
# Study of the Essential Knowledge and Skills and Assessment Instruments

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# Contents

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## Introduction

The 84th Texas Legislature, Regular Session, 2015, passed House Bill (HB) 743, and the legislation was signed into law on June 19, 2015. This bill amended Texas Education Code (TEC) §§39.023, 39.0236, 39.0261, and 39.0381. HB 743 also required the Texas Education Agency (TEA) to conduct a study regarding the Texas Essential Knowledge and Skills under TEC §28.002 and assessment instruments administered to public school students under TEC §39.023.

This report satisfies the study requirements under Section 2 of HB 743. In particular, this report addresses the requirement that TEA evaluate the following:

1) Number and scope of the essential knowledge and skills of each subject of the required curriculum under TEC §28.002, with each essential knowledge or skill identified as a readiness or supporting standard, and whether the number or scope should be limited

2) Number and subjects of assessment instruments under TEC §39.023 that are required to be administered to students in grades three through eight

3) How state assessment instruments assess standards essential for student success and whether the assessment instruments should also assess supporting standards, including an analysis of the portion of the essential knowledge and skills capable of being accurately assessed, the appropriate skills that can be assessed within the testing parameters under current law, and how current standards compare to those parameters

This report is intended to inform State Board of Education (SBOE) members so that they may provide recommendations to the governor and each member of the legislature regarding the required curriculum and assessment instruments, as required under TEC §39.0236(c). These recommendations are due to the governor and legislature by May 1, 2016.

## Essential Knowledge and Skills

In 1995, the Texas Legislature passed Senate Bill (SB) 1 (74th Texas Legislature, Regular Session) which, among other actions, established the required curriculum and called for the development of essential knowledge and skills for the courses of the required curriculum. The legislature stated that the essential knowledge and skills should require students "to demonstrate the knowledge and skills necessary to read, write, compute, problem solve, think critically, apply technology, and communicate across all subject areas" (TEC §28.001).

### Required Curriculum

The Texas Legislature identifies the subjects of the required curriculum in TEC §28.002. Each school district that serves kindergarten – grade 12 is required to offer the subjects that constitute the foundation and enrichment curricula. Table 1 below identifies the subjects of the required curriculum.

**Table 1: Required Curriculum**

| Foundation Curriculum | Enrichment Curriculum |
|---|---|
| • English language arts<br>• Mathematics<br>• Science<br>• Social studies, consisting of Texas, United States, and world history; government; economics, with emphasis on the free enterprise system and its benefits; and geography | • Languages other than English (to the extent possible)<br>• Health, with emphasis on the importance of proper nutrition and exercise<br>• Physical education<br>• Fine arts<br>• Career and technology education<br>• Technology applications<br>• Religious literature, including the Hebrew Scriptures (Old Testament) and New Testament, and its impact on history and literature<br>• Personal financial literacy |

SBOE rules in 19 Texas Administrative Code (TAC) §§74.2 and 74.3 detail the specific subject areas and courses in which school districts are required to provide instruction at the elementary and secondary levels. These rules require districts to "ensure that sufficient time is provided for teachers to teach and students to learn" all of the essential knowledge and skills of the required curriculum (TAC §§74.2(a), 74.3(a)(1), 74.3(b)(1)).

## Texas Essential Knowledge and Skills (TEKS)

Twenty years ago, the State of Texas began the process of implementing a comprehensive set of curriculum standards to establish the educational requirements in each subject area. In 1995 SB 1 charged the SBOE with identifying the essential knowledge and skills of each subject of the required curriculum (TEC §28.002(c)). After several years of work and study, in 1997 the SBOE approved the state curriculum standards, known as the Texas Essential Knowledge and Skills, or TEKS. Those curriculum standards were first implemented in classrooms across the state in the 1998-1999 school year.

The TEKS describe what students should know and be able to do at the end of each grade level or course. Student expectations (SEs) identify the specific knowledge and skills that students must demonstrate. Certain subject areas include SEs that focus on process skills. Process skills describe ways in which students are expected to engage with the content. Mathematics, science, and social studies all include SEs that focus on processes. (See Appendices A, B, and C for the process skills for mathematics, science, and social studies.)

School districts are required to provide instruction at appropriate grade levels and in appropriate high school courses to help students develop proficiency in the TEKS. Districts have the authority to add more content in their instruction than what is provided in the TEKS. However, they must at minimum address all of the TEKS for any particular course or grade level. Additionally, the TEKS serve as the basis by which SBOE-approved instructional materials are evaluated and are addressed on state assessment instruments (TEC §28.002(c)). State law prohibits the SBOE from adopting rules that designate a specific

methodology to be used by teachers or an amount of time to be spent by a teacher or student on a particular task or subject (TEC §28.002(i)).

## Revising the TEKS

Since the original adoption of the TEKS in 1997, the SBOE has overseen the periodic review and revision of the standards. A board-approved cycle guides the timeline for the review and revision of the various subject areas and ensures alignment with the instructional materials review cycle. (See Appendix D: TEKS and Instructional Materials Working Document.)

TEC §28.002(c) requires the SBOE to include the direct participation of educators, parents, business and industry representatives, and employers in the development of the TEKS. With each subject area review, the SBOE appoints individuals to TEKS review committees that make recommendations to the SBOE regarding changes to the current TEKS. There are multiple opportunities for public input throughout the review and revision process, including public hearings, an informal feedback process, and the official public comment period.

The SBOE first began revising the original TEKS in 2004 with revisions to the mathematics TEKS. Since that time, the TEKS for all but two subject areas have been reviewed and updated. Table 2, below, identifies the years in which the TEKS for each subject area were last revised.

**Table 2:**
**Implementation of Revised Texas Essential Knowledge and Skills**

| **Foundation Curriculum** | |
|---|---|
| **Subject Area** | **Revisions Last Implemented** |
| English language arts and reading | 2009-2010 |
| Mathematics | 2014-2015 (K-grade 8)<br>2015-2016 (High school) |
| Science | 2010-2011 |
| Social studies and Economics | 2011-2012 |
| Spanish language arts and reading | 2009-2010 |
| **Enrichment Curriculum** | |
| **Subject Area** | **Revisions Last Implemented** |
| Career and technical education (CTE) | 2010-2011[1] |
| Fine arts | 2015-2016 |
| Health education | 1998-1999[2] |
| Languages other than English | 1998-1999[3] |
| Physical education | 1998-1999[2] |
| Technology applications | 2012-2013 |

[1] The SBOE gave final approval to revisions to the CTE TEKS in 2015; however, they are not scheduled to be implemented until the 2017-2018 school year.

[2] The original TEKS are still being implemented because TEKS for health education and physical education have not yet been revised.

[3] The SBOE gave final approval to revisions to the languages other than English TEKS in 2014; however, they are not scheduled to be implemented until the 2017-2018 school year.

In 2009 the SBOE approved an official process to guide the review and revision of the TEKS, and that process was used for the first time with the revision of the social studies TEKS. Since then, the SBOE has occasionally adjusted this process to ensure an efficient review of the TEKS. (See Appendix E: State Board of Education TEKS Review Process).

During the review and revision of the TEKS, the SBOE typically charges the TEKS review committees to use the existing TEKS as the foundation document and to recommend changes to the current curriculum standards. Committees are tasked with ensuring that the recommended student expectations are:

- essential,
- observable and measurable,
- rigorous,
- aligned across grade levels and subjects, and
- clear and well written.

Since 2008 the SBOE has also directed TEKS review committees to ensure that the Texas College and Career Readiness Standards (CCRS) continue to be appropriately imbedded in the TEKS as they consider recommending revisions. In 2006 the 79th Texas Legislature (Third Called Session) passed HB 1, requiring TEA and the Texas Higher Education Coordinating Board to convene vertical teams to develop college and career readiness standards in the subject areas of English, mathematics, science, and social studies. The legislation also required the SBOE to incorporate these college readiness standards and expectations into the TEKS. As of 2014, the SBOE had integrated the CCRS into the TEKS for all but two subject areas.[4]

## Scope of the Texas Essential Knowledge and Skills

The SBOE began to hear concerns expressed regarding the length and scope of the TEKS. As a result, the SBOE has recently added emphasis on ensuring the TEKS are appropriate in scope as a key component of the review and revision process.

### Streamlining of the TEKS

In recent years, the SBOE has addressed the issue of the breadth and depth of the TEKS. At its July 2013 meeting, the SBOE took up an item to discuss the scope of the TEKS. At that time, the board heard from a number of educators, administrators, and others regarding the difficulties in teaching all of the TEKS to mastery in the amount of time available during the instructional year. Members of the SBOE engaged in discussions regarding whether the content was appropriate given the amount of available instructional time and determined that the issue needed to be specifically addressed.

Later that year, the SBOE issued a request for qualifications for a standards writing advisor to provide guidance and suggestions to the board in the streamlining of the TEKS. The standards writing advisor who was selected provided training to the SBOE and TEA staff on how to best approach the streamlining of the TEKS. (See Appendix F: Guidelines for the Review and Revision of the Texas Essential Knowledge and Skills.)

[4] The SBOE has not yet completed a full review of the TEKS for health education and physical education; as a result the CCRS have not yet been incorporated into these two subject area TEKS.

The SBOE began the work of narrowing the scope of the TEKS with the 2014 review of the CTE TEKS. At that time, the SBOE directed the CTE TEKS review committees to ensure that the TEKS were streamlined. The SBOE also modified its review process to ensure that TEKS review committees carefully consider the amount of time necessary for students to develop mastery and ensure that the SEs can "reasonably be taught within the amount of time typically allotted for the subject or course prior to the end of the school year or a state end-of-course assessment" (see Appendix E).

In 2015 with the review and revision of the English and Spanish language arts and reading TEKS, the SBOE once again directed the TEKS review committees to ensure that any recommendations included efforts to streamline the TEKS. During an initial webinar with TEKS review committee members in August 2015, TEA staff provided information on streamlining the TEKS that had been received from the standards writing advisor.

In March 2015 the SBOE conducted a work session to address the schedule of the review and revision of the TEKS and the instructional materials adoption cycle. At that meeting, the SBOE determined that it would focus on streamlining the TEKS for both science and social studies and approved a schedule for these two TEKS streamlining processes. The SBOE approved the process to be used in the streamlining of the science and social studies TEKS at their January 2016 meeting. (See Appendix G: State Board of Education TEKS Streamlining Process.) The TEKS streamlining process for science is expected to begin in summer/fall 2016 and the social studies TEKS streamlining process is scheduled to begin in summer 2017.

## Number and Scope of Texas Essential Knowledge and Skills (TEKS) for the Required Curriculum

The following tables identify the number of student expectations for each subject of the required curriculum in each grade level and high school course. Where common strands exist for a subject area, the number of SEs are identified by strand.

Since SEs vary in length and scope, looking at the number of student expectations alone will not indicate whether students are able to develop mastery within the amount of time typically allotted for the subject or course prior to the end of the school year or a state end-of-course assessment. The SBOE and TEA staff are currently collaborating to identify a process by which scope can be more accurately determined for each subject area.

## Foundation Curriculum

### English Language Arts and Reading

**Ch. 110, English Language Arts and Reading (1 of 2)**

| | Reading | Writing | Oral/written conventions | Research | Listening/speaking | Total |
|---|---|---|---|---|---|---|
| **Kindergarten** | 42 | 8 | 9 | 4 | 4 | **67** |
| **Grade 1** | 47 | 10 | 11 | 7 | 4 | **79** |
| **Grade 2** | 36 | 11 | 12 | 7 | 4 | **70** |
| **Grade 3** | 35 | 12 | 14 | 9 | 4 | **74** |
| **Grade 4** | 27 | 12 | 10 | 9 | 4 | **62** |
| **Grade 5** | 31 | 12 | 11 | 13 | 5 | **72** |
| **Grade 6** | 29 | 13 | 9 | 13 | 5 | **69** |
| **Grade 7** | 29 | 15 | 6 | 12 | 5 | **67** |
| **Grade 8** | 29 | 17 | 4 | 12 | 5 | **67** |
| **English I** | 29 | 17 | 6 | 13 | 5 | **70** |
| **English II** | 29 | 18 | 6 | 13 | 5 | **71** |
| **English III** | 29 | 18 | 4 | 13 | 4 | **68** |
| **English IV** | 29 | 19 | 4 | 11 | 4 | **67** |

**Ch. 110, English Language Arts and Reading (2 of 2)**

| Course Name | Number of Student Expectations |
|---|---|
| **Independent Study in English** | **8** |
| **Reading I, II, III** | **41** |
| **College Readiness and Study Skills** | **27** |
| **Visual Media Analysis and Production** | **11** |
| **Contemporary Media** | **13** |
| **Literary Genres** | **26** |
| **Creative Writing** | **20** |
| **Research and Technical Writing** | **23** |
| **Practical Writing Skills** | **29** |
| **Humanities** | **15** |
| **Public Speaking I, II, III** | **42** |
| **Communication Applications** | **43** |
| **Oral Interpretation I, II, III** | **35** |
| **Debate I, II, III** | **42** |
| **Independent Study in Speech** | **20** |
| **Journalism** | **29** |
| **Independent Study in Journalism** | **10** |
| **Advanced Broadcast Journalism I, II, III** | **29** |
| **Photojournalism** | **20** |
| **Advanced Journalism: Yearbook I, II, III/Newspaper I, II, III/Literary Magazine** | **32** |

## Foundation Curriculum: Spanish Language Arts and Reading

| Ch. 128, Spanish Language Arts and Reading and English as a Second Language | Reading | Writing | Oral and written conventions | Research | Listening/speaking | Second language acquisition | Total |
|---|---|---|---|---|---|---|---|
| **Kindergarten** | 47 | 8 | 11 | 4 | 4 | 0 | **74** |
| **Grade 1** | 49 | 10 | 16 | 7 | 4 | 0 | **86** |
| **Grade 2** | 38 | 11 | 17 | 7 | 4 | 0 | **77** |
| **Grade 3** | 39 | 12 | 19 | 9 | 4 | 0 | **83** |
| **Grade 4** | 27 | 12 | 14 | 9 | 4 | 0 | **66** |
| **Grade 5** | 31 | 12 | 15 | 13 | 5 | 0 | **76** |
| **Grade 6** | 29 | 13 | 14 | 13 | 5 | 0 | **74** |
| **English I for Speakers of Other Languages** | 29 | 17 | 6 | 13 | 5 | 58 | **128** |
| **English II for Speakers of Other Languages** | 29 | 18 | 6 | 13 | 5 | 58 | **129** |

## Foundation Curriculum: Mathematics

| Ch. 111, Mathematics, Grades K-8 | Mathematical process standards | Number and operations | Algebraic reasoning | Geometry and measurement | Data analysis | Personal financial literacy | Proportionality | Expressions, equations, and relationships | Measurement and data | Two-dimensional shapes | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Kindergarten** | 7 | 13 | 1 | 8 | 3 | 4 | 0 | 0 | 0 | 0 | **36** |
| **Grade 1** | 7 | 16 | 7 | 13 | 3 | 4 | 0 | 0 | 0 | 0 | **50** |
| **Grade 2** | 7 | 18 | 3 | 12 | 4 | 6 | 0 | 0 | 0 | 0 | **50** |
| **Grade 3** | 7 | 23 | 5 | 10 | 2 | 6 | 0 | 0 | 0 | 0 | **53** |
| **Grade 4** | 7 | 23 | 4 | 12 | 2 | 5 | 0 | 0 | 0 | 0 | **53** |
| **Grade 5** | 7 | 15 | 8 | 7 | 3 | 6 | 0 | 0 | 0 | 0 | **46** |
| **Grade 6** | 7 | 10 | 0 | 0 | 0 | 8 | 11 | 16 | 7 | 0 | **59** |
| **Grade 7** | 7 | 3 | 0 | 0 | 0 | 6 | 17 | 14 | 3 | 0 | **50** |
| **Grade 8** | 7 | 4 | 0 | 0 | 0 | 7 | 15 | 12 | 3 | 4 | **52** |

## Ch. 111, Mathematics, High School Courses (1 of 2)

| | Mathematical process standards | Algebraic reasoning | Linear functions, equations, and inequalities | Quadratic functions and equations | Exponential functions and equations | Number and algebraic methods | Attributes of functions and their inverses | Systems of equations and inequalities | Quadratic and square root functions, equations, and inequalities | Exponential and logarithmic functions and equations | Cubic, cube root, absolute value and rational functions, equations, and inequalities | Data | Coordinate and transformational geometry | Logical argument and constructions | Proof and congruence | Similarity, proof, and trigonometry | Two-dimensional and three-dimensional figures | Circles | Probability | Functions | Relations and geometric reasoning | Number and measure | Patterns and structure | Modeling from data | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Algebra I** | 7 | 0 | 23 | 8 | 5 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **56** |
| **Algebra II** | 7 | 0 | 0 | 0 | 0 | 9 | 4 | 7 | 8 | 5 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **55** |
| **Geometry** | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 8 | 5 | 6 | 6 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | **49** |
| **Precalculus** | 7 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 9 | 11 | 0 | 0 | **57** |
| **Algebraic Reasoning** | 7 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 5 | **34** |

## Ch. 111, Mathematics, High School Courses (2 of 2)

| | Mathematical process standards | Mathematical modeling in personal finance | Mathematical modeling in science and engineering | Mathematical modeling in fine arts | Mathematical modeling in social sciences | Numeric reasoning | Algebraic reasoning (expressions, equations, and generalized relationships) | Probabilistic and statistical reasoning | Graph theory | Planning and scheduling | Group decision making | Fair division | Game (or competition) theory | Theory of moves | Statistical process sampling and experimentation | Variability | Categorical and quantitative data | Probability and random variables | Inference | Bivariate data | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mathematical Models with Applications** | 7 | 10 | 7 | 4 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **39** |
| **Advanced Quantitative Reasoning** | 7 | 0 | 0 | 0 | 0 | 8 | 8 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **43** |
| **Independent Study in Mathematics** | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** |
| **Discrete Mathematics and Problem Solving** | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 10 | 11 | 11 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | **65** |
| **Statistics** | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 6 | 4 | 10 | 6 | **44** |

## Foundation Curriculum: Science

| Ch. 112, Science | Scientific investigation and reasoning | Matter and energy | Force, motion, and energy | Earth and space | Organisms and environments | Scientific processes | Scientific concepts | Earth in space and time | Solid Earth | Fluid Earth | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Kindergarten** | 13 | 2 | 4 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | **31** |
| **Grade 1** | 13 | 2 | 4 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | **33** |
| **Grade 2** | 14 | 4 | 4 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | **35** |
| **Grade 3** | 14 | 4 | 3 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | **35** |
| **Grade 4** | 14 | 3 | 4 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | **32** |
| **Grade 5** | 15 | 4 | 4 | 8 | 7 | 0 | 0 | 0 | 0 | 0 | **38** |
| **Grade 6** | 13 | 9 | 8 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | **43** |
| **Grade 7** | 13 | 6 | 3 | 5 | 17 | 0 | 0 | 0 | 0 | 0 | **44** |
| **Grade 8** | 13 | 6 | 3 | 14 | 4 | 0 | 0 | 0 | 0 | 0 | **40** |
| **Aquatic Science** | 0 | 0 | 0 | 0 | 0 | 18 | 28 | 0 | 0 | 0 | **46** |
| **Astronomy** | 0 | 0 | 0 | 0 | 0 | 16 | 46 | 0 | 0 | 0 | **62** |
| **Biology** | 0 | 0 | 0 | 0 | 0 | 16 | 42 | 0 | 0 | 0 | **58** |
| **Chemistry** | 0 | 0 | 0 | 0 | 0 | 18 | 43 | 0 | 0 | 0 | **61** |
| **Earth and Space Science** | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 19 | 20 | 14 | **71** |
| **Environmental Systems** | 0 | 0 | 0 | 0 | 0 | 19 | 40 | 0 | 0 | 0 | **59** |
| **Integrated Physics and Chemistry** | 0 | 0 | 0 | 0 | 0 | 13 | 27 | 0 | 0 | 0 | **40** |
| **Physics** | 0 | 0 | 0 | 0 | 0 | 20 | 31 | 0 | 0 | 0 | **51** |

## Foundation Curriculum: Social Studies

**Ch. 113, Social Studies and Ch. 118, Economics (1 of 2)**

| | History | Geography | Economics | Personal financial literacy | Government | Citizen-ship | Culture | Science, technology, and society | Social studies skills | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| **Kindergarten** | 6 | 5 | 5 | 0 | 4 | 4 | 4 | 3 | 7 | **38** |
| **Grade 1** | 8 | 7 | 10 | 0 | 5 | 9 | 2 | 3 | 7 | **51** |
| **Grade 2** | 10 | 12 | 5 | 0 | 7 | 8 | 4 | 2 | 9 | **57** |
| **Grade 3** | 9 | 9 | 10 | 0 | 6 | 6 | 6 | 2 | 11 | **59** |
| **Grade 4** | 21 | 11 | 14 | 0 | 5 | 11 | 3 | 3 | 12 | **80** |
| **Grade 5** | 17 | 11 | 12 | 0 | 8 | 12 | 5 | 4 | 12 | **81** |
| **Grade 6** | 4 | 19 | 10 | 0 | 7 | 5 | 20 | 3 | 14 | **82** |
| **Grade 7** | 29 | 11 | 6 | 0 | 5 | 7 | 4 | 5 | 14 | **81** |
| **Grade 8** | 36 | 6 | 8 | 0 | 11 | 14 | 13 | 6 | 16 | **110** |
| **United States History Since 1877** | 57 | 7 | 17 | 0 | 10 | 8 | 10 | 6 | 15 | **130** |
| **World History** | 59 | 5 | 9 | 0 | 6 | 9 | 11 | 10 | 14 | **123** |
| **World Geography** | 4 | 19 | 9 | 0 | 5 | 2 | 12 | 5 | 11 | **67** |
| **United States Government** | 8 | 5 | 6 | 0 | 28 | 15 | 2 | 4 | 12 | **80** |
| **Economics** | 0 | 0 | 47 | 28 | 0 | 0 | 0 | 0 | 13 | **88** |

**Ch. 113, Social Studies and Ch. 118, Economics (2 of 2)**

| Course Name | Number of Student Expectations |
|---|---|
| Psychology | **62** |
| Sociology | **73** |
| Special Topics in Social Studies | **23** |
| Social Studies Research Methods | **42** |
| Social Studies Advanced Studies | **20** |
| Economics Advanced Studies | **20** |

## Enrichment Curriculum

### Languages Other Than English

**Ch. 114, Languages Other Than English (1 of 2)**

| | Communication | Cultures | Connections | Comparisons | Communities | Interpersonal communication: speaking and writing | Interpretive communication: reading and listening | Personal communication: speaking and writing | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Levels I and II - Novice Progress Checkpoint** | 3 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **12** |
| **Levels III and IV - Intermediate Progress Checkpoint** | 3 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **12** |
| **Levels V, VI, and VII - Advanced Progress Checkpoint** | 3 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **12** |
| **American Sign Language Levels I and II - Novice Progress Checkpoint** | 4 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **13** |
| **American Sign Language Levels III and IV - Intermediate Progress Checkpoint** | 4 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **13** |
| **American Sign Language Levels V, VI, and VII - Advanced Progress Checkpoint** | 4 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | **13** |
| **Special Topics in Language and Culture** | 3 | 3 | 2 | 3 | 3 | 0 | 0 | 0 | **14** |
| **American Sign Language, Level I** | 5 | 4 | 2 | 3 | 3 | 0 | 0 | 0 | **17** |
| **American Sign Language, Level II** | 5 | 4 | 2 | 3 | 3 | 0 | 0 | 0 | **17** |
| **American Sign Language, Level III** | 5 | 4 | 2 | 3 | 3 | 0 | 0 | 0 | **17** |
| **American Sign Language, Level IV** | 5 | 4 | 2 | 3 | 3 | 0 | 0 | 0 | **17** |
| **American Sign Language, Advanced Independent Study** | 5 | 4 | 2 | 3 | 3 | 0 | 0 | 0 | **17** |
| **Level I, Novice Mid to Novice High Proficiency** | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 2 | **12** |
| **Level II, Novice High to Intermediate Low Proficiency** | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 2 | **12** |
| **Level III, Intermediate Low to Intermediate Mid Proficiency** | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 3 | **13** |
| **Level IV, Intermediate Mid to Intermediate High Proficiency** | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 3 | **14** |
| **Level V, Intermediate High to Advanced Mid Proficiency** | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | **10** |
| **Level VI, Advanced Mid to Advanced High Proficiency** | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | **10** |
| **Level VII, Advanced High to Superior Proficiency** | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | **10** |
| **Classical Languages, Level I, Novice Low to Intermediate Low Proficiency** | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | **8** |
| **Classical Languages, Level II, Novice Mid to Intermediate Mid Proficiency** | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 2 | **9** |
| **Classical Languages, Level III, Novice Mid to Advanced Low Proficiency** | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 2 | **10** |
| **Classical Languages, Level IV, Novice Mid to Advanced Mid Proficiency** | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 2 | **10** |
| **Classical Languages, Levels V-VII, Novice High to Superior Low Proficiency** | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | **7** |

**Ch. 114, Languages Other Than English (2 of 2)**

| Course Name | Number of Student Expectations |
|---|---|
| Cultural and Linguistics Topics | **12** |
| Exploratory Languages | **11** |
| Discovering Languages and Cultures | **8** |
| Seminar in Languages Other than English, Advanced | **13** |

## Enrichment Curriculum: Health Education

| Ch. 115, Health Education | Health behaviors | Health information | Influencing factors | Personal/interpersonal skills | Bullying | Total |
|---|---|---|---|---|---|---|
| **Kindergarten** | 13 | 5 | 6 | 9 | 0 | **33** |
| **Grade 1** | 13 | 7 | 5 | 10 | 0 | **35** |
| **Grade 2** | 13 | 12 | 4 | 14 | 0 | **43** |
| **Grade 3** | 14 | 5 | 6 | 19 | 0 | **44** |
| **Grade 4** | 11 | 10 | 4 | 18 | 5 | **48** |
| **Grade 5** | 14 | 10 | 13 | 6 | 5 | **48** |
| **Grade 6** | 9 | 17 | 11 | 14 | 4 | **55** |
| **Grade 7-8** | 12 | 17 | 8 | 18 | 5 | **60** |
| **Health I, Grades 9-10** | 15 | 23 | 11 | 20 | 0 | **69** |
| **Advanced Health, Grades 11-12** | 6 | 17 | 11 | 16 | 0 | **50** |

## Enrichment Curriculum: Physical Education

| Ch. 116, Physical Education | Movement | Physical activity and health | Social development | Total |
|---|---|---|---|---|
| **Kindergarten** | 10 | 13 | 5 | **28** |
| **Grade 1** | 10 | 14 | 5 | **29** |
| **Grade 2** | 16 | 16 | 4 | **36** |
| **Grade 3** | 12 | 13 | 5 | **30** |
| **Grade 4** | 15 | 19 | 6 | **40** |
| **Grade 5** | 15 | 16 | 5 | **36** |
| **Grade 6** | 14 | 18 | 8 | **40** |
| **Grade 7** | 15 | 19 | 7 | **41** |
| **Grade 8** | 15 | 22 | 7 | **44** |
| **Foundations of Personal Fitness** | 2 | 19 | 2 | **23** |
| **Adventure/Outdoor Education** | 3 | 15 | 0 | **18** |
| **Aerobic Activities** | 4 | 14 | 4 | **22** |
| **Individual Sports** | 6 | 10 | 9 | **25** |
| **Team Sports** | 7 | 13 | 9 | **29** |

## Enrichment Curriculum: Fine Arts

**Ch. 117, Fine Arts, Art**

| | Foundations: observation and perception | Creative expression | Historical and cultural relevance | Critical evaluation and response | Total |
|---|---|---|---|---|---|
| **Art, Kindergarten** | 2 | 3 | 4 | 3 | **12** |
| **Art, Grade 1** | 2 | 3 | 4 | 3 | **12** |
| **Art, Grade 2** | 2 | 3 | 4 | 3 | **12** |
| **Art, Grade 3** | 3 | 3 | 4 | 3 | **13** |
| **Art, Grade 4** | 3 | 3 | 4 | 3 | **13** |
| **Art, Grade 5** | 3 | 3 | 4 | 3 | **13** |
| **Art, Middle School 1** | 4 | 3 | 4 | 5 | **16** |
| **Art, Middle School 2** | 4 | 4 | 4 | 5 | **17** |
| **Art, Middle School 3** | 4 | 5 | 4 | 4 | **17** |
| **Art, Level I** | 4 | 6 | 4 | 4 | **18** |
| **Art, Level II** | 4 | 6 | 4 | 5 | **19** |
| **Art, Level III** | 4 | 6 | 4 | 6 | **20** |
| **Art, Level IV** | 4 | 6 | 4 | 6 | **20** |

**Ch. 117, Fine Arts, Dance**

| | Foundations: perception | Creative expression: artistic process | Creative expression: performance | Historical and cultural relevance | Critical evaluation and response | Total |
|---|---|---|---|---|---|---|
| **Dance, Middle School 1** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Middle School 2** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Middle School 3** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Level I** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Level II** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Level III** | 4 | 4 | 4 | 4 | 4 | **20** |
| **Dance, Level IV** | 4 | 4 | 4 | 4 | 4 | **20** |

**Ch. 117, Fine Arts, Music**

| | Foundations: music literacy | Creative expression | Historical and cultural relevance | Critical evaluation and response | Total |
|---|---|---|---|---|---|
| **Music, Kindergarten** | 5 | 5 | 2 | 3 | **15** |
| **Music, Grade 1** | 6 | 8 | 3 | 4 | **21** |
| **Music, Grade 2** | 7 | 8 | 3 | 4 | **22** |
| **Music, Grade 3** | 7 | 8 | 3 | 5 | **23** |
| **Music, Grade 4** | 7 | 9 | 4 | 6 | **26** |
| **Music, Grade 5** | 7 | 9 | 4 | 6 | **26** |
| **Music, Middle School 1** | 10 | 7 | 4 | 5 | **26** |
| **Music, Middle School 2** | 10 | 7 | 4 | 6 | **27** |
| **Music, Middle School 3** | 10 | 7 | 4 | 6 | **27** |
| **Music, Level I** | 8 | 12 | 6 | 4 | **30** |
| **Music, Level II** | 10 | 13 | 6 | 4 | **33** |
| **Music, Level III** | 11 | 13 | 6 | 5 | **35** |
| **Music, Level IV** | 11 | 13 | 6 | 5 | **35** |
| **Music Studies** | 11 | 8 | 6 | 4 | **29** |

**Ch. 117, Fine Arts, Theatre**

| | Foundations: inquiry and understanding | Creative expression: performance | Creative expression: production | Historical and cultural relevance | Critical evaluation and response | Total |
|---|---|---|---|---|---|---|
| **Theatre, Kindergarten** | 4 | 4 | 4 | 2 | 2 | **16** |
| **Theatre, Grade 1** | 4 | 4 | 4 | 2 | 2 | **16** |
| **Theatre, Grade 2** | 4 | 4 | 4 | 2 | 2 | **16** |
| **Theatre, Grade 3** | 4 | 4 | 5 | 2 | 3 | **18** |
| **Theatre, Grade 4** | 7 | 5 | 4 | 3 | 3 | **22** |
| **Theatre, Grade 5** | 7 | 5 | 4 | 3 | 3 | **22** |
| **Theatre, Middle School 1** | 6 | 6 | 4 | 2 | 4 | **22** |
| **Theatre, Middle School 2** | 6 | 7 | 4 | 3 | 4 | **24** |
| **Theatre, Middle School 3** | 6 | 4 | 4 | 3 | 4 | **21** |
| **Theatre, Level I** | 11 | 6 | 4 | 6 | 8 | **35** |
| **Theatre, Level II** | 7 | 6 | 5 | 6 | 7 | **31** |
| **Theatre, Level III** | 7 | 6 | 5 | 6 | 8 | **32** |
| **Theatre, Level IV** | 7 | 5 | 6 | 6 | 8 | **32** |
| **Musical Theatre, Level I** | 7 | 5 | 4 | 6 | 7 | **29** |
| **Musical Theatre, Level II** | 8 | 7 | 5 | 6 | 8 | **34** |
| **Musical Theatre, Level III** | 8 | 6 | 4 | 5 | 8 | **31** |
| **Musical Theatre, Level IV** | 8 | 7 | 3 | 4 | 8 | **30** |
| **Technical Theatre, Level I** | 5 | 7 | 5 | 4 | 7 | **28** |
| **Technical Theatre, Level II** | 5 | 7 | 3 | 7 | 9 | **31** |
| **Technical Theatre, Level III** | 5 | 10 | 4 | 7 | 9 | **35** |
| **Technical Theatre, Level IV** | 5 | 6 | 6 | 5 | 9 | **31** |

## Enrichment Curriculum: Technology Applications

| Ch. 126, Technology Applications | Creativity and innovation | Communication and collaboration | Research and information fluency | Critical thinking, problem solving, and decision making | Digital citizenship | Technology operations and concepts | Mathematical process standards | Total |
|---|---|---|---|---|---|---|---|---|
| **Kindergarten-Grade 2** | 5 | 4 | 3 | 4 | 3 | 7 | 0 | **26** |
| **Grade 3-Grade 5** | 3 | 6 | 4 | 4 | 7 | 5 | 0 | **29** |
| **Grade 6** | 4 | 3 | 4 | 6 | 4 | 14 | 0 | **35** |
| **Grade 7** | 4 | 3 | 4 | 6 | 4 | 14 | 0 | **35** |
| **Grade 8** | 4 | 3 | 4 | 6 | 4 | 14 | 0 | **35** |
| **Fundamentals of Computer Science** | 7 | 3 | 2 | 14 | 6 | 6 | 0 | **38** |
| **Computer Science I** | 3 | 8 | 2 | 23 | 5 | 22 | 0 | **63** |
| **Computer Science II** | 9 | 7 | 8 | 39 | 3 | 6 | 0 | **72** |
| **Computer Science III** | 8 | 4 | 10 | 16 | 2 | 4 | 0 | **44** |
| **Digital Forensics** | 4 | 7 | 12 | 2 | 11 | 13 | 0 | **49** |
| **Discrete Mathematics for Computer Science** | 3 | 6 | 2 | 15 | 3 | 13 | 0 | **42** |
| **Game Programming and Design** | 12 | 6 | 3 | 8 | 6 | 19 | 0 | **54** |
| **Mobile Application Development** | 6 | 6 | 4 | 11 | 8 | 11 | 0 | **46** |
| **Robotics Programming and Design** | 8 | 8 | 5 | 7 | 3 | 20 | 7 | **58** |
| **Digital Design and Media Production** | 3 | 4 | 3 | 6 | 4 | 8 | 0 | **28** |
| **Digital Art and Animation** | 11 | 9 | 7 | 8 | 4 | 4 | 0 | **43** |
| **3-D Modeling and Animation** | 12 | 9 | 7 | 8 | 4 | 4 | 0 | **44** |
| **Digital Communications in the 21st Century** | 8 | 11 | 6 | 8 | 6 | 6 | 0 | **45** |
| **Digital Video and Audio Design** | 8 | 11 | 5 | 6 | 7 | 13 | 0 | **50** |
| **Web Communications** | 4 | 4 | 8 | 7 | 4 | 10 | 0 | **37** |
| **Web Design** | 7 | 5 | 22 | 17 | 10 | 19 | 0 | **80** |
| **Web Game Development** | 4 | 6 | 18 | 15 | 7 | 3 | 0 | **53** |
| **Independent Study in Technology Applications** | 10 | 9 | 5 | 8 | 7 | 4 | 0 | **43** |
| **Independent Study in Evolving/Emerging Technologies** | 10 | 9 | 5 | 8 | 7 | 4 | 0 | **43** |

## Enrichment Curriculum: Career Development

| Ch. 127, Career Development | |
|---|---|
| **Middle School** | **Number of Student Expectations** |
| Exploring Careers | **39** |
| Career Portals | **36** |
| **High School** | |
| Problems and Solutions | **27** |
| Career Preparation I | **49** |
| Career Preparation II | **50** |

## Enrichment Curriculum: Career and Technical Education

| Ch. 130, Subchapter A: Agriculture, Food, and Natural Resources | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Agriculture, Food, and Natural Resources | **84** |
| Livestock Production | **35** |
| Small Animal Management | **32** |
| Equine Science | **20** |
| Veterinary Medical Applications | **103** |
| Advanced Animal Science | **69** |
| Professional Standards in Agribusiness | **36** |
| Agribusiness Management and Marketing | **38** |
| Mathematical Applications in Agriculture, Food, and Natural Resources | **36** |
| Energy and Natural Resources Technology | **63** |
| Advanced Environmental Technology | **63** |
| Food Technology and Safety | **50** |
| Food Processing | **25** |
| Wildlife, Fisheries and Ecology Management | **68** |
| Range Ecology and Management | **37** |
| Forestry and Woodland Ecosystems | **45** |
| Principles and Elements of Floral Design | **34** |
| Landscape Design and Turf Grass Management | **30** |
| Horticulture Science | **27** |
| Advanced Plant and Soil Science | **67** |
| Agricultural Mechanics and Metal Technologies | **39** |
| Agricultural Facilities Design and Fabrication | **34** |
| Agricultural Power Systems | **50** |
| Practicum in Agriculture, Food, and Natural Resources | **44** |

| Ch. 130, Subchapter B: Agriculture and Construction | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Architecture and Construction | **256** |
| Interior Design | **82** |
| Advanced Interior Design | **52** |
| Practicum in Interior Design | **60** |
| Architectural Design | **68** |
| Advanced Architectural Design | **71** |
| Practicum in Architectural Design | **42** |
| Construction Management | **166** |
| Advanced Construction Management | **101** |
| Practicum in Construction Management | **69** |
| Construction Technology | **79** |
| Advanced Construction Technology | **80** |
| Mill and Cabinetmaking Technology | **23** |
| Building Maintenance Technology | **65** |
| Advanced Building Maintenance Technology | **49** |
| Electrical Technology | **96** |
| Advanced Electrical Technology | **137** |
| Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology | **74** |
| Advanced Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology | **116** |
| Piping and Plumbing Technology | **89** |
| Advanced Piping and Plumbing Technology | **41** |

| Ch. 130, Subchapter C: Arts, Audio/Video Technology, and Communications | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Arts, Audio Video Technology, and Communications | **39** |
| Animation | **43** |
| Advanced Animation | **37** |
| Audio/Video Production | **56** |
| Advanced Audio/Video Production | **55** |
| Practicum in Audio/Video Production | **42** |
| Graphic Design and Illustration | **37** |
| Advanced Graphic Design and Illustration | **32** |
| Practicum in Graphic Design and Illustration | **35** |
| Commercial Photography | **41** |
| Advanced Commercial Photography | **41** |
| Fashion Design | **37** |
| Advanced Fashion Design | **41** |
| Practicum in Fashion Design | **38** |
| Printing and Imaging Technology | **39** |
| Advanced Printing and Imaging Technology | **38** |
| Practicum in Printing and Imaging Technology | **42** |
| Professional Communications | **36** |

| Ch. 130, Subchapter D: Business Management and Administration | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Business, Marketing, and Finance | **64** |
| Touch System Data Entry | **37** |
| Business Information Management I | **49** |
| Business Information Management II | **40** |
| Business English | **66** |
| Business Law | **51** |
| Global Business | **56** |
| Human Resources Management | **75** |
| Virtual Business | **25** |
| Business Management | **78** |
| Practicum in Business Management | **121** |

| Ch. 130, Subchapter E: Education and Training | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Education and Training | **26** |
| Human Growth and Development | **58** |
| Instructional Practices in Education and Training | **38** |
| Practicum in Education and Training | **37** |

| Ch. 130, Subchapter F: Finance | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Money Matters | **116** |
| Banking and Financial Services | **45** |
| Securities and Investments | **56** |
| Insurance Operations | **54** |
| Accounting I | **78** |
| Accounting II | **40** |
| Financial Analysis | **31** |
| Statistics and Risk Management | **43** |
| Financial Mathematics | **102** |

| Ch. 130, Subchapter G: Government and Public Administration | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Government and Public Administration | **72** |
| Political Science I | **43** |
| Political Science II | **36** |
| Revenue, Taxation, and Regulation | **24** |
| Public Management and Administration | **42** |
| Planning and Governance | **38** |
| National Security | **35** |
| Foreign Service and Diplomacy | **20** |
| Practicum in Local, State, and Federal Government | **21** |

| Ch. 130, Subchapter H: Health Science | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Health Science | **47** |
| Medical Terminology | **19** |
| Health Science | **48** |
| Practicum in Health Science | **35** |
| Anatomy and Physiology | **44** |
| Medical Microbiology | **32** |
| Pathophysiology | **37** |
| World Health Research | **29** |

| Ch. 130, Subchapter I: Hospitality and Tourism | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Hospitality and Tourism | **41** |
| Restaurant Management | **57** |
| Culinary Arts | **60** |
| Practicum in Culinary Arts | **60** |
| Food Science | **174** |
| Hotel Management | **55** |
| Travel and Tourism Management | **65** |
| Hospitality Services | **84** |
| Practicum in Hospitality Services | **58** |

| Ch. 130, Subchapter J: Human Services | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Human Services | **46** |
| Dollars and Sense | **30** |
| Interpersonal Studies | **51** |
| Lifetime Nutrition and Wellness | **36** |
| Counseling and Mental Health | **31** |
| Child Development | **39** |
| Child Guidance | **37** |
| Family and Community Services | **33** |
| Practicum in Human Services | **39** |
| Introduction to Cosmetology | **19** |
| Cosmetology I | **21** |
| Cosmetology II | **27** |

| Ch. 130, Subchapter K: Information Technology | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Information Technology | **73** |
| Computer Maintenance | **66** |
| Telecommunications and Networking | **66** |
| Computer Technician | **61** |
| Computer Programming | **41** |
| Advanced Computer Programming | **82** |
| Digital and Interactive Media | **58** |
| Web Technologies | **64** |
| Research in Information Technology Solutions | **31** |

| Ch. 130, Subchapter L: Law, Public Safety, Corrections, and Security | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Law, Public Safety, Corrections, and Security | **53** |
| Law Enforcement I | **49** |
| Law Enforcement II | **61** |
| Forensic Science | **84** |
| Court Systems and Practices | **30** |
| Correctional Services | **45** |
| Security Services | **33** |
| Firefighter I | **78** |
| Firefighter II | **37** |
| Practicum in Law, Public Safety, Corrections, and Security | **32** |

| Ch. 130, Subchapter M: Manufacturing | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Manufacturing | **71** |
| Welding | **91** |
| Advanced Welding | **55** |
| Precision Metal Manufacturing | **34** |
| Advanced Precision Metal Manufacturing | **59** |
| Flexible Manufacturing | **42** |
| Advanced Flexible Manufacturing | **53** |
| Manufacturing Engineering | **36** |
| Practicum in Manufacturing | **34** |

| Ch. 130, Subchapter N: Marketing | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Advertising and Sales Promotion | **72** |
| Fashion Marketing | **95** |
| Entrepreneurship | **106** |
| Retailing and E-tailing | **102** |
| Sports and Entertainment Marketing | **84** |
| Marketing Dynamics | **203** |
| Practicum in Marketing Dynamics | **116** |

| Ch. 130, Subchapter O: Science, Technology, Engineering, and Mathematics | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Concepts of Engineering and Technology | **54** |
| Biotechnology | **37** |
| Advanced Biotechnology | **79** |
| Engineering Design and Presentation | **53** |
| Advanced Engineering Design and Presentation | **62** |
| Engineering Mathematics | **102** |
| Electronics | **54** |
| Advanced Electronics | **65** |
| Robotics and Automation | **62** |
| Principles of Technology | **70** |
| Scientific Research and Design | **37** |
| Engineering Design and Problem Solving | **43** |
| Principles of Engineering | **83** |
| Digital Electronics | **63** |
| Practicum in Science, Technology, Engineering, and Mathematics | **33** |

| Ch. 130, Subchapter P: Transportation, Distribution, and Logistics | |
|---|---|
| **Course Name** | **Number of Student Expectations** |
| Principles of Transportation, Distribution, and Logistics | **66** |
| Energy, Power, and Transportation Systems | **23** |
| Aircraft Technology | **41** |
| Advanced Aircraft Technology | **29** |
| Automotive Technology | **24** |
| Advanced Automotive Technology | **29** |
| Collision Repair and Refinishing | **32** |
| Advanced Collision Repair and Refinishing | **34** |
| Small Engine Technology | **46** |
| Advanced Small Engine Technology | **85** |
| Transportation Systems Management | **37** |
| Logistics, Planning, and Management Systems | **77** |
| Practicum in Transportation, Distribution, and Logistics | **33** |

## Student Assessment

As required by TEC, 39.023(a), all students attending a Texas public school are assessed annually in grades 3-8 mathematics and reading; grades 4 and 7 writing; grades 5 and 8 science; and grade 8 social studies. The grades 3-8 reading and mathematics assessments, as well as the grades 5 and 8 science assessments, are also federally required.

| | **Grades 3-8 Assessments Required by Texas Education Code, 39.023(a)** *Federally Required Assessments | | | | |
|---|---|---|---|---|---|
| **Grade 3** | Reading* | Mathematics* | | | |
| **Grade 4** | Reading* | Mathematics* | | | Writing |
| **Grade 5** | Reading* | Mathematics* | Science* | | |
| **Grade 6** | Reading* | Mathematics* | | | |
| **Grade 7** | Reading* | Mathematics* | | | Writing |
| **Grade 8** | Reading* | Mathematics* | Science* | Social Studies | |

TEA uses the State of Texas Assessments of Academic Readiness (STAAR) assessments to meet state and federal testing requirements.

### Test Design

One of the primary goals of the STAAR program is to increase the rigor of the assessments so that students have the academic knowledge and skills they need to meet the challenges of the 21st century. As was the case with previous state assessment programs in Texas, the STAAR program assesses the statewide content standards, the Texas Essential Knowledge and Skills (TEKS). However, the test design for STAAR is fundamentally different from past state assessments. STAAR assessments were developed using three major design attributes: focus, clarity, and depth.

### Design Attribute: Focus

By focusing on the TEKS that are most critical to assess, STAAR is designed to better measure the academic performance of students as they progress from elementary to middle to high school. In an effort to structure STAAR assessments so that they are more focused, TEA made a distinction between “readiness” and “supporting” standards from the TEKS content standards eligible for assessment. Based on feedback from Texas educators (from both K–12 and higher education), a set of readiness standards was identified for each subject and grade or course drawn from the TEKS content standards eligible for assessment. These readiness standards are emphasized annually in the STAAR assessments. The content standards that were deemed to be supporting are still an important part of instruction and are eligible for assessment. However, the supporting standards may not all be tested each year.

The following table compares readiness and supporting standards.

| **Comparison of Readiness and Supporting Standards Readiness Standards** | **Supporting Standards** |
|---|---|
| General characteristics | |
| • are essential for success in the current grade or course<br>• are important for preparedness for the next grade or course<br>• support college and career readiness<br>• necessitate in-depth instruction<br>• address significant content and concepts | • introduced in the current grade or course but may be emphasized in a subsequent year<br>• reinforced in the current grade or course but may be emphasized in a previous year<br>• play a role in preparing students for the next grade or course but not a central role<br>• address more narrowly defined content and concepts |
| • Subject-specific characteristics | |
| • For Reading, Writing, and English Language Arts:<br>• focus on specific reading genres (fiction and expository) and on writing for particular purposes | • For Reading, Writing, and English Language Arts:<br>• may apply to other reading genres (poetry, drama, literary nonfiction, and persuasive) |
| • For Mathematics:<br>• emphasize the integration and application of mathematical skills | • For Mathematics:<br>• focus on skills that underlie more significant mathematical concepts |
| • For Science:<br>• emphasize the integration and application of major scientific concepts | • For Science:<br>• focus on content that supports fundamental scientific principles |
| • For Social Studies:<br>• emphasize landmark historical events and foundational geographic concepts<br>• emphasize unifying historical and geographical themes | • For Social Studies:<br>• focus on discrete historical facts, events, or individual people, as well as more detail-oriented geographical facts and concepts |

## Process Standards

The process skills in the TEKS for mathematics, science, and social studies describe ways in which students are expected to engage with the content. Process standards are not directly assessed. Instead, these skills should be incorporated into the teaching of the TEKS when possible so that students can attain a greater depth of understanding of complex content. (See appendices A, B, and C for the process skills for mathematics, science, and social studies.)

For the STAAR program, process skills in mathematics, science, and social studies are assessed in context, not in isolation, which allows for a more integrated and authentic assessment of these content areas. Process skills are incorporated into test questions that are designed to address content within the

TEKS. Both content and process student expectations are reported for test questions that measure a content student expectation and incorporate a process student expectation.

## Process Standards and STAAR Mathematics Assessments

The student expectations addressing **mathematical process standards** have become a central part of the TEKS for mathematics. In the STAAR mathematics assessments for grades 3–8, as well as for algebra, there is not a separate reporting category for process skills. Instead, multiple process skills are incorporated into test questions from the content reporting categories, and all the mathematics questions have at least one process skill included. When student expectations are reported for an administered test, an additional report is provided listing the content student expectation and all applicable process student expectations.

Three process skills included in the **mathematical process standards** strand of the TEKS are listed below as examples.

5.1 **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to
(F) analyze mathematical relationships to connect and communicate mathematical ideas.

7.1 **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to
(E) create and use representations to organize, record, and communicate mathematical ideas.

A.1 **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

The student uses mathematical processes to acquire and demonstrate mathematical understanding.

New mathematical process standards expect a student to do the following:

(A) apply mathematics to problems arising in everyday life, society, and the workplace;

(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;

(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;

(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;

(E) create and use representations to organize, record, and communicate mathematical ideas;

(F) analyze mathematical relationships to connect and communicate mathematical ideas; and

(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Test Question from STAAR Grade 4 Mathematics

*Mrs. Taylor wants to pour 8 quarts of juice into 16 glasses. Each glass holds one pint. Does Mrs. Taylor have enough juice to fill 16 glasses?*

*A* *No, because there are 4 quarts in 1 gallon and 16 ÷ 4 = 4*
*B* *No, because there are 4 quarts in 1 gallon and 4 × 16 = 64*
*C** *Yes, because there are 2 pints in 1 quart and 2 × 8 = 16*
*D* *Yes, because there are 2 pints in 1 quart and 8 ÷ 2 = 4*

This test question assesses a content student expectation.

4.8(B)—convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table

This test question also incorporates multiple process student expectations.

4.1(A)—apply mathematics to problems arising in everyday life, society, and the workplace
4.1(B)—use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution
4.1(C)—select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems
4.1(G)—display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication

Test Question from STAAR Grade 7 Mathematics

*Of the 250 sheep in a flock, 34% are white. What is the total number of white sheep in the flock?*

*A** *85*
*B* *216*
*C* *165*
*D* *Not here*

This test question assesses a content student expectation.

7.4(D)—solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems

This test question also incorporates multiple process student expectations.

7.1(A)—apply mathematics to problems arising in everyday life, society, and the workplace
7.1(B)—use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution
7.1(F)—analyze mathematical relationships to connect and communicate mathematical ideas

## Process Standards and STAAR Science Assessments

The student expectations addressing **scientific processes** are an integral part of the TEKS for science. In the STAAR science assessments, there is not a separate reporting category for process skills. Instead, these skills are incorporated into at least 40% of the test questions from the content reporting categories. When student expectations are reported for an administered test, both content and process student expectations appear on the report.

Three process skills included in the **scientific processes** strand of the TEKS are listed below as examples.

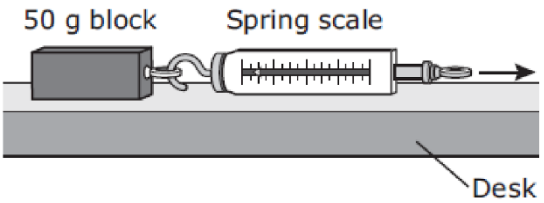
5.3 **Scientific investigation and reasoning.** The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to
(B) evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels.

8.2 **Scientific investigation and reasoning.** The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to
(C) collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers.

B.1 **Scientific processes.** The student, for at least 40% of instructional time, conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. The student is expected to
(A) demonstrate safe practices during laboratory and field investigations.

Test Question from STAAR Grade 5 Science

*A student uses a spring scale to pull a 50-gram block horizontally across a wood desk. Then the student pulls the block the same distance across surfaces of carpet, sandpaper, and glass.*




*Which question is this investigation most likely designed to answer?*

*A* *How do blocks of different sizes react to force?*
*B** *How do different surfaces affect the amount of force needed to move a block?*

*C* *How do blocks affect spring scales?*
*D* *How does the mass of a block change when it is pulled across a desk?*

This test question assesses a content student expectation.

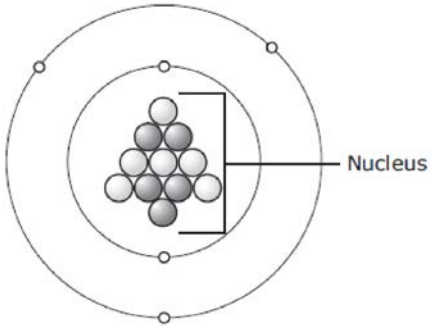
5.6(D)—design an experiment that tests the effect of force on an object

This test question also incorporates a process student expectation.

5.2(B)—ask well-defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology

Test Question from STAAR Grade 8 Science

*A model of an atom is shown below.*




*An atom of which element is represented by this model?*

*A** *Boron (B)*
*B* *Carbon (C)*
*C* *Neon (Ne)*
*D* *Sodium (Na)*

This test question assesses a content student expectation.

8.5(B)—identify that protons determine an element's identity and valence electrons determine its chemical properties, including reactivity

This test question also incorporates a process student expectation.

8.3(B)—use models to represent aspects of the natural world such as an atom, a molecule, space, or a geologic feature

## Process Standards and STAAR Social Studies Assessments

The student expectations addressing **social studies skills** are an integral part of the TEKS for social studies. In the STAAR social studies assessments, there is not a separate reporting category for process skills. Instead, these skills are incorporated into at least 30% of the test questions from the content

reporting categories. When student expectations are reported for an administered test, both content and process student expectations appear on the report.

Two process skills included in the **social studies skills** strand of the TEKS are listed below as examples.

8.29 **Social studies skills.** The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including electronic technology. The student is expected to

(D) identify points of view from the historical context surrounding an event and the frame of reference which influenced the participants.

H.30 **Social studies skills.** The student communicates in written, oral, and visual forms. The student is expected to

(B) use correct social studies terminology to explain historical concepts.

Test Question from STAAR Grade 8 Social Studies

> *Black Codes* was a name given to laws passed by southern governments established during the presidency of Andrew Johnson. These laws imposed severe restrictions on freedmen, such as prohibiting their right to vote, forbidding them to sit on juries, and limiting their right to testify against white men. They were also forbidden from carrying weapons in public places and working in certain occupations.
>
> *—National Archives and Records Administration, http://www.archives.gov (accessed July 14, 2010)*

*Southern states passed the codes described in this excerpt in order to —*

*A** *limit the effects of the Reconstruction Amendments*
*B* *increase the labor supply for factory jobs in the North*
*C* *decrease the number of northern representatives in Congress*
*D* *improve relations with the Democratic Party*

This test question assesses a content student expectation.

8.9(C)—explain the economic, political, and social problems during Reconstruction and evaluate their impact on different groups

This test question also incorporates a process student expectation.

8.29(B)—analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions

Additional examples of STAAR test questions that assess content and incorporate process skills from the TEKS can be found in the released STAAR test questions on the TEA website at

http://tea.texas.gov/Student_Testing_and_Accountability/Testing/State_of_Texas_Assessments_of_Academic_Readiness_(STAAR)/STAAR_Released_Test_Questions/.

### Rigor

With greater focus, clarity, and depth in assessment, it is possible to have a more rigorous testing program. The following table summarizes how rigor is emphasized in the program at the individual question level, at the total test level, and through the performance standards. Additional information regarding rigor in the STAAR program can be found at http://tea.texas.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2147490430.

| **General Characteristics of STAAR That Contribute to Rigor** |
|---|
| • The rigor of items will be increased by<br>o assessing content and skills at a greater depth and higher level of cognitive complexity<br>o assessing more than one student expectation in an item<br><br>• **The rigor of the tests will be increased by**<br>o assessing more focused student expectations but doing so multiple times and in more complex ways<br>o including a greater number of rigorous items on the test, thereby increasing the overall test difficulty<br><br>• **Performance standards will be increased by**<br>o using empirical data to link performance in specific courses to college and career readiness<br>o using empirical studies to compare student performance on the new assessments with other national assessments<br>o reviewing performance standards at least once every three years and, if necessary, adjusting them to maintain a high level of rigor<br>o expectations for student performance on STAAR will be raised to achieve the goal of graduating students who are college and career ready |

## Test and Item Specifications

### Test Specifications

Test specifications provide the underlying structure for the assessments, supporting how the assessments are designed, constructed, administered, and scored. Tests are constructed to match a test blueprint that identifies the total number of questions on each test, with a majority of test questions addressing readiness standards from the content standards. Each STAAR assessment consists primarily of multiple-choice questions addressing the content standards for the grade or course. (See Appendix H: Sample of Assessed Curriculum and Test Blueprints for Mathematics, Reading, Science, Social Studies, and Writing.)

### STAAR Grades 3–8

All general STAAR grades 3–8 assessments are offered in paper-and-pencil format. Each STAAR grades 3–8 assessment consists primarily of multiple-choice questions addressing the content standards for the

grade level and subject. All mathematics assessments and the grades 5 and 8 science assessments include open-ended items that are machine scorable, referred to as griddable items, in which the answer is generated by the student instead of being selected from a set of options. In this format, a student records a numerical response using several columns of response bubbles.

The STAAR grades 3–8 reading assessment will consist of multiple-choice questions related to reading selections drawn from a variety of published and commissioned pieces. For grades 4–8, three to four stand-alone selections and one pair of thematically linked selections will be included on each test; grade 3 reading will not include paired selections. For thematically linked reading selections, the test will incorporate questions that require students to demonstrate an understanding of the connections between the two texts. The selections on the reading assessments will be genre-based and will include both literary (fiction, literary nonfiction, poetry, drama, media literacy) and informational (expository, persuasive, procedural, media literacy) texts.

### Item Specifications

Item specifications provide guidance to the professional item writers who develop test questions for the STAAR program. The specifications offer guidelines for assessment strategies and include descriptions and samples of the kinds of items appropriate for each content standard. Item specifications for reading tests include acceptable ranges for selection length and guidelines for readability.

### Blueprints

Test blueprints specify the set of reporting categories and student expectations to be measured on an assessment, as well as the number of items to be tested for each reporting category. The following graphic shows the relative relationship between the readiness and supporting standards in the TEKS content standards and the readiness and supporting standards that are assessed each year. The STAAR test blueprints are designed so that a larger number of test items measure student expectations designated as readiness standards

| TEKS Content Standard | Eligible Content Standards from the TEKS | STAAR Assessment Blueprint TEKS Content Standards Assessed |
|---|---|---|
| **Readiness Standards** | 30% | 65% |
| **Supporting Standards** | 70% | 35% |

## Alignment of the Assessments with the Content Standards

Alignment is central to the validity of the STAAR student assessment system. STAAR provides useful information for valid accountability decisions and educational improvement only to the extent that all components of the system are aligned. It is important to determine the extent to which STAAR adequately measures the knowledge and skills specified in the TEKS and the extent to which STAAR includes items that cover the full range of achievement standards, particularly at the highest achievement level.

Demonstrating that every item on STAAR can be matched to one or more content standards in the TEKS is necessary but not sufficient to ensure alignment. In addition to the content match, evidence of

alignment also addresses the degree to which STAAR reflects the full range and breadth of the content standards as well as the degree of cognitive complexity evident in the standards.

The state gathers significant evidence to ensure that the tests are closely aligned to the grade-level content standards. The systematic and well-documented test development process used for STAAR includes annual item review committees composed of educators who represent the 20 regions of the state. These educators review every item for alignment to the content standards and to the sub-content areas and discuss and reassign the content standard and sub-content area being assessed, as needed. Item judgments are collected for every item related to each item's alignment to content standards in response to the question "Does this item measure the reporting category/student expectation it was designed to measure?" Summaries of the committees' judgments related to each item's alignment to specific content standards and sub-content areas clearly demonstrate alignment between the STAAR tests and the content standards. The summaries are maintained as Item Content Committee Review Reports for every grade and subject for STAAR.

Every item chosen for inclusion on a STAAR test has undergone extensive review by TEA, its testing contractor, and approximately 40 independent Texas educators (20 in item review and 20 in data review) in terms of its alignment to the specific content standard and sub-content area. Because of the thoroughness of this content alignment, TEA is confident that STAAR reflects the knowledge and skills in the TEKS. It should be noted that there are plans by the State Board of Education (SBOE) for additional TEKS revisions. These revisions will have an overall impact on the alignment of the assessments with the content standards. If revisions are approved by the SBOE, TEA will work through a process similar to the one noted above to verify that STAAR items and the revised TEKS are aligned. In addition to the alignment process described above, current federal regulations require an independent alignment study as part of the peer review process. This alignment study has been completed and will be included in the STAAR program's 2016 federal peer review.

Additionally, to comply with House Bill (HB) 743, the TEA contracted with the Human Resources Research Organization (HumRRO) to provide an independent evaluation of the validity and reliability of the State of Texas Assessments of Academic Readiness (STAAR) in grades 3-8. The assessments subject to evaluation are grades 3-8 reading and mathematics, grades 4 and 7 writing, grades 5 and 8 science, and grade 8 social studies. Part I of the report, which contains the evaluation of grades 5 and 8 and reading and mathematics, and grades 4 and 7 writing, can be found on TEA's Student Assessment website. Part II of the report, to be posted in May 2016, will include the remaining grades 3-8 assessments.

# Appendix A
# Process Skills: Mathematics

| **Kindergarten – Grade 12 Mathematics Process Standards** |
| --- |
| The student is expected to:<br>• apply mathematics to problems arising in everyday life, society, and the workplace<br>• use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution<br>• select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems<br>• communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate<br>• create and use representations to organize, record, and communicate mathematical ideas<br>• analyze mathematical relationships to connect and communicate mathematical ideas<br>• display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication |

# Appendix B
# Process Skills: Science

| **Kindergarten – Grade 12 Science Process Skills** |
|---|
| Scientific investigation and reasoning. The student, for at least 40% of instructional time, conducts laboratory and field investigations following safety procedures and environmentally appropriate and ethical practices. The student is expected to:<br>• demonstrate safe practices during laboratory and field investigations as outlined in the Texas Safety Standards<br>• practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials<br><br>Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and field investigations. The student is expected to:<br>• know the definition of science and understand that it has limitations*<br>• know that scientific hypotheses are tentative and testable statements that must be capable of being supported or not supported by observational evidence. Hypotheses of durable explanatory power which have been tested over a wide variety of conditions are incorporated into theories*<br>• know that scientific theories are based on natural and physical phenomena and are capable of being tested by multiple independent researchers. Unlike hypotheses, scientific theories are well-established and highly-reliable explanations, but may be subject to change as new areas of science and new technologies are developed*<br>• distinguish between scientific hypotheses and scientific theories*<br>• plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology<br>• design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology<br>• collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers<br>• construct tables and graphs, using repeated trials and means, to organize data and identify patterns<br>• analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends<br>• communicate valid conclusions supported by the data through methods such as lab reports, labeled drawings, graphs, journals, summaries, oral reports, and technology-based reports* |

* Process skills appear in high school courses only.

# Appendix C
# Process Skills: Social Studies

| **Kindergarten – Grade 12 Social Studies Skills[5]** |
|---|
| The student is expected to:<br>• differentiate between, locate, and use valid primary and secondary sources such as computer software, databases, media and news services, biographies, interviews, and artifacts to acquire information<br>• use various parts of a source, including the table of contents, glossary, and index as well as keyword Internet searches, to locate information<br>• identify methods used by archaeologists, anthropologists, historians, and geographers to analyze evidence<br>• identify different points of view about an issue or current topic<br>• identify and support with historical evidence a point of view on a social studies issue or event<br>• identify the historical context of an event<br>• identify the elements of frame of reference that influenced participants in an event<br>• identify bias in written, oral, and visual material<br>• use appropriate skills to analyze and interpret social studies information such as maps, graphs, presentations, speeches, lectures, and political cartoons<br>• use case studies and GIS to identify contemporary challenges and to answer real-world questions<br>• evaluate the validity of a source based on language, corroboration with other sources, and information about the author<br>• analyze and evaluate the validity and utility of multiple sources of geographic information such as primary and secondary sources, aerial photographs, and maps<br>• analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions<br>• create and interpret different types of maps to answer geographic questions, infer relationships, and analyze change<br>• create economic models, including production-possibilities curves, circular-flow charts, and supply-and-demand graphs, to analyze economic concepts or issues<br>• create a product on a contemporary government issue or topic using critical methods of inquiry<br>• organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps<br>• construct a thesis on a social studies issue or event supported by evidence<br>• plan, organize, and complete a research project that involves asking geographic questions; acquiring, organizing, and analyzing information; answering questions; and communicating results<br>• use social studies terminology correctly<br>• create written, oral, and visual presentations of social studies information<br>• incorporate main and supporting ideas in verbal and written communication<br>• transfer information from one medium to another, including written to visual and statistical to written or visual, using computer software as appropriate<br>• generate summaries, generalizations, and thesis statements supported by evidence |

[5] The social studies process standards vary somewhat across grade levels and courses.

- create original work using proper citations and understanding and avoiding plagiarism
- use standard grammar, spelling, sentence structure, and punctuation
- use a problem-solving process to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution
- use a decision-making process to identify a situation that requires a decision, gather information, identify options, predict consequences, and take action to implement a decision

# Appendix D
# TEKS and Instructional Materials Working Document

**TEKS and Instructional Materials Working Document**

| | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Texas Essential Knowledge and Skills (TEKS) Review and Revision Process**<br><br>**KEY:**<br>**Math** red<br><br>**ELA/R &SLA/R** blue<br><br>**Science** green<br><br>**Social Studies** orange<br><br>**CTE** black<br><br>**Tech Apps** purple<br><br>**Fine Arts** brown<br><br>**Health/P.E.** turquoise<br><br>**LOTE** pink | **Social Studies-** Implement revised TEKS 2011-2012<br><br>**ELA Electives-** Implement revised TEKS 2011-2012<br><br>**Technology Applications-** Spring/Summer 2012 TEKS professional development<br><br>**Math-**April 2012 SBOE adoption of revised TEKS<br><br>**Fine Arts-**April 2012 begin TEKS review | **Technology Applications-** Implement revised TEKS 2012-2013<br><br>**Fine Arts-** January 2013 SBOE adoption of revised TEKS<br><br>**Languages Other Than English (LOTE)-**Spring 2013 begin TEKS review | **LOTE-**April 2014 SBOE adoption of revised TEKS<br><br>**Math-** Spring/Summer 2014 K-8 TEKS professional development<br><br>**CTE-**Summer 2014 begin TEKS review | **Math-** Implement revised K-8 TEKS 2014-2015<br><br>**Fine Arts-** Spring/Summer 2015 TEKS professional development<br><br>**CTE-**April and July 2015 SBOE adoption of revised TEKS<br><br>**Math-** Spring/Summer 2015 high school TEKS professional development<br><br>**ELA/R and SLA/R-** Summer 2015 begin TEKS review | **Math-** Implement revised high school TEKS 2015-2016<br><br>**Fine Arts-** Implement revised TEKS 2015-2016<br><br>**ELA/R and SLA/R-** July 2016 SBOE adoption of revised K-12 TEKS<br><br>**LOTE-** Spring/Summer 2016 TEKS professional development<br><br>**Science** Spring 2016 begin TEKS streamlining | **Science** January 2017 SBOE adoption of streamlined TEKS<br><br>**Social Studies-** Spring 2017 begin TEKS streamlining<br><br>**CTE-** Spring/Summer 2017 TEKS professional development | **LOTE-** Implement revised TEKS 2017-2018<br><br>**CTE-**Implement revised TEKS 2017-2018<br><br>**Science** Implement streamlined TEKS 2017-2018<br><br>**Social Studies-** January 2018 SBOE adoption of streamlined TEKS<br><br>**ELA/R and SLA/R-**Spring/ Summer 2018 K-8 TEKS professional development<br><br>**Health & Physical Education (PE)-** Spring/Summer 2018 begin TEKS review | **ELA/R and SLA/R-** Implement revised K-8 TEKS 2018-2019<br><br>**Social Studies-** Implement streamlined TEKS 2018-2019<br><br>**Health & PE-** April 2019 SBOE adoption of revised TEKS<br><br>**ELA/R and SLA/R-**Spring/ Summer 2019 9-12 TEKS professional development | **ELA/R and SLA/R-** Implement revised 9-12 TEKS 2019-2020<br><br>**Health & PE-** Spring/Summer 2020 TEKS professional development | **Health & PE-** Implement revised TEKS 2020-2021 |



(Updated 09.2015 by Standards and Programs)

# Appendix E
# State Board of Education TEKS Review Process

**April 2014**
**Process for Review and Revision of Texas Essential Knowledge and Skills (TEKS)**

| Step | Activity |
|---|---|
| 1 | Texas Education Agency (TEA) staff notifies public of review process via ListServs and presentations including deadline for applications to serve on TEKS review committees. TEA contacts organizations such as the Texas Association of School Boards (TASB) for assistance in providing information to non-educators. |
| 2 | State Board of Education (SBOE) members make SBOE TEKS review committee nominations to include educators, parents, business and industry leaders, and employers. [TEC §28.002(c)] The role of committees is to aid the SBOE in meeting their statutory requirements. |
| 3 | TEA notifies SBOE members of the placement of nominees on a TEKS review committee and notifies TEKS review committee members of their appointment. There will be representation from all board members. |
| 4 | SBOE may designate up to seven expert reviewers. A board member may not nominate more than one expert. To be designated, the expert must be qualified to be on the panel. To be qualified, the expert must have (1) a minimum of a bachelor's degree from an accredited college or university, (2) demonstrated his or her expertise in the subject area in which he or she is being appointed, and (3) either taught or worked in such field. If qualified, and such expert is nominated by two or more board members, the expert shall be placed on the expert review panel. The board office shall transmit the nominations and any supporting materials to all board members as soon as possible. |
| 5 | TEA sends current TEKS to expert reviewers for initial feedback and recommendations. |
| 6 | The SBOE provides the charge to the TEKS review committees based on expert recommendations to:<br>- use the current TEKS as the foundation document;<br>- consider the general course of study, not what might be covered in an Advanced Placement course;<br>- consider College and Career Readiness Standards (CCRS) when revising the TEKS;<br>- ensure revisions are in compliance with all related statutes;<br>- provide justification for all suggested revisions;<br>- track all revisions to show what has been changed;<br>- ensure that the student expectations are content driven; and<br>- carefully consider the amount of time necessary for students to develop mastery of the content and ensure that all student expectations reasonably can be taught within the amount of time typically allotted for the subject or course prior to the end of the school year or a state end-of-course assessment required by TEC, §39.023, as applicable.<br>Any and all documents must be left with TEA staff. |
| 7 | TEKS review committee members work face-to-face (which is the preferred method of meeting) or by videoconference if face-to-face is not possible. TEA staff, with direction from the SBOE, determines the number of work days needed for 1) review and revision of the TEKS, 2) ensuring vertical alignment of the TEKS across all K-12 grade levels, and 3) horizontal alignment of the TEKS under review with related TEKS previously adopted or under review. Work completed at the conclusion of each meeting will automatically be sent to SBOE members. |
| 8 | TEA staff prepares draft documents that reflect TEKS review committee recommendations to be posted online for informal feedback. |
| 9 | Experts review proposed revisions to TEKS and provide feedback and recommendations. |
| 10 | Experts and one representative from each TEKS review committee provide invited testimony regarding first draft recommendations at the SBOE meeting prior to the meeting at which SBOE discussion of the TEKS occurs. SBOE members provide additional guidance and direction to committees before they prepare final recommendations at the final TEKS review committee meeting. |
| 11 | TEA staff receives and compiles informal feedback. |
| 12 | TEA staff sends compiled informal feedback and expert recommendations to SBOE members. |
| 13 | TEKS review committees reconvene to make additional revisions to TEKS based on expert recommendations and informal feedback. Experts may be invited to this meeting. |
| 14 | Final recommendations for revisions to the TEKS are sent to experts for review, posted on the TEA website, and provided to the SBOE. Experts review final draft recommendations and provide specific recommendations for additional changes to specific student expectations. |
| 15 | SBOE discusses comments received from TEKS review committee members, and expert reviewers and directs TEA staff to prepare draft rule text with any requested revisions/edits. |
| 16 | SBOE holds a public hearing and completes first reading and filing authorization.<br>(for 30 day official public comment period – Texas Register). |
| 17 | SBOE holds second public hearing prior to the end of the 30 day public comment period. |
| 18 | TEA summarizes public comments and provides summaries to the SBOE prior to the second reading and final adoption. |
| 19 | SBOE members review comments and work on proposed amendments. |
| 20 | SBOE members share proposed amendments with one another prior to second reading and adoption. |
| 21 | A member wishing to amend any TEKS being considered for second reading and final adoption shall submit the amendment in writing to the staff no later than 5:00 p.m. or two hours following adjournment of the Committee of the Full Board, whichever is later, on the day prior to the amendment being considered by the board in accordance with rules adopted by the board relating to the TEKS adoption process. All amendments shall be made available to the public to the extent possible. This rule may be suspended by a 2/3 vote of the members of the board present and voting, with the motion to suspend being debatable. |
| 22 | SBOE discusses and completes second reading and adoption of the TEKS with a specified implementation date. The implementation date may not occur prior to a legislative appropriation for such instructional materials having been deemed sufficient by the Commissioner. |

* Updates are provided throughout this process to the SBOE as appropriate and/or upon request by the Chair.

*As amended by the State Board of Education, April 18, 2014*

# Appendix F
# Guidelines for the Review and Revision of the Texas Essential Knowledge and Skills
Shirley V. Dickson, Ph.D.

# Appendix F

Guidelines for the Review and Revision of the Texas Essential Knowledge and Skills

Shirley V. Dickson, Ph.D.

The 25-year history of educational reform in Texas is a history of consistency, consensus, and comprehensiveness. Policy makers have made no major educational policy shifts that might distract from improving student achievement. While there have been disagreements, consensus prevails within government, business, education, and the public. Comprehensive support includes alignment between content standards, curriculum, assessment, teacher preparation, professional development, and state resources (Achieve, 2001).

Part of Texas educational reform has been the development of content standards. The Texas Education Code, Section 28.002(c), requires the State Board of Education (SBOE) to identify the essential knowledge and skills for each subject of the required curriculum for all Texas students. Today, we know these skills as the Texas Essential Knowledge and Skills (TEKS). The SBOE regularly reviews and updates the TEKS. During this round of reviews and updates, the SBOE will work to ensure that "the standards are appropriate in scope and rigor, streamlined, clear, relevant, assessable where appropriate, and aligned across subjects and grade levels" (Texas Education Agency, RFP #701-14-025, 2014). This aligns with the calls of many across the nation, including United States Secretary of Education Arne Duncan for fewer, clearer, and more rigorous standards to prepare students for post-secondary education and careers in the 21st century.

The overarching charge is to streamline the TEKS while increasing rigor and student achievement. In business, streamlining means making a system more efficient and effective by removing unnecessary layers. In the case of the TEKS, it is hoped that streamlining will lead to a more efficient and effective system of aligned content standards, curriculum, assessment, professional development, and teacher preparation. Streamlining means removing unnecessary "layers," not removing essential knowledge or playing a numbers game. Streamlining also means keeping an eye on the goal - preparing Texas students for the 21st century. literature related to the correlation between standards and student achievement supports streamlining standards and increasing rigor.

The guidelines for revising and streamlining the TEKS come from four domains: effective content standards, learning theory, research-supported content, and effective instruction. As much as possible, the guidelines presented in this paper are supported with research evidence.

The guidelines fall within two categories. The first category concerns the content of the standards. As noted above, revision is not a simple matter of writing fewer content standards. The critical task is deciding what is essential knowledge. What do students need to know to be prepared for post-secondary life in the 21st century? To help determine essential knowledge, content standards writers can look at the research base in their content areas, models of content standards from top-performing nations, and forms of knowledge (e.g., facts, principles, concepts).

The second category of guidelines concerns how the content standards inform instruction. This includes considering whether the standard statements and student expectations (a) provide

multiple examples of student performance, (b) are clear and specific, (c) are coherent, (d) are realistic, (e) are rigorous, and (f) are aligned across grade levels. While content standards do not tell teachers how to teach, the wording of a standard statement or a student expectation influences instruction. The wording can influence whether content is covered or deeply taught. The wording can influence whether students memorize facts or learn to analyze, evaluate, and synthesize.

## Guidelines

Fewer content standards. Streamlining includes writing fewer content standards. This aligns with the top-performing nations on international assessments [e.g., Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS)] The top-performing nations have fewer content standards when compared to the content standards of various states in the United States (National Governors Association, Council of Chief State School Officers, and Achieve, 2008). Fewer content standards empower teachers to spend more time teaching each topic and students to attain mastery before they advance to more difficult content. Research evidence indicates that trying to cover too many topics per grade level has a negative influence on student learning. For example, at the eighth-grade level, researchers found that a decrease in the number of taught topics in mathematics predicted a significant increase in achievement. "The amount of 'clutter' created by covering too many topics . . . must be kept small." (Schmidt, cited in National Governors Association, Council of Chief State School Officers, and Achieve, 2008).

Writing fewer content standards is not a numbers game. It is not reducing the number of standards for the sake of meeting a predetermined number. Reducing the number of standards may or may not mean merging some standard statements or student expectations. Simply merging standard statements or student expectations may result in very long, unclear, content standards that still results in an overwhelming amount of content to cover rather than teach. Writing fewer content standards requires thought in determining what is essential and not simply adding "clutter."

Essential knowledge. While streamlining content standards means considering fewer content standards, it is important to not repeat the mistakes of the past and narrow the curriculum. It is generally recognized that content standards must be grounded in the real world expectations of postsecondary educators and employers. It is also generally recognized that there are multiple pathways to postsecondary life. Not all students are college-bound. Instead, they may enter the military or careers that require training other than college. Content standards must include foundation knowledge and processes without resorting to the lowest demonization of knowledge. Content standards must also include more rigorous content and complex processes. Additionally, content standards cannot contain every skill needed for successful adult life. The task before the writers of content standards is to determine what essential knowledge is. What do students need to know and be able to do to be ready for post-secondary life in college, the

workforce, or the military? The next two sections address ways to determine what is and is not essential knowledge.

Research-based knowledge. Research syntheses and meta-analyses in each content area provide one source for what is essential knowledge in each content area. For example, the National Reading Panel and handbooks of reading research provide the research base for including phonological awareness, phonics, fluency, comprehension, and vocabulary in the reading standards. The standard writers in each content area should be familiar with the content research syntheses and meta-analyses within each of their own content areas. Sometimes this is easier said than done. There are gaps in the research base of what students must know to be successful learners in the different content areas. Often there are disagreements among content experts. However, even with these limitations, the content standard writers should look to the research in each of their areas to help determine the essential knowledge to include in the content standards.

Part of the revision process includes analyzing any gaps between the current standards and research-based content. This helps with deciding what to keep, add to, eliminate, or modify. For example, in English language arts several researchers have found a lack of research-based writing standards (e.g., Duke, Dutro & Valencia, Gilbert & Graham, Troia & Maddox, cited in Troia & Olinghouse, 2013). This includes text structure models for writing (Graham & Perin, cited in Troia & Olinghouse), providing verbal and written peer and teacher feedback on writing skills or use of strategies (Graham, Harris, & Hebert, cited in Troia &Olinghouse), strategies that lead to high-quality writing (Graham & Perin, cited in Troia & Olinghouse), and integration of grammar instruction and writing (Graham, McKeown, Kiuhara, & Harris; Graham & Perin, cited in Troia & Olinghouse). Because spelling, handwriting, and keyboarding have a moderate effect size (0.55) on writing quality (Graham, et al., cited in Troia & Olinghouse), Troia and Olinghouse recommend a more thorough treatment of spelling in the content standards for later grades.

Models of rigorous content standards. Another way to determine essential knowledge is to look at models of rigorous content standards (e.g., "Texas College and Career Readiness Standards," TEA, 2009). The National Governors Association, Council of Chief State School Officers, and Achieve (2008) recommend using the content standards of the top-performing nations as models. Often the top-performing nations introduce more rigorous content standards at lower grade levels than do states in the United States. Other documents that provide models for rigorous standards include the content frameworks for the National Assessment of Educational Progress (NAEP) and "Three Paths, One Destination: Standards-Based Reform in Maryland, Massachusetts, and Texas" (Garcia, & Rothman, 2002). This report contains a table of 22 American Diploma Project Core English Benchmarks and 34 American Diploma Project Core Mathematics Benchmarks.

Forms of knowledge. Knowledge comes in many forms including technical knowledge, practical knowledge, conscientious knowledge, and tacit knowledge. Across all content areas, forms of knowledge include declarative, procedural knowledge, facts, principles, and concepts. The different content areas have different criteria for what constitutes a form of knowledge. However, the descriptions of the forms of knowledge used in this paper are general and apply to each content area. Declarative knowledge is knowledge that can be restated; such as naming the parts of the eye or naming four geographic factors that influence the economic development of a society. Procedural knowledge is knowing how to do something. Some include also knowing when to perform the procedures. An example of procedural knowledge would be knowing when and how to apply geographic factors to analyzing the economic development of a society. The writing process (planning, drafting, revising, editing) is an example of procedural knowledge.

A fact is a reality or truth. The parts of the eye are facts. "Austin is the capital of Texas" is a fact. While facts are important to thinking and talking about content, students can only restate facts. They cannot apply facts to a wide range of situations.

Principles are like rules or general laws. They typically fit the statement, "If . . ., then . . . " For example, if molecules in a liquid or gas are heated, then they move farther apart from each other. If you have these geographic factors, then you have these influences on the economic development of a society.

Concepts are general ideas or thoughts that embody a set of ideas or thing that have one or more properties in common. Examples of concepts are democracy, freedom, and social decision-making. An example of a concept that could be written as a standards statement is "places influence people and people influence places" (Learning Media, 2009)

What students are expected to do with what they know determines whether knowledge should be declarative knowledge or procedural knowledge. If the content standard writers want students to restate facts, (such as naming the parts of the eye or naming four geographic factors that influence the economic development of a society), then they should write the content standards as declarative knowledge. If the content standards writers want students to know how an eye works, (know when to apply the four geographic factors to analyzing the economic development of a society or use the writing process), then they should write the content standards as procedural knowledge. Not following this guideline results in giving students inappropriate or insufficient knowledge. Having insufficient, inaccurate, or inappropriate knowledge may interfere with students demonstrating what they know and may interfere with acquiring new knowledge (Ambrose, et al., 2008). For example, knowing the names of the parts of the eye is insufficient knowledge for explaining how the eyes work.

What we want students to do with what they know also determines whether content standards should be written as facts, principles, or concepts. Facts can only be restated; a low level of

thinking. Principles and concepts can be applied to a wide range of situations one of the criteria for deep learning. For example, the concept of convection can be applied to volcanoes, tides and currents, and winds. Principles and concepts also allow more complex thinking such as complex inferences, analyses, and evaluations.

Research evidence supports teaching concepts and principles versus having students memorize isolated facts. As we learn new information, our brains organize the new information with related known information. Experts tend to automatically process information in coherent chunks based on their prior knowledge. The experts then use these chunks to build larger, more interconnected knowledge structures. These more complex and highly connected knowledge structures allow experts to efficiently and effectively access and use their knowledge (e.g., Bradshaw & Anderson; Reder & Anderson; Smith, Adams, & Schorr; cited in Ambrose, et al., 2010). Students, who are novices compared to teachers who are experts, build their knowledge structures over time. However, it takes time, and students may develop knowledge structures that are superficial and may not lend themselves to abstract thinking or problem solving. For example, students whose knowledge of physics is disconnected and lacks coherence, could simultaneously hold and use contradictory knowledge about the movement of physical objects and not notice inconsistencies in their knowledge or applications (DiSessa, cited in Ambrose, et al.). Research evidence indicates that when teachers provide students with a structure for organizing new information, the students learn more efficiently and effectively than when left to deduce their own knowledge structures (e.g., Ausubel; Bower et al.; Bradshaw & Anderson; cited in Ambrose, et al.). Writing content standards as principles or concepts provides teachers and students with the knowledge structures for organizing new knowledge. This in turn empowers students to efficiently access their knowledge.

One way to reduce the number of standards, foster complex thinking, and improve student achievement is to revise content standards so that there are more principles and concepts and fewer facts. Principles and concepts allow multiple applications and more complex thinking, while facts allow few applications and lower levels of thinking. For example, when students understand the factors of geography that influence the economic development of a society (TEKS-Geography 6.5.C) they can apply their knowledge to ancient and modern societies. They can also engage in complex thinking by evaluating and analyzing the relationship between a society's geography and economic development.

Another way to think about concepts is to reconsider how we organize content standards. For example, in the lower grades, Canada and Singapore structure their science standards around themes or key concepts that are common to all of the sciences. (Singapore has four themes: diversity, systems, energy, and interaction. Canada has six themes: matter, energy, systems and interactions, structure and function, sustainability and stewardship and change and continuity.) Achieve (2008) suggests that this helps teachers and students make sense of seemingly

disconnected content within and across grade levels of instruction and imparts coherence to the curriculum. Furthermore, the theme-based approach provides a filter for selecting the essential concepts to include in the science standards.

The remaining guidelines for revising the content standards are related to instruction. The examples and the wording help teachers understand what they should teach and help the assessment developers understand what should be assessed.

Multiple examples of performance. Providing multiple examples of performance in content and performance standards makes student expectations specific and transparent. In Canada, for example, grade 5 students are expected to describe physical changes in matter as changes that are reversible. Several examples follow this student expectation, such as a melted ice cube can be re-frozen; a bottle of frozen water can be thawed to a liquid state again; water vapor that has condensed on a cold window can evaporate into a vaporous state again; water from a puddle that has evaporated will fall to the ground as rain. This use of multiple examples communicates the level of rigor expected from students. By using multiple examples, the teacher helps learners connect concepts with applications in the real world and explain everyday phenomena. Incorporating multiple examples (rather than relying on a single example) shows a range of applications whereas one example might limit what teachers teach (Achieve, 2010).

The wording for how multiple examples are included in a standard statement or student expectation is critical. When standards writers use the words *including* and *and,* each example or part of the student expectation must be taught. When standards writers use the words *such as* they give teachers an example of what to teach. The examples that are listed using the words *including* and *and* provide a laundry list of what to teach and may encourage "coverage" rather than deep teaching. To help decide whether examples are a "laundry list" and too much to teach in a school year, standard writers in the past have broken an early draft of content standards into the smallest components; each part that is joined by the word *including* or *and* is listed on a separate line. This provides a visual picture of everything a teacher must teach (or cover). The standards writers can then determine if each small part is essential and part of their intent for what students should know and be able to do or if the list should be turned into examples using the *words such as.*

One idea raised by Texas Education Association (TEA) staff is to ponder what might happen if the writers include no examples for many of the student expectations. One hope is that teachers would then study the standard statement and student expectations very carefully in order to understand what is expected. Their study would lead teachers to provide many applications that would help themselves and their students deeply understand the concept or principle and apply the student expectations to a wide range of situations.

Clear, specific, and succinct. Top-performing countries take great care to ensure that their content standards are clear and that they communicate the intent of the standards (Achieve, 2010). Being clear requires a balance between specificity and vagueness. A content standard that is too specific narrows the curriculum. In contrast, a curriculum standard that is too vague leaves

teachers not knowing what to teach. One way to check the clarity and specificity of a content standard is to ask, "Is this teachable and learnable?"

Standard writers also need to be careful of repetition of content and student expectations within a grade and across grade levels. Too much repetition of specific content or student expectations makes it more difficult for teacher to figure out what to teach.

Coherent. As you revise the content standards, check to confirm the revision fits within the unified vision of what is being taught within the school year and across the grades. Check that the revision contributes to a progression of learning that is meaningful and appropriate within a grade and across grade levels and that there is limited repetition from grade to grade. In other words, the content standards should increase in rigor and complexity rather than repeating the same student expectations from year-to-year.

Realistic. As you revise the content standards, check that the revision fits within what else is being taught during the school year, promotes deep understanding, and can be applied to new situations. Be sure to not include more content than what can be taught within the school year.

Rigor. Rigor includes both content and what students are expected to do with the content. As noted earlier, the content standards in the top-performing nations may include more rigorous content in earlier grade levels than content standards in the United States. The National Governors Association, Council of Chief State School Officers, and Achieve (2008) found that science content in the United States is often two years behind the science content of the top-performing countries. For example, while eighth -grade students in the United States memorize parts of the eye, students in the top-performing countries learn how the eye works. One common change in the United States is that eighth-grade students now often study algebra or geometry instead of arithmetic making us more like the top-performing countries in what we expect students to know and do in mathematics.

Rigor includes cognitive complexity. The content standards should include a range of cognitive complexity from recall to analyze, synthesize, evaluate, and investigate. There are several cognitive frameworks, including Bloom's taxonomy and Deeper Learning Principles to guide increases in cognitive complexity. (See McGee, retrieved www.google.com, September 22, 2014.)

Vertical alignment. Content standards should align with the college and career readiness standards and should align with each other from kindergarten through grade 12. The alignment should follow an orderly progression that follows the logic of the content area. The progression of content standards should allow more thorough and deeper coverage of content and not be a laundry list of topics. Furthermore, the progression should avoid repetitions. (Achieve, 2010).

The learning progression for key disciplinary concepts requires more research (Achieve, 2010). The research support for vertical alignment can be found in the body of research evidence related

to prior knowledge. Students learn more readily when they connect new knowledge to what they already know (e.g., Gaultney, 1995; Palinscar et al., 1991 Rottman & Cross, 1990). This includes being sure the prior knowledge is the correct kind of knowledge, declarative or procedural. If students have insufficient, inaccurate, or inappropriate prior knowledge, it may actively distort or impede learning new knowledge (Ambrose, et al. 2010).

When developing the vertical alignment for content across grade levels, consider when to include procedural knowledge. Consider, also, whether sufficient prior knowledge is included in lower grades to prepare students for the more advanced content standards in the later grades. Another caution is to be aware of research and the appropriate grade levels for introducing new content.

In summary, the standards writing committees face the challenge of streaming the TEKS and increasing rigor. The goals include improving student achievement and preparing students for the 21st century. Guidelines for the review and revision process lie within two categories. The first set of guidelines help the writing committees determine the content of the standard statements and student expectations. The guidelines help writers determine essential knowledge by looking at research syntheses and meta-analyses and at model standards in their content areas. The guidelines also suggest that the standards writers match the form of knowledge to what they want students to do. In other words, to consider procedural knowledge and to consider principles and concepts in place of facts.

The second category of guidelines relate to informing instruction. This includes considering whether the standard statements and student expectations (a) provide multiple examples of student performance, (b) are clear and specific, (c) are coherent, (d) are realistic, (e) are rigorous, and (f) are aligned across grade levels.

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# Appendix G
# State Board of Education TEKS Streamlining Process

**January 2016**
**Process for Streamlining of Texas Essential Knowledge and Skills (TEKS)**

| Step | Activity |
|---|---|
| 1 | Texas Education Agency (TEA) staff notifies public of review process, including deadline for applications to serve on TEKS streamlining committees, via listservs and presentations. |
| 2 | State Board of Education (SBOE) members make SBOE TEKS streamlining committee nominations to include educators, parents, business and industry leaders, and employers. [TEC §28.002(c)] The role of committees is to aid the SBOE in meeting their statutory requirements. |
| 3 | TEA notifies SBOE members of the placement of nominees on a TEKS streamlining committee and notifies TEKS streamlining committee members of their appointment. There will be representation from all board members who submit nominations by the agreed upon deadline. |
| 4 | TEA creates a survey for the SBOE's review and input and then collects information via survey from educators regarding student expectations that are essential at each given grade level, student expectations that may not be essential at each grade level, and any other information that would be relevant to the streamlining of the subject area TEKS. |
| 5 | The SBOE provides the charge to the TEKS streamlining committees based on survey feedback:<br>- to begin by determining an estimate of the amount of time necessary for students to develop mastery of the content in the current standards;<br>- to only delete or reduce the scope of the student expectations;<br>- not to add content or student expectations;<br>- not to move content or student expectations from one grade level or course to another;<br>- to look for student expectations that are duplicated in another course or grade level and eliminate unnecessary duplication;<br>- to use the current TEKS as the foundation document;<br>- to consider the general course of study, not what might be covered in an Advanced Placement course;<br>- to consider and maintain appropriate College and Career Readiness Standards (CCRS);<br>- to ensure recommendations are in compliance with all related statutes;<br>- to provide justification for all suggested recommendations;<br>- to track all revisions to show what has been deleted or simplified;<br>- to ensure that the remaining student expectations are content driven; and<br>- to carefully consider an estimate of the amount of time necessary for students to develop mastery of the content and ensure that all remaining student expectations reasonably can be taught within the amount of time typically allotted for the subject or course prior to the end of the school year or a state end-of-course assessment required by TEC, §39.023, as applicable.<br>Any and all official documents must be left with TEA staff. Copies of working drafts may be kept for a committee member's personal use between meetings, but may not be distributed to others outside of the committee. |
| 6 | TEKS streamlining committee members work face-to-face (which is the preferred method of meeting) or virtually if face-to-face is not possible. TEA staff, with direction from the SBOE, determines the number of work days needed for 1) determining the amount of time necessary for students to develop mastery of the content in the current TEKS, 2) streamlining the standards; 3) ensuring vertical alignment of the TEKS across all K-12 grade levels, and 4) horizontal alignment of the TEKS to be streamlined with related TEKS previously adopted or under review. |
| 7 | TEA staff prepares draft documents that reflect TEKS streamlining committee recommendations to be posted online for informal feedback. |
| 8 | TEA staff receives and compiles informal feedback. |
| 9 | One representative from each TEKS streamlining committee provides invited testimony regarding first draft recommendations at the SBOE meeting prior to the meeting during which SBOE discussion of the proposed rule amendments occurs. SBOE members provide additional guidance and direction to committees before they prepare final recommendations at the final TEKS review committee meeting. |
| 10 | TEKS streamlining committees reconvene to make additional revisions to TEKS based on SBOE guidance. |
| 11 | Final recommendations for streamlining to the TEKS are posted on the TEA website and provided to the SBOE. |
| 12 | SBOE discusses recommendations received from TEKS streamlining committee members and requests TEA staff to prepare draft rule text. |
| 13 | SBOE holds a public hearing and completes first reading and filing authorization.<br>(for 30-day official public comment period – Texas Register) |
| 14 | SBOE holds second public hearing prior to the end of the 30-day public comment period. |
| 15 | TEA summarizes public comments and provides summaries to the SBOE prior to second reading and final adoption. |
| 16 | SBOE members review comments and work on proposed amendments. |
| 17 | SBOE members share proposed amendments with one another prior to second reading and adoption. |
| 18 | A member wishing to amend TEKS being considered for second reading and final adoption shall submit the amendment in writing to the staff no later than 5:00 p.m. or two hours following adjournment of the Committee of the Full Board, whichever is later, on the day prior to the amendment being considered by the board in accordance with rules adopted by the board relating to the TEKS adoption process. All amendments shall be made available to the public to the extent possible. This rule may be suspended by a 2/3 vote of the members of the board present and voting, with the motion to suspend being debatable. |
| 19 | SBOE discusses and completes second reading and final adoption of the TEKS with a specified implementation date. The implementation may not occur on the specified date unless the SBOE has determined that the instructional materials most recently adopted for the subject area continue to sufficiently cover the TEKS as amended. |

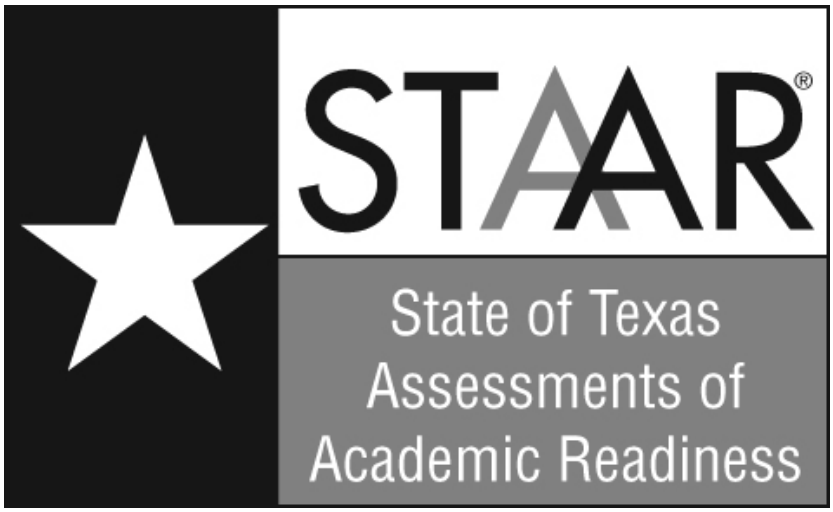
* Updates are provided throughout this process to the SBOE as appropriate and/or upon request by the Chair.

*January 2016*

# Appendix H
# Sample of Assessed Curriculum and Test Blueprints for Mathematics, Reading, Science, Social Studies, and Writing

Appendix H contains samples of the assessed curriculum and corresponding test blueprints by grade and subject for the following:

- Grade 5 mathematics
- Grade 5 reading
- Grade 5 science
- Grade 7 writing
- Grade 8 social studies




# Grade 5 Mathematics Assessment

## Eligible Texas Essential Knowledge and Skills

# STAAR Grade 5 Mathematics Assessment

## Mathematical Process Standards

**These student expectations will not be listed under a separate reporting category. Instead, they will be incorporated into test questions across reporting categories since the application of mathematical process standards is part of each knowledge statement.**

(5.1) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to

(A) apply mathematics to problems arising in everyday life, society, and the workplace;

(B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;

(C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;

(D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;

(E) create and use representations to organize, record, and communicate mathematical ideas;

(F) analyze mathematical relationships to connect and communicate mathematical ideas; and

(G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

# Reporting Category 1:
# Numerical Representations and Relationships

**The student will demonstrate an understanding of how to represent and manipulate numbers and expressions.**

(5.2) **Number and operations.** The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value. The student is expected to

(A) represent the value of the digit in decimals through the thousandths using expanded notation and numerals; ***Supporting Standard***

(B) compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or =; and ***Readiness Standard***

(C) round decimals to tenths or hundredths. ***Supporting Standard***

(5.4) **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to

(A) identify prime and composite numbers; ***Supporting Standard***

(E) describe the meaning of parentheses and brackets in a numeric expression; and ***Supporting Standard***

(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping. ***Readiness Standard***

# Reporting Category 2:
# Computations and Algebraic Relationships

**The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.**

(5.3) **Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to

(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division; ***Supporting Standard***

(B) multiply with fluency a three-digit number by a two-digit number using the standard algorithm; ***Supporting Standard***

(C) solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm; ***Supporting Standard***

(D) represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models; ***Supporting Standard***

(E) solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers; ***Readiness Standard***

(F) represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models; ***Supporting Standard***

(G) solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm; ***Readiness Standard***

(H) represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations; ***Supporting Standard***

(I) represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models; ***Supporting Standard***

(J) represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as 1/3 ÷ 7 and 7 ÷ 1/3 using objects and pictorial models, including area models; ***Supporting Standard***

(K) add and subtract positive rational numbers fluently; and ***Readiness Standard***

(L) divide whole numbers by unit fractions and unit fractions by whole numbers. ***Readiness Standard***

(5.4) **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to

(B) represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity; ***Readiness Standard***

(C) generate a numerical pattern when given a rule in the form $y = ax$ or $y = x + a$ and graph; and ***Readiness Standard***

(D) recognize the difference between additive and multiplicative numerical patterns given in a table or graph. ***Supporting Standard***

# Reporting Category 3:
# Geometry and Measurement

**The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.**

(5.4) **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to

(H) represent and solve problems related to perimeter and/or area and related to volume. ***Readiness Standard***

(5.5) **Geometry and measurement.** The student applies mathematical process standards to classify two-dimensional figures by attributes and properties. The student is expected to

(A) classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties. ***Readiness Standard***

(5.6) **Geometry and measurement.** The student applies mathematical process standards to understand, recognize, and quantify volume. The student is expected to

(A) recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (*n* cubic units) needed to fill it with no gaps or overlaps if possible; and ***Supporting Standard***

(B) determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base. ***Supporting Standard***

(5.7) **Geometry and measurement.** The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to

(A) solve problems by calculating conversions within a measurement system, customary or metric. ***Supporting Standard***

(5.8) **Geometry and measurement.** The student applies mathematical process standards to identify locations on a coordinate plane. The student is expected to

(A) describe the key attributes of the coordinate plane, including perpendicular number lines (axes) where the intersection (origin) of the two lines coincides with zero on each number line and the given point (0, 0); the *x*-coordinate, the first number in an ordered pair, indicates movement parallel to the *x*-axis starting at the origin; and the *y*-coordinate, the second number, indicates movement parallel to the *y*-axis starting at the origin; ***Supporting Standard***

(B) describe the process for graphing ordered pairs of numbers in the first quadrant of the coordinate plane; and ***Supporting Standard***

(C) graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical and real-world problems, including those generated by number patterns or found in an input-output table. ***Readiness Standard***

# Reporting Category 4:
# Data Analysis and Personal Financial Literacy

**The student will demonstrate an understanding of how to represent and analyze data and how to describe and apply personal financial concepts.**

(5.9) **Data analysis.** The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data. The student is expected to

(A) represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots;
***Supporting Standard***

(B) represent discrete paired data on a scatterplot; and
***Supporting Standard***

(C) solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot.
***Readiness Standard***

(5.10) **Personal financial literacy.** The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security. The student is expected to

(A) define income tax, payroll tax, sales tax, and property tax;
***Supporting Standard***

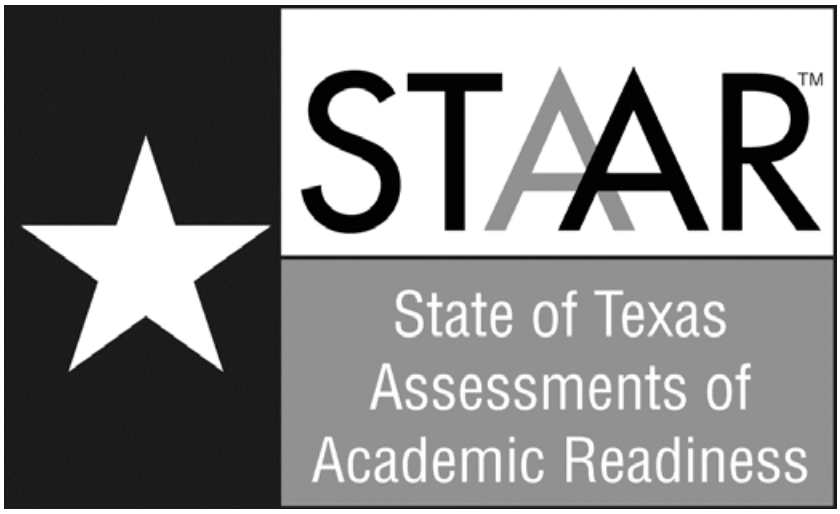
(B) explain the difference between gross income and net income;
***Supporting Standard***

(E) describe actions that might be taken to balance a budget when expenses exceed income; and ***Supporting Standard***

(F) balance a simple budget. ***Supporting Standard***

# STAAR Grade 5 Mathematics Blueprint

| Reporting Categories | Number of Standards | | Number of Questions | |
|---|---|---|---|---|
| **Reporting Category 1: Numerical Representations and Relationships** | Readiness Standards | 2 | **8** | |
| | Supporting Standards | 4 | | |
| | Total | 6 | | |
| **Reporting Category 2: Computations and Algebraic Relationships** | Readiness Standards | 6 | **24** | |
| | Supporting Standards | 9 | | |
| | Total | 15 | | |
| **Reporting Category 3: Geometry and Measurement** | Readiness Standards | 3 | **12** | |
| | Supporting Standards | 5 | | |
| | Total | 8 | | |
| **Reporting Category 4: Data Analysis and Personal Financial Literacy** | Readiness Standards | 1 | **6** | |
| | Supporting Standards | 6 | | |
| | Total | 7 | | |
| **Readiness Standards** | **Total Number of Standards** | **12** | **60%–65%** | **30–33** |
| **Supporting Standards** | **Total Number of Standards** | **24** | **35%–40%** | **17–20** |
| **Total Number of Questions on Test** | | | **47 Multiple Choice<br>3 Griddable<br>50 Total** | |




# Grade 5 Reading Assessment

## Eligible Texas Essential Knowledge and Skills

Texas Education Agency
Student Assessment Division
Spring 2011

# STAAR Grade 5 Reading Assessment

**Genres Assessed:**

| **Literary** | **Informational** |
|---|---|
| • Fiction (Readiness) | • Expository (Readiness) |
| • Literary Nonfiction (Supporting) | • Persuasive (Supporting) |
| • Poetry (Supporting) | • Procedural (Embedded) |
| • Drama (Supporting) | • Media Literacy (Embedded) |
| • Media Literacy (Embedded) | |

## Reporting Category 1: Understanding and Analysis Across Genres

**The student will demonstrate an ability to understand and analyze a variety of written texts across reading genres.**

(2) **Reading/Vocabulary Development.** Students understand new vocabulary and use it when reading and writing. Students are expected to

(A) determine the meaning of grade-level academic English words derived from Latin, Greek, or other linguistic roots and affixes; ***Readiness Standard***

(B) use context (e.g., in-sentence restatement) to determine or clarify the meaning of unfamiliar or multiple meaning words; ***Readiness Standard***

(E) use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine the meanings, syllabication, pronunciations, alternate word choices, and parts of speech of words. ***Readiness Standard***

(3) **Reading/Comprehension of Literary Text/Theme and Genre.** Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to

(A) compare and contrast the themes or moral lessons of several works of fiction from various cultures. ***Supporting Standard***

(Figure 19) **Reading/Comprehension Skills.** Students use a flexible range of metacognitive reading skills in both assigned and independent reading to understand an author's message. Students will continue to apply earlier standards with greater depth in increasingly more complex texts as they become self-directed, critical readers. The student is expected to

(F) make connections (e.g., thematic links, author analysis) between and across multiple texts of various genres and provide textual evidence. ***Readiness Standard***

## Reporting Category 2:
## Understanding and Analysis of Literary Texts

**The student will demonstrate an ability to understand and analyze literary texts.**

(3) **Reading/Comprehension of Literary Text/Theme and Genre.** Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to

(B) describe the phenomena explained in origin myths from various cultures; ***Supporting Standard***

(C) explain the effect of a historical event or movement on the theme of a work of literature. ***Supporting Standard***

(4) **Reading/Comprehension of Literary Text/Poetry.** Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to

(A) analyze how poets use sound effects (e.g., alliteration, internal rhyme, onomatopoeia, rhyme scheme) to reinforce meaning in poems. ***Supporting Standard***

(5) **Reading/Comprehension of Literary Text/Drama.** Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. ***Supporting Standard***

(6) **Reading/Comprehension of Literary Text/Fiction.** Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to

(A) describe incidents that advance the story or novel, explaining how each incident gives rise to or foreshadows future events; ***Readiness Standard***

(B) explain the roles and functions of characters in various plots, including their relationships and conflicts; ***Readiness Standard***

(C) explain different forms of third-person points of view in stories. ***Supporting Standard***

(7) **Reading/Comprehension of Literary Text/Literary Nonfiction.** Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to

(A) identify the literary language and devices used in biographies and autobiographies, including how authors present major events in a person's life. ***Supporting Standard***

(8) **Reading/Comprehension of Literary Text/Sensory Language.** Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to

(A) evaluate the impact of sensory details, imagery, and figurative language in literary text. ***Readiness Standard***

(14) **Reading/Media Literacy.** Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to

(C) identify the point of view of media presentations. ***Supporting Standard***

(Figure 19) **Reading/Comprehension Skills.** Students use a flexible range of metacognitive reading skills in both assigned and independent reading to understand an author's message. Students will continue to apply earlier standards with greater depth in increasingly more complex texts as they become self-directed, critical readers. The student is expected to

(D) make inferences about text and use textual evidence to support understanding; ***Readiness Standard*** (Fiction) / ***Supporting Standard*** (Literary Nonfiction, Poetry, Drama)

(E) summarize and paraphrase texts in ways that maintain meaning and logical order within a text and across texts. ***Readiness Standard*** (Fiction) / ***Supporting Standard*** (Literary Nonfiction, Poetry, Drama)

# Reporting Category 3:
# Understanding and Analysis of Informational Texts

**The student will demonstrate an ability to understand and analyze informational texts.**

(10) **Reading/Comprehension of Informational Text/Culture and History.** Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to

(A) draw conclusions from the information presented by an author and evaluate how well the author's purpose was achieved. ***Supporting Standard***

(11) **Reading/Comprehension of Informational Text/Expository Text.** Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to

(A) summarize the main ideas and supporting details in a text in ways that maintain meaning and logical order; ***Readiness Standard***

(B) determine the facts in text and verify them through established methods; ***Supporting Standard***

(C) analyze how the organizational pattern of a text (e.g., cause-and-effect, compare-and-contrast, sequential order, logical order, classification schemes) influences the relationships among the ideas; ***Readiness Standard***

(D) use multiple text features and graphics to gain an overview of the contents of text and to locate information; ***Readiness Standard***

(E) synthesize and make logical connections between ideas within a text and across two or three texts representing similar or different genres. ***Readiness Standard***

(12) **Reading/Comprehension of Informational Text/Persuasive Text.** Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to

(A) identify the author's viewpoint or position and explain the basic relationships among ideas (e.g., parallelism, comparison, causality) in the argument; ***Supporting Standard***

(B) recognize exaggerated, contradictory, or misleading statements in text. ***Supporting Standard***

(13) **Reading/Comprehension of Informational Text/Procedural Texts.** Students understand how to glean and use information in procedural texts and documents. Students are expected to

(A) interpret details from procedural text to complete a task, solve a problem, or perform procedures; ***Supporting Standard***

(B) interpret factual or quantitative information presented in maps, charts, illustrations, graphs, timelines, tables, and diagrams. ***Supporting Standard***

(14) **Reading/Media Literacy.** Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to

(C) identify the point of view of media presentations. ***Supporting Standard***

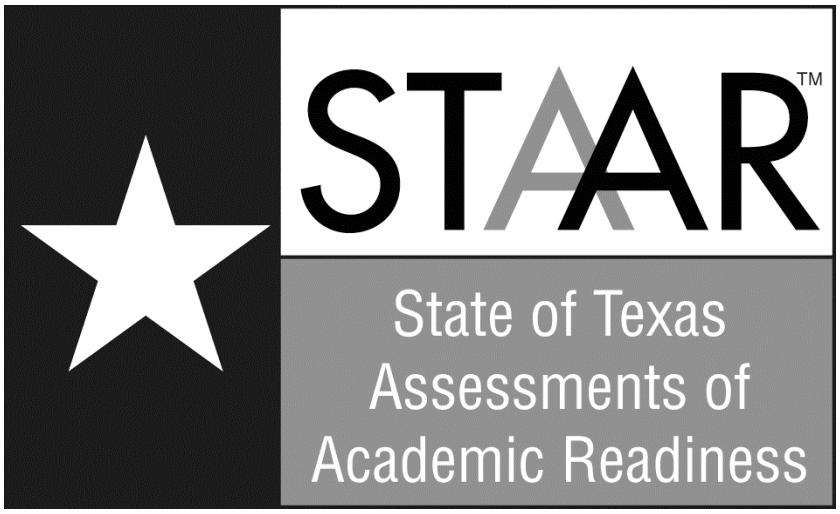
(Figure 19) **Reading/Comprehension Skills.** Students use a flexible range of metacognitive reading skills in both assigned and independent reading to understand an author's message. Students will continue to apply earlier standards with greater depth in increasingly more complex texts as they become self-directed, critical readers. The student is expected to

(D) make inferences about text and use textual evidence to support understanding; ***Readiness Standard*** (Expository) / ***Supporting Standard*** (Persuasive)

(E) summarize and paraphrase texts in ways that maintain meaning and logical order within a text and across texts. ***Readiness Standard*** (Expository) / ***Supporting Standard*** (Persuasive)

# STAAR Grade 5 Reading Blueprint

| Reporting Categories | Number of Standards | | Number of Questions | |
|---|---|---|---|---|
| **Reporting Category 1: Understanding/Analysis Across Genres** | Readiness Standards | 4 | **10** | |
| | Supporting Standards | 1 | | |
| | Total | 5 | | |
| **Reporting Category 2: Understanding/Analysis of Literary Texts** | Readiness Standards | 5 | **19** | |
| | Supporting Standards | 9 | | |
| | Total | 14 | | |
| **Reporting Category 3: Understanding/Analysis of Informational Texts** | Readiness Standards | 6 | **17** | |
| | Supporting Standards | 9 | | |
| | Total | 15 | | |
| **Readiness Standards** | **Total Number of Standards** | **15** | **60%–70%** | **28–32** |
| **Supporting Standards** | **Total Number of Standards** | **19** | **30%–40%** | **14–18** |
| **Total Number of Questions on Test** | | | **46** | |




# Grade 5 Science Assessment

## Eligible Texas Essential Knowledge and Skills

Texas Education Agency
Student Assessment Division
Fall 2010

# STAAR Grade 5 Science Assessment

## Reporting Category 1: Matter and Energy

**The student will demonstrate an understanding of the properties of matter and energy and their interactions.**

**Grade 5**

(5.5) **Matter and energy.** The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to

(A) classify matter based on physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating), solubility in water, and the ability to conduct or insulate thermal energy or electric energy; ***Readiness Standard***

(B) identify the boiling and freezing/melting points of water on the Celsius scale; ***Supporting Standard***

(C) demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand; and ***Supporting Standard***

(D) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water. ***Supporting Standard***

**Grade 3**

(3.5) **Matter and energy.** The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to

(C) predict, observe, and record changes in the state of matter caused by heating or cooling. ***Supporting Standard***

## Reporting Category 2:
## Force, Motion, and Energy

**The student will demonstrate an understanding of force, motion, and energy and their relationships.**

**Grade 5**

(5.6) **Force, motion, and energy.** The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to

(A) explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy; ***Readiness Standard***

(B) demonstrate that the flow of electricity in circuits requires a complete path through which an electric current can pass and can produce light, heat, and sound; ***Readiness Standard***

(C) demonstrate that light travels in a straight line until it strikes an object or travels through one medium to another and demonstrate that light can be reflected such as the use of mirrors or other shiny surfaces and refracted such as the appearance of an object when observed through water; and ***Readiness Standard***

(D) design an experiment that tests the effect of force on an object. ***Supporting Standard***

**Grade 3**

(3.6) **Force, motion, and energy.** The student knows that forces cause change and that energy exists in many forms. The student is expected to

(B) demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done such as swings, balls, pulleys, and wagons. ***Supporting Standard***

# Reporting Category 3:
# Earth and Space

**The student will demonstrate an understanding of components, cycles, patterns, and natural events of Earth and space systems.**

**Grade 5**

(5.7) **Earth and space.** The student knows Earth's surface is constantly changing and consists of useful resources. The student is expected to

(A) explore the processes that led to the formation of sedimentary rocks and fossil fuels; ***Readiness Standard***

(B) recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice; ***Readiness Standard***

(C) identify alternative energy resources such as wind, solar, hydroelectric, geothermal, and biofuels; and ***Readiness Standard***

(D) identify fossils as evidence of past living organisms and the nature of the environments at the time using models. ***Supporting Standard***

(5.8) **Earth and space.** The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to

(A) differentiate between weather and climate; ***Supporting Standard***

(B) explain how the Sun and the ocean interact in the water cycle; ***Supporting Standard***

(C) demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day/night cycle and the apparent movement of the Sun across the sky; and ***Readiness Standard***

(D) identify and compare the physical characteristics of the Sun, Earth, and Moon. ***Supporting Standard***

**Grade 4**

(4.7) **Earth and space.** The student knows that Earth consists of useful resources and its surface is constantly changing. The student is expected to

(A) examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants; and ***Supporting Standard***

(C) identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation. ***Supporting Standard***

(4.8) **Earth and space.** The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to

(A) measure and record changes in weather and make predictions using weather maps, weather symbols, and a map key; ***Supporting Standard***

(B) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process; and ***Supporting Standard***

(C) collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time. ***Supporting Standard***

**Grade 3**

(3.7) **Earth and space.** The student knows that Earth consists of natural resources and its surface is constantly changing. The student is expected to

(B) investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides. ***Supporting Standard***

(3.8) **Earth and space.** The student knows there are recognizable patterns in the natural world and among objects in the sky. The student is expected to

(D) identify the planets in Earth's solar system and their position in relation to the Sun. ***Supporting Standard***

# Reporting Category 4:
# Organisms and Environments

**The student will demonstrate an understanding of the structures and functions of living organisms and their interdependence on each other and on their environment.**

**Grade 5**

(5.9) **Organisms and environments.** The student knows that there are relationships, systems, and cycles within environments. The student is expected to

(A) observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements;
***Readiness Standard***

(B) describe how the flow of energy derived from the Sun, used by producers to create their own food, is transferred through a food chain and food web to consumers and decomposers;
***Readiness Standard***

(C) predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways; and
***Supporting Standard***

(D) identify the significance of the carbon dioxide-oxygen cycle to the survival of plants and animals. ***Supporting Standard***

(5.10) **Organisms and environments.** The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to

(A) compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals;
***Readiness Standard***

(B) differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle; and
***Readiness Standard***

(C) describe the differences between complete and incomplete metamorphosis of insects. ***Supporting Standard***

## Grade 3

(3.9) **Organisms and environments.** The student knows that organisms have characteristics that help them survive and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to

(A) observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem. ***Supporting Standard***

(3.10) **Organisms and environments.** The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to

(C) investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady bugs. ***Supporting Standard***

## Scientific Investigation and Reasoning Skills

**These skills will not be listed under a separate reporting category. Instead, they will be incorporated into at least 40% of the test questions in reporting categories 1–4 and will be identified along with content standards.**

**Grade 5**

(5.1) **Scientific investigation and reasoning.** The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to

(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations; and

(B) make informed choices in the conservation, disposal, and recycling of materials.

(5.2) **Scientific investigation and reasoning.** The student uses scientific methods during laboratory and outdoor investigations. The student is expected to

(A) describe, plan, and implement simple experimental investigations testing one variable;

(B) ask well-defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology;

(C) collect information by detailed observations and accurate measuring;

(D) analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence;

(E) demonstrate that repeated investigations may increase the reliability of results;

(F) communicate valid conclusions in [both] written [and verbal] form[s]; and

(G) construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.

(5.3) **Scientific investigation and reasoning.** The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to

(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student;

(B) evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels;

(C) draw or develop a model that represents how something works or looks that cannot be seen such as how a soda dispensing machine works; and

(D) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.

(5.4) **Scientific investigation and reasoning.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to

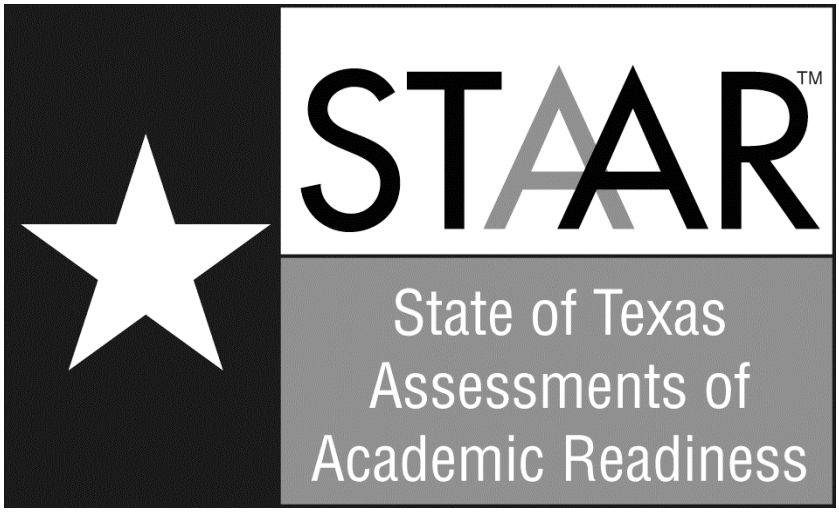
(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums; and

(B) use safety equipment, including safety goggles and gloves.

# STAAR Grade 5 Science Blueprint

**Scientific Investigation and Reasoning Skills** is not a separate reporting category. These skills will be incorporated into at least 40% of the test questions from reporting categories 1–4 and will be identified along with the content standards.

| Reporting Categories | Number of Standards | | Number of Questions | |
|---|---|---|---|---|
| **Reporting Category 1: Matter and Energy** | Readiness Standards | 1 | **8** | |
| | Supporting Standards | 4 | | |
| | Total | 5 | | |
| **Reporting Category 2: Force, Motion, and Energy** | Readiness Standards | 3 | **10** | |
| | Supporting Standards | 2 | | |
| | Total | 5 | | |
| **Reporting Category 3: Earth and Space** | Readiness Standards | 4 | **12** | |
| | Supporting Standards | 11 | | |
| | Total | 15 | | |
| **Reporting Category 4: Organisms and Environments** | Readiness Standards | 4 | **14** | |
| | Supporting Standards | 5 | | |
| | Total | 9 | | |
| **Readiness Standards** | **Total Number of Standards** | **12** | **60%–65%** | **26–29** |
| **Supporting Standards** | **Total Number of Standards** | **22** | **35%–40%** | **15–18** |
| **Total Number of Questions on Test** | | | **43 Multiple Choice<br>1 Griddable<br>44 Total** | |




# Grade 8 Social Studies Assessment

## Eligible Texas Essential Knowledge and Skills

# STAAR Grade 8 Social Studies Assessment
## Based on Revised Curriculum

## Reporting Category 1:
## History

**The student will demonstrate an understanding of issues and events in U.S. history.**

(1) **History.** The student understands traditional historical points of reference in U.S. history through 1877. The student is expected to

(A) identify the major eras and events in U.S. history through 1877, including colonization, revolution, drafting of the Declaration of Independence, creation and ratification of the Constitution, religious revivals such as the Second Great Awakening, early republic, the Age of Jackson, westward expansion, reform movements, sectionalism, Civil War, and Reconstruction, and describe their causes and effects; ***Readiness Standard***

(B) apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods; and ***Supporting Standard***

(C) explain the significance of the following dates: 1607, founding of Jamestown; 1620, arrival of the Pilgrims and signing of the Mayflower Compact; 1776, adoption of the Declaration of Independence; 1787, writing of the U.S. Constitution; 1803, Louisiana Purchase; and 1861–1865, Civil War. ***Supporting Standard***

(2) **History.** The student understands the causes of exploration and colonization eras. The student is expected to

(A) identify reasons for European exploration and colonization of North America; and ***Readiness Standard***

(B) compare political, economic, religious, and social reasons for the establishment of the 13 English colonies. ***Supporting Standard***

(3) **History.** The student understands the foundations of representative government in the United States. The student is expected to

(A) explain the reasons for the growth of representative government and institutions during the colonial period; ***Readiness Standard***

(B) analyze the importance of the Mayflower Compact, the Fundamental Orders of Connecticut, and the Virginia House of Burgesses to the growth of representative government; and ***Supporting Standard***

(C) describe how religion and virtue contributed to the growth of representative government in the American colonies. ***Supporting Standard***

(4) **History.** The student understands significant political and economic issues of the revolutionary era. The student is expected to

(A) analyze causes of the American Revolution, including the Proclamation of 1763, the Intolerable Acts, the Stamp Act, mercantilism, lack of representation in Parliament, and British economic policies following the French and Indian War; ***Readiness Standard***

(B) explain the roles played by significant individuals during the American Revolution, including Abigail Adams, John Adams, Wentworth Cheswell, Samuel Adams, Mercy Otis Warren, James Armistead, Benjamin Franklin, Bernardo de Gálvez, Crispus Attucks, King George III, Haym Salomon, Patrick Henry, Thomas Jefferson, the Marquis de Lafayette, Thomas Paine, and George Washington; ***Supporting Standard***

(C) explain the issues surrounding important events of the American Revolution, including declaring independence; writing the Articles of Confederation; fighting the battles of Lexington, Concord, Saratoga, and Yorktown; enduring the winter at Valley Forge; and signing the Treaty of Paris of 1783; ***Readiness Standard***

(D) analyze the issues of the Constitutional Convention of 1787, including the Great Compromise and the Three-Fifths Compromise; and ***Supporting Standard***

(E) analyze the arguments for and against ratification. ***Readiness Standard***

(5) **History.** The student understands the challenges confronted by the government and its leaders in the early years of the republic and the Age of Jackson. The student is expected to

(A) describe major domestic problems faced by the leaders of the new republic such as maintaining national security, building a military, creating a stable economic system, setting up the court system, and defining the authority of the central government; ***Readiness Standard***

(B) summarize arguments regarding protective tariffs, taxation, and the banking system; ***Supporting Standard***

(C) explain the origin and development of American political parties; ***Readiness Standard***

(D) explain the causes, important events, and effects of the War of 1812; ***Supporting Standard***

(E) identify the foreign policies of presidents Washington through Monroe and explain the impact of Washington's Farewell Address and the Monroe Doctrine; ***Readiness Standard***

(F) explain the impact of the election of Andrew Jackson, including expanded suffrage; and ***Supporting Standard***

(G) analyze the reasons for the removal and resettlement of Cherokee Indians during the Jacksonian era, including the Indian Removal Act, *Worcester* v. *Georgia*, and the Trail of Tears. ***Supporting Standard***

(6) **History.** The student understands westward expansion and its effects on the political, economic, and social development of the nation. The student is expected to

(A) explain how the Northwest Ordinance established principles and procedures for orderly expansion of the United States; ***Readiness Standard***

(B) explain the political, economic, and social roots of Manifest Destiny; ***Readiness Standard***

(C) analyze the relationship between the concept of Manifest Destiny and the westward growth of the nation; ***Supporting Standard***

(D) explain the causes and effects of the U.S.-Mexican War and their impact on the United States; and ***Readiness Standard***

(E) identify areas that were acquired to form the United States, including the Louisiana Purchase. ***Supporting Standard***

(7) **History.** The student understands how political, economic, and social factors led to the growth of sectionalism and the Civil War. The student is expected to

(A) analyze the impact of tariff policies on sections of the United States before the Civil War; ***Supporting Standard***

(B) compare the effects of political, economic, and social factors on slaves and free blacks; ***Supporting Standard***

(C) analyze the impact of slavery on different sections of the United States; and ***Readiness Standard***

(D) identify the provisions and compare the effects of congressional conflicts and compromises prior to the Civil War, including the roles of John Quincy Adams, John C. Calhoun, Henry Clay, and Daniel Webster. ***Supporting Standard***

(8) **History.** The student understands individuals, issues, and events of the Civil War. The student is expected to

(A) explain the roles played by significant individuals during the Civil War, including Jefferson Davis, Ulysses S. Grant, Robert E. Lee, and Abraham Lincoln, and heroes such as Congressional Medal of Honor recipients William Carney and Philip Bazaar; ***Supporting Standard***

(B) explain the causes of the Civil War, including sectionalism, states' rights, and slavery, and significant events of the Civil War, including the firing on Fort Sumter; the battles of Antietam, Gettysburg, and Vicksburg; the announcement of the Emancipation Proclamation; Lee's surrender at Appomattox Court House; and the assassination of Abraham Lincoln; and ***Readiness Standard***

(C) analyze Abraham Lincoln's ideas about liberty, equality, union, and government as contained in his first and second inaugural addresses and the Gettysburg Address and contrast them with the ideas contained in Jefferson Davis's inaugural address. ***Supporting Standard***

(9) **History.** The student understands the effects of Reconstruction on the political, economic, and social life of the nation. The student is expected to

(A) evaluate legislative reform programs of the Radical Reconstruction Congress and reconstructed state governments; ***Supporting Standard***

(B) evaluate the impact of the election of Hiram Rhodes Revels; ***Supporting Standard***

(C) explain the economic, political, and social problems during Reconstruction and evaluate their impact on different groups; and ***Readiness Standard***

(D) identify the effects of legislative acts such as the Homestead Act, the Dawes Act, and the Morrill Act. ***Supporting Standard***

# Reporting Category 2:
# Geography and Culture

**The student will demonstrate an understanding of geographic and cultural influences on historical issues and events.**

(10) **Geography.** The student understands the location and characteristics of places and regions of the United States, past and present. The student is expected to

(A) locate places and regions of importance in the United States during the 17th, 18th, and 19th centuries; ***Supporting Standard***

(B) compare places and regions of the United States in terms of physical and human characteristics; and ***Readiness Standard***

(C) analyze the effects of physical and human geographic factors on major historical and contemporary events in the United States. ***Readiness Standard***

(11) **Geography.** The student understands the physical characteristics of North America and how humans adapted to and modified the environment through the mid-19th century. The student is expected to

(A) analyze how physical characteristics of the environment influenced population distribution, settlement patterns, and economic activities in the United States during the 17th, 18th, and 19th centuries; ***Readiness Standard***

(B) describe the positive and negative consequences of human modification of the physical environment of the United States; and ***Supporting Standard***

(C) describe how different immigrant groups interacted with the environment in the United States during the 17th, 18th, and 19th centuries. ***Supporting Standard***

(23) **Culture.** The student understands the relationships between and among people from various groups, including racial, ethnic, and religious groups, during the 17th, 18th, and 19th centuries. The student is expected to

(A) identify selected racial, ethnic, and religious groups that settled in the United States and explain their reasons for immigration; ***Readiness Standard***

(B) explain the relationship between urbanization and conflicts resulting from differences in religion, social class, and political beliefs; ***Supporting Standard***

(C) identify ways conflicts between people from various racial, ethnic, and religious groups were resolved; ***Supporting Standard***

(D) analyze the contributions of people of various racial, ethnic, and religious groups to our national identity; and ***Supporting Standard***

(E) identify the political, social, and economic contributions of women to American society. ***Supporting Standard***

(24) **Culture.** The student understands the major reform movements of the 19th century. The student is expected to

(A) describe the historical development of the abolitionist movement; and ***Supporting Standard***

(B) evaluate the impact of reform movements, including educational reform, temperance, the women's rights movement, prison reform, abolition, the labor reform movement, and care of the disabled. ***Readiness Standard***

(25) **Culture.** The student understands the impact of religion on the American way of life. The student is expected to

(A) trace the development of religious freedom in the United States; ***Supporting Standard***

(B) describe religious motivation for immigration and influence on social movements, including the impact of the first and second Great Awakenings; and ***Supporting Standard***

(C) analyze the impact of the First Amendment guarantees of religious freedom on the American way of life. ***Readiness Standard***

(26) **Culture.** The student understands the relationship between the arts and the times during which they were created. The student is expected to

(A) describe developments in art, music, and literature that are unique to American culture such as the Hudson River School artists, John James Audubon, "Battle Hymn of the Republic," transcendentalism, and other cultural activities in the history of the United States; ***Supporting Standard***

(B) identify examples of American art, music, and literature that reflect society in different eras; and ***Supporting Standard***

(C) analyze the relationship between fine arts and continuity and change in the American way of life. ***Supporting Standard***

## Reporting Category 3:
## Government and Citizenship

**The student will demonstrate an understanding of the role of government and the civic process on historical issues and events.**

(15) **Government.** The student understands the American beliefs and principles reflected in the Declaration of Independence, the U.S. Constitution, and other important historic documents. The student is expected to

(A) identify the influence of ideas from historic documents, including the Magna Carta, the English Bill of Rights, the Mayflower Compact, the Federalist Papers, and selected Anti-Federalist writings, on the U.S. system of government; ***Readiness Standard***

(B) summarize the strengths and weaknesses of the Articles of Confederation; ***Supporting Standard***

(C) identify colonial grievances listed in the Declaration of Independence and explain how those grievances were addressed in the U.S. Constitution and the Bill of Rights; and ***Readiness Standard***

(D) analyze how the U.S. Constitution reflects the principles of limited government, republicanism, checks and balances, federalism, separation of powers, popular sovereignty, and individual rights. ***Readiness Standard***

(16) **Government.** The student understands the process of changing the U.S. Constitution and the impact of amendments on American society. The student is expected to

(A) summarize the purposes for and process of amending the U.S. Constitution; and ***Readiness Standard***

(B) describe the impact of 19th-century amendments, including the 13th, 14th, and 15th amendments, on life in the United States. ***Readiness Standard***

(17) **Government.** The student understands the dynamic nature of the powers of the national government and state governments in a federal system. The student is expected to

(A) analyze the arguments of the Federalists and Anti-Federalists, including those of Alexander Hamilton, Patrick Henry, James Madison, and George Mason; and ***Readiness Standard***

(B) explain constitutional issues arising over the issue of states' rights, including the Nullification Crisis and the Civil War. ***Readiness Standard***

(18) **Government.** The student understands the impact of landmark Supreme Court cases. The student is expected to

(A) identify the origin of judicial review and analyze examples of congressional and presidential responses; ***Readiness Standard***

(B) summarize the issues, decisions, and significance of landmark Supreme Court cases, including *Marbury* v. *Madison*, *McCulloch* v. *Maryland*, and *Gibbons* v. *Ogden*; and ***Supporting Standard***

(C) evaluate the impact of selected landmark Supreme Court decisions, including *Dred Scott* v. *Sandford*, on life in the United States. ***Supporting Standard***

(19) **Citizenship.** The student understands the rights and responsibilities of citizens of the United States. The student is expected to

(A) define and give examples of unalienable rights; ***Readiness Standard***

(B) summarize rights guaranteed in the Bill of Rights; ***Readiness Standard***

(D) identify examples of responsible citizenship, including obeying rules and laws, staying informed on public issues, voting, and serving on juries; ***Supporting Standard***

(E) summarize the criteria and explain the process for becoming a naturalized citizen of the United States; and ***Supporting Standard***

(20) **Citizenship.** The student understands the importance of voluntary individual participation in the democratic process. The student is expected to

(A) explain the role of significant individuals such as Thomas Hooker, Charles de Montesquieu, John Locke, William Blackstone, and William Penn in the development of self-government in colonial America; ***Supporting Standard***

(B) evaluate the contributions of the Founding Fathers as models of civic virtue; and ***Supporting Standard***

(C) analyze reasons for and the impact of selected examples of civil disobedience in U.S. history such as the Boston Tea Party and Henry David Thoreau's refusal to pay a tax. ***Supporting Standard***

(21) **Citizenship.** The student understands the importance of the expression of different points of view in a constitutional republic. The student is expected to

(A) identify different points of view of political parties and interest groups on important historical and contemporary issues; ***Supporting Standard***

(B) describe the importance of free speech and press in a constitutional republic; and ***Supporting Standard***

(C) summarize a historical event in which compromise resulted in a peaceful resolution. ***Supporting Standard***

(22) **Citizenship.** The student understands the importance of effective leadership in a constitutional republic. The student is expected to

(A) analyze the leadership qualities of elected and appointed leaders of the United States such as George Washington, John Marshall, and Abraham Lincoln; and ***Supporting Standard***

(B) describe the contributions of significant political, social, and military leaders of the United States such as Frederick Douglass, John Paul Jones, James Monroe, Stonewall Jackson, Susan B. Anthony, and Elizabeth Cady Stanton. ***Supporting Standard***

# Reporting Category 4:
# Economics, Science, Technology and Society

**The student will demonstrate an understanding of economic and technological influences on historical issues and events.**

(12) **Economics.** The student understands why various sections of the United States developed different patterns of economic activity. The student is expected to

(A) identify economic differences among different regions of the United States; ***Supporting Standard***

(B) explain reasons for the development of the plantation system, the transatlantic slave trade, and the spread of slavery; ***Readiness Standard***

(C) explain the reasons for the increase in factories and urbanization; and ***Supporting Standard***

(D) analyze the causes and effects of economic differences among different regions of the United States at selected times in U.S. history. ***Readiness Standard***

(13) **Economics.** The student understands how various economic forces resulted in the Industrial Revolution in the 19th century. The student is expected to

(A) analyze the War of 1812 as a cause of economic changes in the nation; and ***Supporting Standard***

(B) identify the economic factors that brought about rapid industrialization and urbanization. ***Readiness Standard***

(14) **Economics.** The student understands the origins and development of the free enterprise system in the United States. The student is expected to

(A) explain why a free enterprise system of economics developed in the new nation, including minimal government intrusion, taxation, and property rights; and ***Supporting Standard***

(B) describe the characteristics and the benefits of the U.S. free enterprise system during the 18th and 19th centuries. ***Supporting Standard***

(27) **Science, technology, and society.** The student understands the impact of science and technology on the economic development of the United States. The student is expected to

(A) explain the effects of technological and scientific innovations such as the steamboat, the cotton gin, and interchangeable parts; ***Readiness Standard***

(B) analyze the impact of transportation and communication systems on the growth, development, and urbanization of the United States; ***Readiness Standard***

(C) analyze how technological innovations changed the way goods were manufactured and marketed, nationally and internationally; and ***Supporting Standard***

(D) explain how technological innovations brought about economic growth such as how the factory system contributed to rapid industrialization and the Transcontinental Railroad led to the opening of the west. ***Supporting Standard***

(28) **Science, technology, and society.** The student understands the impact of scientific discoveries and technological innovations on daily life in the United States. The student is expected to

(A) compare the effects of scientific discoveries and technological innovations that have influenced daily life in different periods in U.S. history; and ***Supporting Standard***

(B) identify examples of how industrialization changed life in the United States. ***Supporting Standard***

## Social Studies Skills

**These skills will not be listed under a separate reporting category. Instead, they will be incorporated in the test questions in reporting categories 1–4 and will be identified along with content standards.**

(29) **Social studies skills.** The student applies critical-thinking skills to organize and use information acquired through established research methodologies from a variety of valid sources, including electronic technology. The student is expected to

(A) differentiate between, locate, and use valid primary and secondary sources such as computer software, databases, media and news services, biographies, interviews, and artifacts to acquire information about the United States;

(B) analyze information by sequencing, categorizing, identifying cause-and-effect relationships, comparing, contrasting, finding the main idea, summarizing, making generalizations and predictions, and drawing inferences and conclusions;

(C) organize and interpret information from outlines, reports, databases, and visuals, including graphs, charts, timelines, and maps;

(D) identify points of view from the historical context surrounding an event and the frame of reference which influenced the participants;

(E) support a point of view on a social studies issue or event;

(H) use appropriate mathematical skills to interpret social studies information such as maps and graphs;

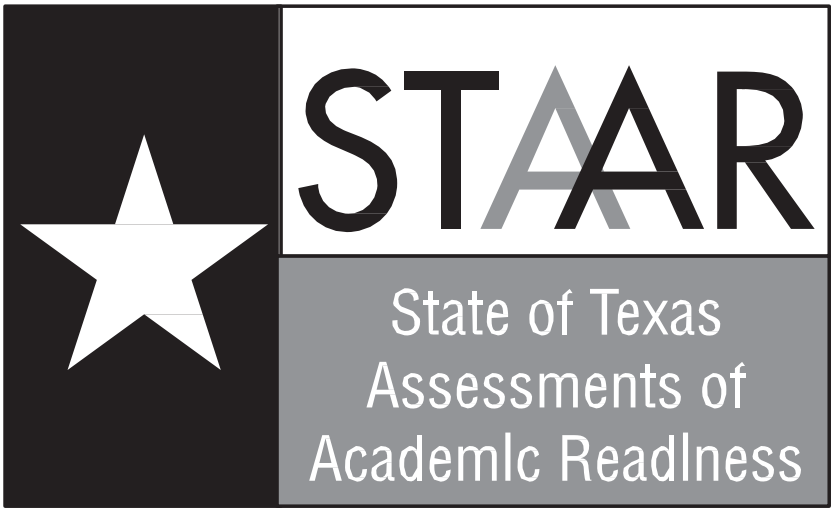
(J) pose and answer questions about geographic distributions and patterns shown on maps, graphs, charts, models, and databases.

(30) **Social studies skills.** The student communicates in written, oral, and visual forms. The student is expected to

(A) use social studies terminology correctly.

# STAAR Grade 8 Social Studies Blueprint

| **Social Studies Skills** is not a separate reporting category. These skills will be incorporated into at least 30% of the test questions from reporting categories 1–4 and will be identified along with the content standards. | | | | |
|---|---|---|---|---|
| **Reporting Categories** | **Number of Standards** | | **Number of Questions** | |
| **Reporting Category 1: History** | Readiness Standards | 15 | **20** | |
| | Supporting Standards | 21 | | |
| | Total | 36 | | |
| **Reporting Category 2: Geography and Culture** | Readiness Standards | 6 | **12** | |
| | Supporting Standards | 13 | | |
| | Total | 19 | | |
| **Reporting Category 3: Government and Citizenship** | Readiness Standards | 10 | **12** | |
| | Supporting Standards | 13 | | |
| | Total | 23 | | |
| **Reporting Category 4: Economics, Science, Technology, and Society** | Readiness Standards | 5 | **8** | |
| | Supporting Standards | 9 | | |
| | Total | 14 | | |
| **Readiness Standards** | **Total Number of Standards** | **36** | **60%–65%** | **31–34** |
| **Supporting Standards** | **Total Number of Standards** | **56** | **35%–40%** | **18–21** |
| **Total Number of Questions on Test** | | | **52 Multiple Choice** | |




# Grade 7 Writing Assessment

## Eligible Texas Essential Knowledge and Skills

# STAAR Grade 7 Writing Assessment

## Reporting Category 1: Composition

**The student will demonstrate an ability to compose a variety of written texts with a clear, controlling idea; coherent organization; sufficient development; and effective use of language and conventions.**

(14) **Writing/Writing Process.** Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to

(B) develop drafts by choosing an appropriate organizational strategy (e.g., sequence of events, cause-effect, compare-contrast) and building on ideas to create a focused, organized, and coherent piece of writing; ***Readiness Standard***

(C) revise drafts to ensure precise word choice and vivid images; consistent point of view; use of simple, compound, and complex sentences; internal and external coherence; and the use of effective transitions after rethinking how well questions of purpose, audience, and genre have been addressed; ***Readiness Standard***

(D) edit drafts for grammar, mechanics, and spelling. ***Readiness Standard***

(17) **Writing/Expository [and Procedural] Texts.** Students write expository [and procedural or work-related] texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to

(A) write a multi-paragraph essay to convey information about a topic ***Readiness Standard***

that

(i) presents effective introductions and concluding paragraphs;

(ii) contains a clearly stated purpose or controlling idea;

(iii) is logically organized with appropriate facts and details and includes no extraneous information or inconsistencies;

(iv) accurately synthesizes ideas from several sources; and

(v) uses a variety of sentence structures, rhetorical devices, and transitions to link paragraphs.

## Reporting Category 2: Revision

**The student will demonstrate an ability to revise a variety of written texts.**

(14) **Writing / Writing Process.** Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to

(C) revise drafts to ensure precise word choice and vivid images; consistent point of view; use of simple, compound, and complex sentences; internal and external coherence; and the use of effective transitions after rethinking how well questions of purpose, audience, and genre have been addressed. ***Readiness Standard***

(17) **Writing / Expository [and Procedural] Texts.** Students write expository [and procedural or work-related] texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to

(A) write a multi-paragraph essay to convey information about a topic that

(i) presents effective introductions and concluding paragraphs; ***Supporting Standard***

(ii) contains a clearly stated purpose or controlling idea; ***Supporting Standard***

(iii) is logically organized with appropriate facts and details and includes no extraneous information or inconsistencies; ***Supporting Standard***

(iv) accurately synthesizes ideas from several sources; ***Supporting Standard***

(v) uses a variety of sentence structures, rhetorical devices, and transitions to link paragraphs. ***Supporting Standard***

(18) **Writing / Persuasive Texts.** Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write a persuasive essay to the appropriate audience that

(A) establishes a clear thesis or position; ***Supporting Standard***

(C) includes evidence that is logically organized to support the author's viewpoint and that differentiates between fact and opinion. ***Supporting Standard***

## Reporting Category 3: Editing

**The student will demonstrate an ability to edit a variety of texts.**

(14) **Writing / Writing Process.** Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to

(D) edit drafts for grammar, mechanics, and spelling. ***Readiness Standard***

(19) **[Oral and] Written Conventions / Conventions.** Students understand the function of and use the conventions of academic language when speaking and writing. Students will continue to apply earlier standards with greater complexity. Students are expected to

(A) identify, use, and understand the function of the following parts of speech in the context of reading, writing, and speaking: ***Readiness Standard***

(i) verbs (perfect and progressive tenses) and participles; ***Supporting Standard***

(ii) appositive phrases; ***Supporting Standard***

(iii) adverbial and adjectival phrases and clauses; ***Supporting Standard***

(iv) conjunctive adverbs (e.g., consequently, furthermore, indeed); ***Supporting Standard***

(v) prepositions and prepositional phrases and their influence on subject-verb agreement; ***Supporting Standard***

(vi) relative pronouns (e.g., *whose*, *that*, *which*); ***Supporting Standard***

(vii) subordinating conjunctions (e.g., *because*, *since*); ***Supporting Standard***

(viii) transitions for sentence to sentence or paragraph to paragraph coherence; ***Supporting Standard***

(B) write complex sentences and differentiate between main versus subordinate clauses; ***Supporting Standard***

(C) use a variety of complete sentences (e.g., simple, compound, complex) that include properly placed modifiers, correctly identified antecedents, parallel structures, and consistent tenses. ***Readiness Standard***

(20) **[Oral and] Written Conventions/Handwriting, Capitalization, and Punctuation**. Students write legibly and use appropriate capitalization and punctuation conventions in their compositions. Students are expected to

(A) use conventions of capitalization; ***Readiness Standard***

(B) recognize and use punctuation marks ***Readiness Standard***

including

(i) commas after introductory words, phrases, and clauses; ***Supporting Standard***

(ii) semicolons, colons, and hyphens. ***Supporting Standard***

(21) **[Oral and] Written Conventions/Spelling.** Students spell correctly. Students are expected to spell correctly, including using various resources to determine and check correct spellings. Students are expected to

(A) spell correctly, including using various resources to determine and check correct spellings. ***Readiness Standard***

# STAAR Grade 7 Writing Blueprint

| Reporting Categories | Number of Standards | | Number of Questions | |
|---|---|---|---|---|
| **Reporting Category 1: Composition** | Readiness Standards | 4 | **1 Composition*** | |
| | Supporting Standards | 0 | | |
| | Total | 4 | | |
| **Reporting Category 2: Revision** | Readiness Standards | 1 | **13 Multiple Choice** | |
| | Supporting Standards | 7 | | |
| | Total | 8 | | |
| **Reporting Category 3: Editing** | Readiness Standards | 6 | **17 Multiple Choice** | |
| | Supporting Standards | 11 | | |
| | Total | 17 | | |
| **Readiness Standards** | **Total Number of Standards** | **11** | **60%–70%** | **18–21** |
| **Supporting Standards** | **Total Number of Standards** | **18** | **30%–40%** | **9–12** |
| **Total Number of Questions on Test** | | | **30 Multiple Choice**<br>**1 Composition** | |

* The one type of writing assessed each year—expository—is always designated as a Readiness Standard.