid, and rectangular prism).

Aligned Standards of Learning for Probability and Statistics

M-PS 13 The student will

a) solve problems involving the probability of a single event by using tree diagrams or by constructing a sample space representing all possible results;
b) predict the probability of outcomes of simple experiments, representing it with fractions or decimals from 0 to 1, and test the prediction;
c) create a problem statement involving probability and based on information from a given problem situation. Students will not be required to solve the created problem statement.

M-PS 14 The student will, given a problem situation, collect, organize, and display a set of numerical data in a variety of forms, using bar graphs, stem-and-leaf plots, and line graphs, to draw conclusions and make predictions.

M-PS 15 The student will find the mean, median, mode, and range of a set of data.

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 11 The student will analyze the structure of numerical and geometric patterns (how they change or grow) and express the relationship, using words, tables, graphs, or a mathematical sentence. Concrete materials and calculators will be used.

M-PFA 12 The student will

a) investigate and describe the concept of variable;
b) use a variable expression to represent a given quantitative expression involving one operation;
c) write an open sentence to represent a given mathematical relationship, using a variable.

M-PFA 13 The student will create a problem situation based on a given open sentence using a single variable.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 11 Mathematics Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 11 ASOL Mathematics Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Number and Number Sense	M-NS30 M-NS31 M-NS32 M-NS33 M-NS34
Computation and Estimation	M-CE25 M-CE26 M-CE27
Measurement and Geometry	M-M34 M-M35 M-M36 M-M37 M-M38 M-G21 M-G22 M-G23 M-G24
Probability and Statistics	M-PS16 M-PS17 M-PS18
Patterns, Functions, and Algebra	M-PFA14 M-PFA15 M-PFA16

Aligned Standards of Learning for Number and Number Sense

M-NS 30 The student will identify representations of a given percent and describe orally and in writing the equivalence relationships among fractions, decimals, and percents.

M-NS 31 The student will describe and compare two sets of data, using ratios, and will use appropriate notations, such as *a/b*, *a to b*, and *a:b*.

M-NS 32 The student will
a) find common multiples and factors, including least common multiple and greatest common factor;
b) identify and describe prime and composite numbers; and identify and describe the characteristics of even and odd integers.

M-NS 33 The student will compare and order whole numbers, fractions, and decimals, using concrete materials, drawings or pictures, and mathematical symbols.

M-NS 34 The student will identify, represent, order, and compare integers.

Aligned Standards of Learning for Computation and Estimation

M-CE 25 The student will
a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and
b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.

M-CE 26 The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).

M-CE 27 The student will solve multistep consumer-application problems involving fractions and decimals and present data and conclusions in paragraphs, tables, or graphs. Planning a budget will be included.

Aligned Standards of Learning for Measurement and Geometry

M-M 34 The student will compare and convert units of measure for length, area, weight/mass, and volume within the U.S. Customary system and the metric system and estimate conversions between units in each system:
a) length — part of an inch (1/2, 1/4, and 1/8), inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers;
b) weight/mass — ounces, pounds, tons, grams, and kilograms;
c) liquid volume — cups, pints, quarts, gallons, milliliters, and liters; and
d) area — square units. *

**The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

M-M 35 The student will estimate and then determine length, weight/mass, area, and liquid volume/capacity, using standard and nonstandard units of measure.

M-M 36 The student will determine if a problem situation involving polygons of four or fewer sides represents the application of perimeter or area and apply the appropriate formula.

M-M 37 The student will
a) solve problems involving the circumference and/or area of a circle when given the diameter or radius;
b) derive approximations for pi (π) from measurements for circumference and diameter, using concrete materials or computer models.

M-M 38 The student will
a) estimate angle measures, using 45°, 90°, and 180° as referents, and use the appropriate tools to measure the given angles;
b) measure and draw right, acute, and obtuse angles and triangles.

M-G 21 The student will identify, classify, and describe the characteristics of plane figures, describing their similarities, differences, and defining properties.

M-G 22 The student will determine congruence of segments, angles, and polygons by direct comparison, given their attributes. Examples of noncongruent and congruent figures will be included.

M-G 23 The student will construct the perpendicular bisector of a line segment and an angle bisector.

M-G 24 The student will sketch, construct models of, and classify solid figures (rectangular prism, cone, cylinder, and pyramid).

Aligned Standards of Learning for Probability and Statistics

M-PS 16 The student, given a problem situation, will collect, analyze, display, and interpret data in a variety of graphical methods, including
a) line, bar, and circle graphs;
b) stem-and-leaf plots;
c) box-and-whisker plots.
Circle graphs will be limited to halves, fourths, and eighths.

M-PS 17 The student will describe the mean, median, and mode as measures of central tendency, describe the range, and determine their meaning for a set of data.

M-PS 18 The student will
a) make a sample space for selected experiments and represent it in the form of a list, chart, picture, or tree diagram;
b) determine and interpret the probability of an event occurring from a given sample space and represent the probability as a ratio, decimal or percent, as appropriate for the given situation.

Aligned Standards of Learning for Patterns, Functions, and Algebra

M-PFA 14 The student will investigate, describe, and extend numerical and geometric patterns, including triangular numbers, patterns formed by powers of 10, and arithmetic sequences.

M-PFA 15 The student will investigate and describe concepts of positive exponents, perfect squares, square roots, and, for numbers greater than 10, scientific notation. Calculators will be used to develop exponential patterns.

M-PFA 16 The student will
a) model and solve algebraic equations, using concrete materials;
b) solve one-step linear equations in one variable, involving whole number coefficients and positive rational solutions;
c) use the following algebraic terms appropriately: *variable*, *coefficient*, *term*, and *equation*.

*If ASOL statements are not appropriate for the selected student, consult lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints for Science Tests

for the

Aligned Standards of Learning

Virginia

Standards of Learning Assessments

Blueprints Grade 3 Science Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 3 ASOL Science Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Scientific Investigation	S-SI1 S-SI2
Force, Motion, Energy, and Matter	S-FME1 S-M1 S-M2
Life Processes and Living Systems	S-LP1
Earth/Space Systems and Cycles	S-IE1 S-EP1 S-EP2

Aligned Standards of Learning for Scientific Investigation

S-SI 1 The student will conduct investigations in which

a) basic properties of objects are identified by direct observation;
b) observations are made from multiple positions to achieve different perspectives;
c) objects are described both pictorially and verbally;
d) a set of objects is sequenced according to size;
e) a set of objects is separated into two groups based on a single physical attribute;
f) nonstandard units are used to measure common objects;
g) a question is developed from one or more observations;
h) picture graphs are constructed using 10 or fewer units;
i) an unseen member in a sequence of objects is predicted;
j) unusual or unexpected results in an activity are recognized.

S-SI 2 Students will investigate and understand that humans have senses that allow one to seek, find, take in, and react or respond to information in order to learn about one's surroundings. Key concepts include

a) five senses and corresponding sensing organs (taste – tongue, touch – skin, smell – nose, hearing – ears, and sight – eyes);
b) sensory descriptors (sweet, sour, bitter, salty, rough/smooth, hard/soft, cold, warm, hot, loud/soft, high/low, bright/dull).

Aligned Standards of Learning for Force, Motion, Energy, and Matter

S-FME 1 The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications. Key concepts include

a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal;
b) useful applications (refrigerator magnet, can opener, magnetized screwdriver, and magnetic games).

S-M 1 The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include

a) colors (red, orange, yellow, green, blue, purple), white, and black;
b) shapes (circle, triangle, square, and rectangle) and forms (flexible/stiff, straight/curved);
c) textures (rough/smooth) and feel (hard/soft);
d) relative size and weight (big/little, large/small, heavy/light, wide/thin, long/short);
e) position (over/under, in/out, above/below, left/right) and speed (fast/slow).

S-M 2 The student will investigate and understand that water flows and has properties that can be observed and tested. Key concepts include

a) water occurs in different states (solid, liquid, gas);
b) the natural flow of water is downhill;
c) some materials float in water, while others sink.

Aligned Standards of Learning for Life Processes and Living Systems

S-LP 1 The student will investigate and understand basic needs and life processes of plants and animals. Key concepts include

a) living things change as they grow, and they need food, water, and air to survive;
b) plants and animals live and die (go through a life cycle);
c) offspring of plants and animals are similar but not identical to their parents and to one another.

Aligned Standards of Learning for Earth/Space Systems and Cycles

S-IE 1 The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include

a) shadows occur in nature when sunlight is blocked by an object;
b) shadows can be produced by blocking artificial light sources.

S-EP 1 The student will investigate and understand simple patterns in his/her daily life. Key concepts include

a) weather observations;
b) the shapes and forms of many common natural objects including seeds, cones, and leaves;
c) animal and plant growth;
d) home and school routines.

S-EP 2 The student will investigate and understand that change occurs over time and rates may be fast or slow. Key concepts include

a) natural and human-made things may change over time;
b) changes can be noted and measured.

* If ASOL statements are not appropriate for the selected student, consult higher grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 5 Science Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 5 ASOL Science Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Scientific Investigation	S-SI3 S-SI4 S-SI5 S-R2 S-R3 S-R4 S-R5
Force, Motion, Energy, and Matter	S-FME2 S-FME3 S-FME4 S-M3 S-M4 S-M5
Life Processes and Living Systems	S-LP2 S-LP3 S-LP4 S-LP5 S-LS1 S-LS2 S-LS3
Earth/Space Systems and Cycles	S-IE2 S-IE3 S-IE4 S-EP3 S-EP4 S-EP5 S-EP6

Aligned Standards of Learning for Scientific Investigation

S-SI 3 The student will conduct investigations in which

a) differences in physical properties are observed using the senses;
b) simple tools are used to enhance observations;
c) objects or events are classified and arranged according to attributes or properties;
d) observations and data are communicated orally and with simple graphs, pictures, written statements, and numbers;
e) length, mass, and volume are measured using standard and nonstandard units;
f) predictions are based on patterns of observation rather than random guesses;
g) simple experiments are conducted to answer questions;
h) inferences are made and conclusions are drawn about familiar objects and events.

S-SI 4 The student will conduct investigations in which

a) observation is differentiated from personal interpretation, and conclusions are drawn based on observations;
b) observations are repeated to ensure accuracy;
c) two or more attributes are used to classify items;
d) conditions that influence a change are defined;
e) length, volume, mass, and temperature measurements are made in metric units (centimeters, meters, liters, degrees Celsius, grams, kilograms) and standard English units (inches, feet, yards, cups, pints, quarts, gallons, degrees Fahrenheit, ounces, pounds);
f) pictures and bar graphs are constructed using numbered axes;
g) unexpected or unusual quantitative data are recognized;
h) simple physical models are constructed.

S-SI 5 The student will plan and conduct investigations in which

a) predictions and observations are made;
b) objects with similar characteristics are classified into at least two sets and two subsets;
c) questions are developed to formulate hypotheses;
d) volume is measured to the nearest milliliter and liter;
e) length is measured to the nearest centimeter;
f) mass is measured to the nearest gram;
g) data are gathered, charted, and graphed (line plot, picture graph, and bar graph);
h) temperature is measured to the nearest degree Celsius;
i) time is measured to the nearest minute;
j) inferences are made and conclusions are drawn;
k) natural events are sequenced chronologically.

S-R 2 The student will investigate and understand that natural resources are limited. Key concepts include

a) identification of natural resources (plants and animals, water, air, land, minerals, forests, and soil);
b) factors that affect air and water quality;
c) recycling, reusing, and reducing consumption of natural resources.

S-R 3 The student will investigate and understand that plants produce oxygen and food, are a source of useful products, and provide benefits in nature. Key concepts include

a) important plant products (fiber, cotton, oil, spices, lumber, rubber, medicines, and paper);
b) the availability of plant products affects the development of a geographic area;
c) plants provide homes and food for many animals and prevent soil from washing away.

S-R 4 The student will investigate and understand that natural events and human influences can affect the survival of species. Key concepts include

a) the interdependency of plants and animals;
b) the effects of human activity on the quality of air, water, and habitat;
c) the effects of fire, flood, disease, and erosion on organisms;
d) conservation and resource renewal.

S-R 5 The student will investigate and understand different sources of energy. Key concepts include

a) the sun's ability to produce light and heat energy;
b) sources of energy (sunlight, water, wind);
c) fossil fuels (coal, oil, natural gas) and wood;
d) renewable and nonrenewable energy resources.

Aligned Standards of Force, Motion, Energy, and Matter

S-FME 1 The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, and have useful applications. Key concepts include
a) attraction/nonattraction, push/pull, attract/repel, and metal/nonmetal;
b) useful applications (refrigerator magnet, can opener, magnetized screwdriver, and magnetic games).

S-M 1 The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include
a) colors (red, orange, yellow, green, blue, purple), white, and black;
b) shapes (circle, triangle, square, and rectangle) and forms (flexible/stiff, straight/curved);
c) textures (rough/smooth) and feel (hard/soft);
d) relative size and weight (big/little, large/small, heavy/light, wide/thin, long/short);
e) position (over/under, in/out, above/below, left/right) and speed (fast/slow).

S-M 2 The student will investigate and understand that water flows and has properties that can be observed and tested. Key concepts include
a) water occurs in different states (solid, liquid, gas);
b) the natural flow of water is downhill;
c) some materials float in water, while others sink.

Aligned Standards of Life Processes and Living Systems

S-LP 2 The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics. Key concepts include
a) needs (food, air, water, light, and a place to grow);
b) parts (seeds, roots, stems, leaves, blossoms, fruits);
c) characteristics (edible/nonedible, flowering/nonflowering, evergreen/deciduous).

S-LP 3 The student will investigate and understand that animals, including people, have life needs and specific physical characteristics and can be classified according to certain characteristics. Key concepts include
a) life needs (air, food, water, and a suitable place to live);
b) physical characteristics (body coverings, body shape, appendages, and methods of movement);
c) other characteristics (wild/tame, water homes/land homes).

S-LP 4 The student will investigate and understand that plants and animals undergo a series of orderly changes in their life cycles. Key concepts include
a) some animals (frogs and butterflies) undergo distinct stages during their lives, while others generally resemble their parents;
b) flowering plants undergo many changes, from the formation of the flower to the development of the fruit.

S-LP 5 The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs. Key concepts include
a) methods of gathering and storing food, finding shelter, defending themselves, and rearing young;
b) hibernation, migration, camouflage, mimicry, instinct, and learned behavior.

S-LS 1 The student will investigate and understand that living things are part of a system. Key concepts include
a) living organisms are interdependent with their living and nonliving surroundings;
b) habitats change over time due to many influences.

S-LS 2 The student will investigate and understand relationships among organisms in aquatic and terrestrial food chains. Key concepts include

a) producer, consumer, decomposer;
b) herbivore, carnivore, omnivore;
c) predator and prey.

S-LS 3 The student will investigate and understand that environments support a diversity of plants and animals that share limited resources. Key concepts include

a) water-related environments (pond, marshland, swamp, stream, river, and ocean environments);
b) dry-land environments (desert, grassland, rain forest, and forest environments);
c) population and community.

Aligned Standards of Learning for Earth/Space Systems and Cycles

S-IE 2 The student will investigate and understand the basic relationships between the sun and the Earth. Key concepts include

a) the sun is the source of heat and light that warms the land, air, and water;
b) night and day are caused by the rotation of the Earth.

S-IE 3 The student will investigate and understand basic types, changes, and patterns of weather. Key concepts include

a) temperature, wind, precipitation, drought, flood, and storms;
b) the uses and importance of measuring and recording weather data.

S-IE 4 The student will investigate and understand the major components of soil, its origin, and importance to plants and animals including humans. Key concepts include

a) soil provides the support and nutrients necessary for plant growth;
b) topsoil is a natural product of subsoil and bedrock;
c) rock, clay, silt, sand, and humus are components of soils;
d) soil is a natural resource and should be conserved.

S-EP 3 The student will investigate and understand the relationship of seasonal change and weather to the activities and life processes of plants and animals. Key concepts include how temperature, light, and precipitation bring about changes in

a) plants (growth, budding, falling leaves, and wilting);
b) animals (behaviors, hibernation, migration, body covering, and habitat);
c) people (dress, recreation, and work).

S-EP 4 The student will investigate and understand that weather and seasonal changes affect plants, animals, and their surroundings. Key concepts include

a) effects on growth and behavior of living things (migration, hibernation, camouflage, adaptation, dormancy);
b) weathering and erosion of the land surface.

S-EP 5 The student will investigate and understand basic patterns and cycles occurring in nature. Key concepts include

a) patterns of natural events (day and night, seasonal changes, phases of the moon, and tides);
b) animal and plant life cycles.

S-EP 6 The student will investigate and understand the water cycle and its relationship to life on Earth. Key concepts include

a) the energy from the sun drives the water cycle;
b) processes involved in the water cycle (evaporation, condensation, precipitation);
c) water is essential for living things;
d) water supply and water conservation.

* If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 8 Science Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 8 ASOL Science Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Scientific Investigation	S-SI6 S-R6
Force, Motion, Energy, and Matter	S-FME5 S-FME6
Life Processes and Living Systems	S-LP6 S-LP4
Earth/Space Systems and Cycles	S-IE5 S-EP7

Aligned Standards of Learning for Scientific Investigation

S-SI 6 The student will plan and conduct investigations in which

a) distinctions are made among observations, conclusions, inferences, and predictions;
b) hypotheses are formulated based on cause-and-effect relationships;
c) variables that must be held constant in an experimental situation are defined;
d) appropriate instruments are selected to measure linear distance, volume, mass, and temperature;
e) appropriate metric measures are used to collect, record, and report data;
f) data are displayed using bar and basic line graphs;
g) numerical data that are contradictory or unusual in experimental results are recognized;
h) predictions are made based on data from picture graphs, bar graphs, and basic line graphs.

S-R 6 The student will investigate and understand important Virginia natural resources. Key concepts include

a) watershed and water resources;
b) animals and plants;
c) minerals, rocks, ores, and energy sources;
d) forests, soil, and land.

Aligned Standards of Learning for Force, Motion, Energy, and Matter

S-FME 5 The student will investigate and understand characteristics and interaction of moving objects. Key concepts include

a) motion is described by an object's direction and speed;
b) forces cause changes in motion;
c) friction is a force that opposes motion;
d) moving objects have kinetic energy.

S-FME 6 The student will investigate and understand the characteristics of electricity. Key concepts include

a) conductors and insulators;
b) basic circuits (open/closed, parallel/series);
c) static electricity;
d) the ability of electrical energy to be transformed into heat, light, and mechanical energy;
e) simple electromagnets and magnetism;
f) historical contributions in understanding electricity.

Aligned Standards of Learning for Life Processes and Living Systems

S-LP 6 The student will investigate and understand basic plant anatomy and life processes. Key concepts include
- a) the structures of typical plants (leaves, stems, roots, and flowers);
- b) processes and structures involved with reproduction (pollination, stamen, pistil, sepal, embryo, spore, and seed);
- c) photosynthesis (sunlight, chlorophyll, water, carbon dioxide, oxygen, and sugar);
- d) dormancy.

S-LS 4 The student will investigate and understand how plants and animals in an ecosystem interact with one another and the nonliving environment. Key concepts include
- a) behavioral and structural adaptations;
- b) organization of communities;
- c) flow of energy through food webs;
- d) habitats and niches;
- e) life cycles;
- f) influence of human activity on ecosystems.

Aligned Standards of Learning for Earth/Space Systems and Cycles

S-IE 5 The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include
- a) weather measurements and meteorological tools (air pressure – barometer, wind speed – anemometer, rainfall – rain gauge, and temperature – thermometer);
- b) weather phenomena (fronts, clouds, and storms).

S-EP 7 The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include
- a) the motions of the Earth, moon, and sun (revolution and rotation);
- b) the causes for the Earth's seasons and phases of the moon;
- c) the relative size, position, age, and makeup of the Earth, moon, and sun;
- d) historical contributions in understanding the Earth-moon-sun system.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 11 Science Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 11 ASOL Science Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
Scientific Investigation	S-SI7
Force, Motion, Energy, and Matter	S-FME7 S-FME8 S-M6
Life Processes and Living Systems	S-LS5 S-LFS1 S-LFS2 S-LFS3 S-LFS4 S-LFS5 S-LFS6 S-LFS7 S-LFS8 S-LFS9 S-LFS10 S-LFS11 S-ES1 S-ES2 S-ES3 S-ES4 S-ES5 S-ES6 S-ES7 S-ES8 S-ES9
Earth/Space Systems and Cycles	S-IE6 S-IE7 S-IE8

Aligned Standards of Learning for Scientific Investigation

S-SI 7 The student will plan and conduct investigations in which

a) rocks, minerals, and organisms are identified using a classification key;
b) estimations of length, mass, and volume are made;
c) appropriate instruments are selected and used for making quantitative observations of length, mass, volume, and elapsed time;
d) accurate measurements are made using basic tools (thermometer, meter stick, balance, graduated cylinder);
e) data are collected, recorded, and reported using the appropriate graphical representation (graphs, charts, diagrams);

f) predictions are made using patterns, and simple graphical data are extrapolated;
g) manipulated and responding variables are identified;
h) an understanding of the nature of science is developed and reinforced.

Aligned Standards of Learning for Force, Motion, Energy, and Matter

S-FME 7 The student will investigate and understand how sound is transmitted and is used as a means of communication. Key concepts include
a) frequency, waves, wavelength, vibration;
b) the ability of different media (solids, liquids, and gases) to transmit sound;
c) uses and applications (voice, sonar, animal sounds, and musical instruments).

S-FME 8 The student will investigate and understand basic characteristics of visible light and how it behaves. Key concepts include
a) the visible spectrum and light waves;
b) refraction of light through water and prisms;
c) reflection of light from reflective surfaces (mirrors);
d) opaque, transparent, and translucent;
e) historical contributions in understanding light.

Aligned Standards of Learning for Live Processes and Living Systems

S-LS 5 The student will investigate and understand that organisms are made of cells and have distinguishing characteristics. Key concepts include
a) basic cell structures and functions;
b) kingdoms of living things;
c) vascular and nonvascular plants;
d) vertebrates and invertebrates.

S-LFS 1 The student will plan and conduct investigations in which
a) data are organized into tables showing repeated trials and means;
b) variables are defined;
c) metric units (SI—International System of Units) are used;
d) models are constructed to illustrate and explain phenomena;
e) sources of experimental error are identified;
f) dependent variables, independent variables, and constants are identified;
g) variables are controlled to test hypotheses, and trials are repeated;
h) continuous line graphs are constructed, interpreted, and used to make predictions;
i) interpretations from a set of data are evaluated and defended;
j) an understanding of the nature of science is developed and reinforced.

S-LFS 2 The student will investigate and understand that all living things are composed of cells. Key concepts include
a) cell structure and organelles (cell membrane, cell wall, cytoplasm, vacuole, mitochondrion, endoplasmic reticulum, nucleus, and chloroplast);
b) similarities and differences between plant and animal cells;
c) development of cell theory;
d) cell division (mitosis and meiosis).

S-LFS 3 The student will investigate and understand that living things show patterns of cellular organization. Key concepts include

a) cells, tissues, organs, and systems;
b) life functions and processes of cells, tissues, organs, and systems (respiration, removal of wastes, growth, reproduction, digestion, and cellular transport).

S-LFS 4 The student will investigate and understand that the basic needs of organisms must be met in order to carry out life processes. Key concepts include

a) plant needs (light, water, gases, and nutrients);
b) animal needs (food, water, gases, shelter, space);
c) factors that influence life processes.

S-LFS 5 The student will investigate and understand how organisms can be classified. Key concepts include

a) the distinguishing characteristics of kingdoms of organisms;
b) the distinguishing characteristics of major animal and plant phyla;
c) the characteristics of the species.

S-LFS 6 The student will investigate and understand the basic physical and chemical processes of photosynthesis and its importance to plant and animal life. Key concepts include

a) energy transfer between sunlight and chlorophyll;
b) transformation of water and carbon dioxide into sugar and oxygen;
c) photosynthesis as the foundation of virtually all food webs.

S-LFS 7 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include

a) the carbon, water, and nitrogen cycles;
b) interactions resulting in a flow of energy and matter throughout the system;
c) complex relationships within terrestrial, freshwater, and marine ecosystems;
d) energy flow in food webs and energy pyramids.

S-LFS 8 The student will investigate and understand that interactions exist among members of a population. Key concepts include

a) competition, cooperation, social hierarchy, territorial imperative;
b) influence of behavior on a population.

S-LFS 9 The student will investigate and understand interactions among populations in a biological community. Key concepts include

a) the relationships among producers, consumers, and decomposers in food webs;
b) the relationship between predators and prey;
c) competition and cooperation;
d) symbiotic relationships;
e) niches.

S-LFS 10 The student will investigate and understand how organisms adapt to biotic and abiotic factors in an ecosystem. Key concepts include

a) differences between ecosystems and biomes;
b) characteristics of land, marine, and freshwater ecosystems;
c) adaptations that enable organisms to survive within a specific ecosystem.

S-LFS 11 The student will investigate and understand that organisms reproduce and transmit genetic information to new generations. Key concepts include

a) the role of DNA;
b) the function of genes and chromosomes;
c) genotypes and phenotypes;
d) factors affecting the expression of traits;
e) characteristics that can and cannot be inherited;
f) genetic engineering and its applications;
g) historical contributions and significance of discoveries related to genetics.

Aligned Standards of Learning for Earth/Space Systems and Cycles

S-IE 5 The student will investigate and understand how weather conditions and phenomena occur and can be predicted. Key concepts include

a) weather measurements and meteorological tools (air pressure – barometer, wind speed – anemometer, rainfall – rain gauge, and temperature – thermometer);
b) weather phenomena (fronts, clouds, and storms).

S-EP 7 The student will investigate and understand the relationships among the Earth, moon, and sun. Key concepts include

a) the motions of the Earth, moon, and sun (revolution and rotation);
b) the causes for the Earth's seasons and phases of the moon;
c) the relative size, position, age, and makeup of the Earth, moon, and sun;
d) historical contributions in understanding the Earth-moon-sun system.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints for History Tests

for the

Aligned Standards of Learning

Virginia

Standards of Learning Assessments

Blueprints Grade 3 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 3 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H1 HS-H2 HS-H3 HS-H4 HS-H5
Geography	HS-G1 HS-G2 HS-G3 HS-G4 HS-G5 HS-G6
Civics	HS-C1 HS-C2 HS-C3 HS-C4 HS-C5
Economics	HS-E1 HS-E2 HS-E3 HS-E4 HS-E5

Aligned Standards of Learning for History

HS-H1 The student will recognize that history describes events and people of other times and places by

a) identifying examples of past events in legends, stories, and historical accounts of Pocahontas, George Washington, Betsy Ross, and Abraham Lincoln;

b) identifying the people and events honored by the holidays of Thanksgiving Day, Martin Luther King, Jr. Day, Presidents' Day, and Independence Day (Fourth of July).

HS-H2 The student will describe everyday life in the present and in the past and begin to recognize that things change over time.

HS-H3 The student will interpret information presented in picture time lines to show sequence of events and will distinguish between past and present.

HS-H4 The student will describe the stories of American leaders and their contributions to our country, with emphasis on George Washington, Benjamin Franklin, Abraham Lincoln, and George Washington Carver.

HS-H5 The student will discuss the lives of people associated with Presidents' Day, Columbus Day, and the events of Independence Day (Fourth of July).

Aligned Standards of Learning for Geography

HS-G1 The student will describe the relative location of people, places, and things by using positional words, with emphasis on near/far, above/below, left/right, and behind/in front.

HS-G2 The student will use simple maps and globes to
- a) develop an awareness that a map is a drawing of a place to show where things are located and that a globe is a round model of the Earth;
- b) describe places referenced in stories and real-life situations;
- c) locate land and water features.

HS-G3 The student will develop an awareness that maps and globes
- a) show a view from above;
- b) show things in smaller size;
- c) show the position of objects.

HS-G4 The student will develop map skills by
- a) recognizing basic map symbols, including references to land, water, cities, and roads;
- b) using cardinal directions on maps;
- c) identifying the physical shape of the United States and Virginia on maps and globes;
- d) locating Washington, D.C., the capital of the United States, and Richmond, the capital of Virginia, on a United States map.

HS-G5 The student will construct a simple map of a familiar area, using basic map symbols in the map legend.

HS-G6 The student will describe how location, climate, and physical surroundings affect the way people live, including their food, clothing, shelter, transportation, and recreation.

Aligned Standards of Learning for Civics

HS-C1 The student will demonstrate that being a good citizen involves
- a) taking turns and sharing;
- b) taking responsibility for certain classroom chores;
- c) taking care of personal belongings and respecting what belongs to others;
- d) following rules and understanding the consequence of breaking rules;
- e) practicing honesty, self-control, and kindness to others.

HS-C2 The student will recognize the American flag, the Pledge of Allegiance, and that the President is the leader of the United States.

HS-C3 The student will apply the traits of a good citizen by
- a) focusing on fair play, exhibiting good sportsmanship, helping others, and treating others with respect;
- b) recognizing the purpose of rules and practicing self-control;
- c) working hard in school;
- d) taking responsibility for one's own actions;
- e) valuing honesty and truthfulness in oneself and others.

HS-C4 The student will recognize the symbols and traditional practices that honor and foster patriotism in the United States by
- a) identifying the American flag, bald eagle, Washington Monument, and Statue of Liberty;
- b) demonstrating respect for the American flag by learning the Pledge of Allegiance.

HS-C5 The student will recognize that communities in Virginia include people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.

Aligned Standards of Learning for Economics

HS-E1 The student will match simple descriptions of work that people do with the names of those jobs.

HS-E2 The student will

a) identify the difference between basic needs (food, clothing, and shelter) and wants (things people would like to have);

b) recognize that people use money to purchase goods.

HS-E3 The student will explain the difference between goods and services and will describe how people are both buyers and sellers of goods and services.

HS-E4 The student will explain that people make choices because they cannot have everything they want.

HS-E5 The student will recognize that people save money for the future to purchase goods and services.

*If ASOL statements are not appropriate for the selected student, consult higher grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 4 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 4 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H6 HS-H7 HS-H8
Geography	HS-G7 HS-G8 HS-G9
Civics	HS-C6 HS-C7 HS-C8
Economics	HS-E6 HS-E7 HS-E8

Aligned Standards of Learning for History

HS-H6 The student will explain how the contributions of ancient China and Egypt have influenced the present world in terms of architecture, inventions, the calendar, and written language.

HS-H7 The student will compare the lives and contributions of American Indians (First Americans), with emphasis on the Powhatan of the Eastern Woodlands, the Sioux of the Plains, and the Pueblo people of the Southwest.

HS-H8 The student will identify and compare changes in community life over time in terms of buildings, jobs, transportation, and population.

Aligned Standards of Learning for Geography

HS-G7 The student will develop map skills by
- a) locating China and Egypt on world maps;
- b) locating the regions of the Powhatan, Sioux, and Pueblo Indians on United States maps;
- c) comparing the climate, land, and plant life of these regions;
- d) describing how people in these regions adapt to their environment.

HS-G8 The student will develop map skills by
- a) locating the equator, the seven continents, and the four oceans on maps and globes;
- b) locating selected rivers (James River, Mississippi River, Rio Grande), mountain ranges (Appalachian Mountains and Rocky Mountains), and lakes (Great Lakes) in the United States.

HS-G9 The student will demonstrate map skills by constructing simple maps, using title, map legend, and compass rose.

Aligned Standards of Learning for Civics

HS-C6 The student will explain the responsibilities of a good citizen, with emphasis on
a) respecting and protecting the rights and property of others;
b) taking part in the voting process when making classroom decisions;
c) describing actions that can improve the school and community;
d) demonstrating self-discipline and self-reliance;
e) practicing honesty and trustworthiness.

HS-C7 The student will identify George Washington, Abraham Lincoln, Susan B. Anthony, Helen Keller, Jackie Robinson, and Martin Luther King, Jr. as Americans whose contributions improved the lives of other Americans.

HS-C8 The student will understand that the United States is a land of people who have diverse ethnic origins, customs, and traditions, who make contributions to their communities, and who are united as Americans by common principles.

Aligned Standards of Learning for Economics

HS-E6 The student will describe the differences between natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings).

HS-E7 The student will distinguish between the use of barter and money in the exchange for goods and services.

HS-E8 The student will explain that scarcity (limited resources) requires people to make choices about producing and consuming goods and services.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 5 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 5 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H9 HS-H10 HS-H11
Geography	HS-G10
Civics	HS-C9 HS-C10 HS-C11
Economics	HS-E9 HS-E10 HS-E11

Aligned Standards of Learning for History

HS-H9 The student will explain how the contributions of ancient Greece and Rome have influenced the present world in terms of architecture, government (direct and representative democracy), and sports.

HS-H10 The student will study the early West African empire of Mali by describing its oral tradition (storytelling), government (kings), and economic development (trade).

HS-H11 The student will study the exploration of the Americas by

a) describing the accomplishments of Christopher Columbus, Juan Ponce de Léon, Jacques Cartier, and Christopher Newport;
b) identifying reasons for exploring, the information gained, and the results from the travels.

Aligned Standards of Learning for Geography

HS-G10 The student will develop map skills by

a) positioning and labeling the seven continents and four oceans to create a world map;
b) using the equator and prime meridian to identify the four hemispheres;
c) locating the countries of Spain, England, and France;
d) locating the regions in the Americas explored by Christopher Columbus (San Salvador in the Bahamas), Juan Ponce de Léon (near St. Augustine, Florida), Jacques Cartier (near Quebec, Canada), and Christopher Newport (Jamestown, Virginia);
e) locating specific places on a simple letter-number grid system.

Aligned Standards of Learning for Civics

HS-C9 The student will recognize why government is necessary in the classroom, school, and community by

a) explaining the purpose of rules and laws;
b) explaining that the basic purposes of government are to make laws, carry out laws, and decide if laws have been broken;
c) explaining that government protects the rights and property of individuals.

HS-C10 The student will explain the importance of the basic principles that form the foundation of a republican form of government by

a) describing the individual rights to life, liberty, and the pursuit of happiness and equality under the law;
b) identifying the contributions of George Washington, Thomas Jefferson, Abraham Lincoln, Rosa Parks, Thurgood Marshall, and Martin Luther King, Jr.;
c) recognizing that Veterans Day and Memorial Day honor people who have served to protect the country's freedoms.

HS-C11 The student will recognize that Americans are a people of diverse ethnic origins, customs, and traditions, who are united by the basic principles of a republican form of government and respect for individual rights and freedoms.

Aligned Standards of Learning for Economics

HS-E9 The student will explain how producers use natural resources (water, soil, wood, and coal), human resources (people at work), and capital resources (machines, tools, and buildings) to produce goods and services for consumers.

HS-E10 The student will recognize the concepts of specialization (being an expert in one job, product, or service) and interdependence (depending on others) in the production of goods and services (in ancient Greece, Rome, the West African empire of Mali, and in the present).

HS-E11 The student will identify examples of making an economic choice and will explain the idea of opportunity cost (what is given up when making a choice).

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 6 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 6 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H12 HS-H13 HS-H14 HS-H15 HS-H16 HS-H17 HS-H18 HS-H19 HS-H20 HS-H21 HS-H22
Geography	HS-G11 HS-G12 HS-G13 HS-G14
Civics	HS-C12 HS-C13 HS-C14 HS-C15 HS-C16 HS-C17 HS-C18
Economics	HS-E12 HS-E13 HS-E14 HS-E15 HS-E16 HS-E17 HS-E18

Aligned Standards of Learning for History

HS-H12 The student will demonstrate knowledge of the first permanent English settlement in America by explaining the reasons for English colonization.

HS-H13 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the arrival of Africans and women to the Jamestown settlement.

HS-H14 The student will demonstrate knowledge of the first permanent English settlement in America by describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival.

HS-H15 The student will demonstrate knowledge of the first permanent English settlement in America by describing the interactions between the English settlers and the Powhatan people, including the contributions of the Powhatans to the survival of the settlers.

HS-H16 The student will demonstrate knowledge of life in the Virginia colony by describing how European (English, Scotch-Irish, German) immigrants, Africans, and American Indians (First Americans) influenced the cultural landscape and changed the relationship between the Virginia colony and England.

HS-H17 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the various roles played by Virginians in the Revolutionary War era, with emphasis on George Washington, Thomas Jefferson, and Patrick Henry.

HS-H18 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the importance of the American victory at Yorktown.

HS-H19 The student will demonstrate knowledge of the role of Virginia in the establishment of the new American nation by identifying the ideas of George Mason and Thomas Jefferson as expressed in the Virginia Declaration of Rights and the Virginia Statute for Religious Freedom.

HS-H20 The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by identifying the events and differences between northern and southern states that divided Virginians and led to secession, war, and the creation of West Virginia.

HS-H21 The student will demonstrate knowledge of the issues that divided our nation and led to the Civil War by describing Virginia's role in the war, including identifying major battles that took place in Virginia.

HS-H22 The student will demonstrate knowledge of twentieth century Virginia by the political, social, and/or economic contributions made by Maggie L. Walker, Harry F. Byrd, Sr., Arthur R. Ashe, Jr., and L. Douglas Wilder.

Aligned Standards of Learning for Geography

HS-G11 The student will interpret geographic information from maps, tables, graphs, and charts.

HS-G12 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating Virginia and its bordering states on maps of the United States.

HS-G13 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating and describing Virginia's Coastal Plain (Tidewater), Piedmont, Blue Ridge Mountains, Valley and Ridge, and Appalachian Plateau.

HS-G14 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by locating and identifying water features important to the early history of Virginia (Atlantic Ocean, Chesapeake Bay, James River, York River, Potomac River, and Rappahannock River).

Aligned Standards of Learning for Civics

HS-C12 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement.

HS-C13 The student will demonstrate knowledge of the first permanent English settlement in America by identifying the importance of the Virginia Assembly (1619) as the first representative legislative body in English America.

HS-C14 The student will demonstrate knowledge of the role of Virginia in the American Revolution by identifying the reasons why the colonies went to war with England as expressed in the Declaration of Independence.

HS-C15 The student will demonstrate knowledge of the role of Virginia in the establishment of the new American nation by identifying the ideas of George Mason and Thomas Jefferson as expressed in the Virginia Declaration of Rights and the Virginia Statute for Religious Freedom.

HS-C16 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by identifying the effects of segregation and "Jim Crow" on life in Virginia.

HS-C17 The student will demonstrate knowledge of twentieth century Virginia by identifying the social and political events in Virginia linked to desegregation and Massive Resistance and their relationship to national history.

HS-C18 The student will demonstrate knowledge of government, geography, and economics by identifying the three branches of Virginia government and the function of each.

Aligned Standards of Learning for Economics

HS-E12 The student will demonstrate knowledge of life in the Virginia colony by explaining the importance of agriculture and its influence on the institution of slavery.

HS-E13 The student will demonstrate knowledge of life in the Virginia colony by how money, barter, and credit were used.

HS-E14 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by identifying the effects of Reconstruction on life in Virginia.

HS-E15 The student will demonstrate knowledge of the reconstruction of Virginia following the Civil War by describing the importance of railroads, new industries, and the growth of cities to Virginia's economic development.

HS-E16 The student will demonstrate knowledge of twentieth century Virginia by describing the economic and social transition from a rural, agricultural society to a more urban, industrialized society, including the reasons people came to Virginia from other states and countries.

HS-E17 The student will demonstrate knowledge of government, geography, and economics by describing the major products and industries of Virginia's five geographic regions.

HS-E18 The student will demonstrate knowledge of government, geography, and economics by explaining how advances in transportation, communications, and technology have contributed to Virginia's prosperity and role in the global economy.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 7 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 7 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H23 HS-H24 HS-H25 HS-H26 HS-H27 HS-H28 HS-H29 HS-H30 HS-H31 HS-H32 HS-H33 HS-H34 HS-H35 HS-H36
Geography	HS-G15 HS-G16 HS-G17 HS-G18 HS-G19
Civics	HS-C19
Economics	HS-E19 HS-E20 HS-E21 HS-E22

Aligned Standards of Learning for History

HS-H23 The student will demonstrate knowledge of European exploration in North America and West Africa by describing cultural interactions between Europeans and American Indians (First Americans) that led to cooperation and conflict.

HS-H24 The student will demonstrate knowledge of the factors that shaped colonial America by describing the religious and economic events and conditions that led to the colonization of America.

HS-H25 The student will demonstrate knowledge of the factors that shaped colonial America by describing colonial life in America from the perspectives of large landowners, farmers, artisans, women, indentured servants, and slaves.

HS-H26 The student will demonstrate knowledge of the factors that shaped colonial America by identifying the political and economic relationships between the colonies and England.

HS-H27 The student will demonstrate knowledge of the causes and results of the American Revolution by identifying the issues of dissatisfaction that led to the American Revolution.

HS-H28 The student will demonstrate knowledge of the causes and results of the American Revolution by describing key events and the roles of key individuals in the American Revolution, with emphasis on George Washington, Benjamin Franklin, Thomas Jefferson, Patrick Henry, and Thomas Paine.

HS-H29 The student will demonstrate knowledge of the causes and results of the American Revolution by explaining reasons why the colonies were able to defeat Britain.

HS-H30 The student will demonstrate knowledge of the challenges faced by the new nation by describing the major accomplishments of the first five presidents of the United States.

HS-H31 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by describing territorial expansion and how it affected the political map of the United States, with emphasis on the Louisiana Purchase, the Lewis and Clark expedition, and the acquisitions of Florida, Texas, Oregon, and California.

HS-H32 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by identifying the main ideas of the abolitionist and suffrage movements.

HS-H33 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by explaining how the issues of states' rights and slavery increased sectional tensions.

HS-H34 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the roles of Abraham Lincoln, Jefferson Davis, Ulysses S. Grant, Robert E. Lee, Thomas "Stonewall" Jackson, and Frederick Douglass in events leading to and during the war.

HS-H35 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the effects of war from the perspectives of Union and Confederate soldiers (including black soldiers), women, and slaves.

HS-H36 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by describing the impact of Reconstruction policies on the South.

Aligned Standards of Learning for Geography

HS-G15 The student will demonstrate knowledge of the geography and early inhabitants of Virginia by how American Indians (First Americans) adapted to the climate and their environment to secure food, clothing, and shelter.

HS-G16 The student will use maps, globes, photographs, pictures, and tables to locate the seven continents.

HS-G17 The student will use maps, globes, photographs, pictures, and tables to locate and identify the water features important to the early history of the United States: Great Lakes, Mississippi River, Missouri River, Ohio River, Columbia River, Colorado River, Rio Grande, Atlantic Ocean, Pacific Ocean, and Gulf of Mexico.

HS-G18 The student will demonstrate knowledge of how early cultures developed in North America by where the American Indians (First Americans) settled, with emphasis on Arctic (Inuit), Northwest (Kwakiutl), Plains (Sioux), Southwest (Pueblo), and Eastern Woodland (Iroquois).

HS-G19 The student will demonstrate knowledge of how early cultures developed in North America by describing how the American Indians (First Americans) used their environment to obtain food, clothing, and shelter.

Aligned Standards of Learning for Civics

HS-C19 The student will demonstrate knowledge of the causes and results of the American Revolution by identifying how political ideas shaped the revolutionary movement in America and led to the Declaration of Independence, with emphasis on the ideas of John Locke.

Aligned Standards of Learning for Economics

HS-E19 The student will demonstrate knowledge of European exploration in North America and West Africa by identifying the location and describing the characteristics of West African societies (Ghana, Mali, and Songhai) and their interactions with traders.

HS-E20 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by identifying the geographic and economic factors that influenced the westward movement of settlers.

HS-E21 The student will demonstrate knowledge of westward expansion and reform in America from 1801 to 1861 by describing the impact of inventions, including the cotton gin, the reaper, the steamboat, and the steam locomotive, on life in America.

HS-E22 The student will demonstrate knowledge of the effects of Reconstruction on American life by identifying the provisions of the 13th, 14th, and 15th Amendments to the Constitution of the United States of America and their impact on the expansion of freedom in America.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 8 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 8 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H37 HS-H38 HS-H39 HS-H40 HS-H41 HS-H42 HS-H43 HS-H44 HS-H45
Geography	HS-G20 HS-G21 HS-G22
Civics	HS-C20 HS-C21
Economics	HS-E23 HS-E24 HS-E25 HS-E26

Aligned Standards of Learning for History

HS-H37 The student will demonstrate knowledge of how life changed after the Civil War by identifying the reasons for westward expansion.

HS-H38 The student will demonstrate knowledge of how life changed after the Civil War by explaining the reasons for the increase in immigration, growth of cities, new inventions, and challenges arising from this expansion.

HS-H39 The student will demonstrate knowledge of how life changed after the Civil War by describing racial segregation, the rise of "Jim Crow," and other constraints faced by African Americans in the post-Reconstruction South.

HS-H40 The student will demonstrate knowledge of the changing role of the United States from the late nineteenth century through World War I by explaining the reasons for and results of the Spanish American War.

HS-H41 The student will demonstrate knowledge of the changing role of the United States from the late nineteenth century through World War I by explaining the reasons for the United States' involvement in World War I and its leadership role at the conclusion of the war.

HS-H42 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by describing the social changes that took place, including Prohibition, and the Great Migration north.

HS-H43 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by examining art, literature, and music from the 1920s and 1930s, emphasizing Langston Hughes, Duke Ellington, and Georgia O'Keefe and including the Harlem Renaissance.

HS-H44 The student will demonstrate knowledge of the major causes and effects of American involvement in World War II by describing the impact of World War II on the home front.

HS-H45 The student will demonstrate knowledge of the key domestic issues during the second half of the twentieth century by describing the development of new technologies and their impact on American life.

Aligned Standards of Learning for Geography

HS-G20 The student will demonstrate knowledge of the causes, major events, and effects of the Civil War by identifying on a map the states that seceded from the Union and those that remained in the Union.

HS-G21 The student will use maps, globes, photographs, pictures, and tables for locating the 50 states and the cities most significant to the historical development of the United States.

HS-G22 The student will use maps, globes, photographs, and pictures in order to obtain geographical information and apply the concepts of location, scale, and orientation.

Aligned Standards of Learning for Civics

HS-C20 The student will demonstrate knowledge of the challenges faced by the new nation by identifying the basic principles of the new government established by the Constitution of the United States of America and the Bill of Rights.

HS-C21 The student will demonstrate knowledge of the challenges faced by the new nation by identifying the conflicts that resulted in the emergence of two political parties.

Aligned Standards of Learning for Economics

HS-E23 The student will demonstrate knowledge of how life changed after the Civil War by explaining the rise of big business, the growth of industry, and life on American farms.

HS-E24 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by explaining how developments in transportation (including the use of the automobile), communication, and electrification changed American life.

HS-E25 The student will demonstrate knowledge of the social, economic, and technological changes of the early twentieth century by identifying the causes of the Great Depression, its impact on Americans, and the major features of Franklin D. Roosevelt's New Deal.

HS-E26 The student will demonstrate knowledge of the economic, social, and political transformation of the United States and the world between the end of World War II and the present by describing the conversion from a wartime to a peacetime economy.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Virginia

Standards of Learning Assessments

Blueprints Grade 11 History Test

for the

Aligned Standards of Learning

What is a reporting category?

Each test covers a number of Aligned Standards Of Learning (ASOL). ASOL are grouped into categories that address related content or skills at each grade level and corresponding to the Standards of Learning. These categories are labeled Reporting Categories. For example, a Reporting Category for the Mathematics test is "Computation and Estimation." Each of the ASOL in this reporting category addresses computation using addition, subtraction, multiplication, or division or requires the student to estimate the answer to a problem. Each ASOL is assigned to only one reporting category.

How are Aligned Standards of Learning related to grade level Standards?

Since reporting categories cover the essential skills and knowledge expressed within a specific content area, aligned standards of learning reflect essential skills and/or knowledge expressed in those reporting categories, reduced in complexity or modified to reflect prerequisite skills. For students with significant cognitive impairments, these aligned standards of learning are meant to provide access to the grade level content standards expressed in each reporting category and at each grade level.

How do I decide which ASOL to choose for my student?

Examine the reporting categories expressed for the content area and grade level being considered. Choose an Aligned Standard of Learning from each reporting category presented, one per reporting category. Keep in mind that for ASOL statements that have multiple bullets, only one bullet can be selected and defended. (See VAAP Procedural Manual)

What if the grade level ASOL contained in the blueprint are not appropriate for my student based on a significant cognitive disability?

Choose an ASOL from each reporting category listed for a specific content area in which to provide instruction to the student and collect evidence for use in the Virginia Alternate Assessment Program. If ASOL contained on the grade level blueprint are not appropriate for a student, you may examine ASOL from higher grade level blueprints to select one ASOL statement for each reporting category.

Grade 11 ASOL History Blueprint Summary Table

Select one ASOL from EACH reporting category.*

Reporting Categories	Aligned Standards of Learning
History	HS-H46 HS-H47 HS-H48 HS-H49 HS-H50 HS-H51 HS-H52 HS-H53 HS-H54 HS-H55 HS-H56 HS-H57 HS-H58
Geography	HS-G23 HS-G24 HS-G25 HS-G26
Civics	HS-C22
Economics	HS-E27 HS-E28 HS-E29 HS-E30 HS-E31 HS-E32 HS-E33 HS-E34 HS-E35 HS-E36

Aligned Standards of Learning for History

HS-H46 The student will demonstrate knowledge of early development of humankind from the Paleolithic Era to the agricultural revolution by listing characteristics of hunter-gatherer societies, including their use of tools and fire.

HS-H47 The student will demonstrate knowledge of early development of humankind from the Paleolithic Era to the agricultural revolution describing technological and social advancements that gave rise to stable communities.

HS-H48 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by explaining the development of religious traditions.

HS-H49 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by describing the origins, beliefs, traditions, customs, and spread of Judaism.

HS-H50 The student will demonstrate knowledge of ancient river civilizations, including Egypt, Mesopotamia, the Indus River Valley, and China and the civilizations of the Hebrews, Phoenicians, and Kush, by the development of language and writing.

HS-H51 The student will demonstrate an understanding of the political, cultural, and economic conditions in the world about 1500 A.D. by describing artistic, literary, and intellectual ideas of the Renaissance.

HS-H52 The student will demonstrate an understanding of the political, cultural, and economic conditions in the world about 1500 A.D. by major technological and scientific exchanges in the Eastern Hemisphere.

HS-H53 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by explaining the roles of explorers and conquistadors.

HS-H54 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by describing the influence of religion.

HS-H55 The student will demonstrate knowledge of scientific, political, economic, and religious changes during the sixteenth, seventeenth, and eighteenth centuries by describing the Scientific Revolution and its effects.

HS-H56 The student will demonstrate knowledge of scientific, political, economic, and religious changes during the sixteenth, seventeenth, and eighteenth centuries by describing the expansion of the arts, philosophy, literature, and new technology.

HS-H57 The student will demonstrate knowledge of the worldwide impact of World War II by examining the Holocaust and other examples of genocide in the twentieth century.

HS-H58 The student will demonstrate knowledge of the influence of Judaism, Christianity, Islam, Buddhism, and Hinduism in the contemporary world by describing their beliefs, sacred writings, traditions, and customs.

Aligned Standards of Learning for Geography

HS-G23 The student will use maps, globes, photographs, and pictures in order to develop and refine his or her mental maps of world regions.

HS-G24 The student will analyze how selected physical and ecological processes shape the Earth's surface by describing how humans influence the environment and are influenced by it.

HS-G25 The student will analyze how selected physical and ecological process shape the Earth's surface by explaining how technology affects one's ability to modify the environment and adapt to it.

HS-G26 The student will apply geography to interpret the past, understand the present, and plan for the future by relating current events to the physical and human characteristics of places and regions.

Aligned Standards of Learning for Civics

HS-C22 The student will demonstrate knowledge of the key domestic issues during the second half of the twentieth century by examining the Civil Rights Movement and the changing role of women.

Aligned Standards of Learning for Economics

HS-E27 The student will identify natural, human, and capital resources and explain their significance by showing patterns of economic activity and land use.

HS-E28 The student will distinguish between developed and developing countries and relate the level of economic development to the standard of living and quality of life.

HS-E29 The student will demonstrate knowledge of ancient Greece in terms of its impact on Western civilization by identifying the social structure and role of slavery, explaining the significance of citizenship and the development of democracy, and comparing the city-states of Athens and Sparta.

HS-E30 The student will demonstrate knowledge of ancient Rome from about 700 B.C. to 500 A.D. in terms of its impact on Western civilization by explaining the social structure and role of slavery, significance of citizenship, and the development of democratic features in the government of the Roman Republic.

HS-E31 The student will demonstrate knowledge of civilizations and empires of the Eastern Hemisphere and their interactions through regional trade patterns by identifying technological advances and transfers, networks of economic interdependence, and cultural interactions.

HS-E32 The student will demonstrate knowledge of the impact of the European Age of Discovery and expansion into the Americas, Africa, and Asia by describing the impact of precious metal exports from the Americas.

HS-E33 The student will demonstrate knowledge of the status and impact of global trade on regional civilizations of the world after 1500 A.D. by describing Africa and its increasing involvement in global trade.

HS-E34 The student will demonstrate knowledge of the effects of the Industrial Revolution during the nineteenth century by the evolution of the nature of work and the labor force, including its effects on families, the status of women and children, the slave trade, and the labor union movement.

HS-E35 The student will demonstrate knowledge of cultural, economic, and social conditions in developed and developing nations of the contemporary world by assessing the impact of economic development and global population growth on the environment and society, including an understanding of the links between economic and political freedom.

HS-E36 The student will demonstrate knowledge of how the nation grew and changed from the end of Reconstruction through the early twentieth century by describing the transformation of the American economy from a primarily agrarian to a modern industrial economy and identifying major inventions that improved life in the United States.

*If ASOL statements are not appropriate for the selected student, consult higher or lower grade level ASOL blueprints.

Property of the
Virginia Department of Education

©2006 by the Commonwealth of Virginia, Department of Education, P.O. Box 2120, Richmond, Virginia 23218-2120. All rights reserved. Except as permitted by law, this material may not be reproduced or used in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage or retrieval system, without written permission from the copyright owner. Commonwealth of Virginia public school educators may reproduce any portion of these released tests for noncommercial educational purposes without requesting permission. All others should direct their written requests to the Virginia Department of Education, Division of Assessment and Reporting, at the above address or by e-mail to darfax@doe.virginia.gov.

Printed in the United States of America.

VA00001753