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## Grade 9 Table of Contents

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English/Language Arts Grade 9 .....	1
Mathematics Grade 9 -12 .....	12
Science Grade 9 -12 .....	17
Social Studies: Grade 9 - World Regions/Cultures .....	31
Social Studies: Anthropology .....	34
Social Studies: Economics .....	37
Social Studies: Psychology .....	40
Social Studies: Sociology .....	43
Social Studies: Asian Culture .....	46
Social Studies: Minority Studies .....	49
Social Studies: Contemporary Issues .....	52
Health Education Grade 9-12 .....	53
Physical Education: Required Personal Fitness (9–12) .....	56
Physical Education: Required Lifetime Sports (9–12) .....	58
Physical Education: Required Physical Activity & Nutrition (9–12) .....	60
Foreign Language Level 3 .....	62
Visual Arts Grade 9-12 .....	67
Music Education Grade 9-12 .....	69

Strand:

**E1 Reading**

Reading is a process that includes demonstrating comprehension and showing evidence of a warranted and responsible interpretation of the text. “Comprehension” means getting the gist of a text. It is most frequently illustrated by demonstrating an understanding of the text as a whole; identifying complexities presented in the structure of the text and extracting salient information from the text. In providing evidence of a responsible interpretation, students may make connections between parts of a text, among several texts, and between texts and other experiences; make extensions and applications of a text; and examine texts critically and evaluatively.

Standard:

**E1a:** The student reads at least twenty-five books or book equivalents each year. The quality and complexity of materials to be read is based on the lexile level of grade nine (1000L-1200L). The materials should include traditional and contemporary literature (both fiction and non-fiction) as well as magazines, newspapers, textbooks, and on-line materials. Such reading should represent a diverse collection of material from at least three different literary forms and from at least five different writers.

Examples:

*Examples of activities through which students might produce evidence of reading twenty-five books include:*

- *Maintain an annotated list of works read.*
- *Generate a reading log or journal.*
- *Participate in formal and informal book talks.*

Standard:

**E1b:** The student reads and comprehends at least four books (or book equivalents) about one issue or subject, or four books by a single writer, or four books in one genre, and produces evidence of reading that:

Components:

**E1b.1:** makes and supports warranted and responsible assertions about the texts;

**E1b.2:** supports assertions with elaborated and convincing evidence;

**E1b.3:** draws the texts together to compare and contrast themes, characters, and ideas;

**E1b.4:** makes perceptive and well developed connections;

**E1b.5:** evaluates writing strategies and elements of the author’s craft.

Examples:

*Examples of activities through which students might produce evidence of reading comprehension include:*

- *Write a saturation report (a report that recounts information on a topic gathered by a student over a period of time.)*
- *Construct a review of two works by the same author.*
- *Produce a literary response paper.*
- *Produce a research report.*
- *Participate in formal or informal book talks; e.g. Socratic seminar and literature circles.*
- *Create an annotated book list organized according to author, theme, or genre.*

Standard:

**E1c:** The student reads and comprehends informational materials to develop understanding and expertise and produces written or oral work that:

Components:	<p><b>E1c.1:</b> restates or summarizes information;</p> <p><b>E1c.2:</b> relates new information to prior knowledge or experience;</p> <p><b>E1c.3:</b> extends ideas;</p> <p><b>E1c.4:</b> makes a connection to related topics or information.</p>
Examples:	<p><i>Examples of activities through which students might produce evidence of reading informational materials include:</i></p> <ul style="list-style-type: none"><li>• <i>Use information to support or enhance a project.</i></li><li>• <i>Write a report of information that draws from multiple sources.</i></li><li>• <i>Incorporate expert opinions into a speech or position paper.</i></li><li>• <i>Use informational materials to reach a conclusion regarding a controversial topic.</i></li><li>• <i>Use information to support or enhance a project.</i></li><li>• <i>Develop a portfolio of materials regarding a student's hobby or personal interest.</i></li><li>• <i>Summarize key points and issues of an historical or artistic exhibit.</i></li><li>• <i>Write a report that analyzes several historical records of a single event and attempts to understand the reasons for the similarities and differences.</i></li></ul>
Strand:	
<b>E2 Writing</b>	<p>Writing is a process through which a writer shapes language to communicate effectively. Writing often develops through a series of initial plans and multiple drafts and through access to informed feedback and response. Purpose, audience, and context contribute to the form and substance of writing as well as to its style, tone, and stance</p>
Standard:	<b>E2a:</b> The student produces a report that:
Components:	<p><b>E2a.1:</b> engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;</p> <p><b>E2a.2:</b> develops a controlling idea that conveys a perspective on the subject;</p> <p><b>E2a.3:</b> creates an organizing structure appropriate to purpose, audience, and context;</p> <p><b>E2a.4:</b> includes appropriate facts and details;</p> <p><b>E2a.5:</b> excludes extraneous and inappropriate information;</p> <p><b>E2a.6:</b> uses a range of appropriate strategies, such as providing facts and details, describing or analyzing the subject, narrating a relevant anecdote, comparing and contrasting, naming, explaining benefits or limitations, demonstrating claims or assertions, and providing a scenario to illustrate;</p> <p><b>E2a.7:</b> provides a sense of closure to the writing.</p>
Examples	<p><i>Examples of reports include:</i></p> <ul style="list-style-type: none"><li>• <i>An I-search essay (an essay that details a student's search for information as well as the information itself; I-search papers are developed through a variety of means, e.g. interviews, observation, internet, as well as traditional library research).</i></li><li>• <i>A saturation report (a report that recounts substantial information on a topic gathered by a student over a period of time.)</i></li><li>• <i>A report produced as part of studies in subjects such as science, social studies, and mathematics.</i></li><li>• <i>An informal research paper.</i></li></ul>

Standard:	<ul style="list-style-type: none"><li>• <i>An investigative report.</i></li><li>• <i>A report of information on an item of personal interest or experience.</i></li></ul> <b>E2b:</b> The student produces a response to literature that:
Components:	<b>E2b.1:</b> engages the reader through establishing a context, creating a persona, and otherwise developing reader interest; <b>E2b.2:</b> advances a judgment that is interpretive, analytic, evaluative, or reflective; <b>E2b.3:</b> supports a judgment through references to the text, references to other works, authors, or non-print media, or references to personal knowledge; <b>E2b.4:</b> demonstrates understanding of the literary work through suggesting an interpretation; <b>E2b.5:</b> anticipates and answers a reader's questions; <b>E2b.6:</b> recognizes possible ambiguities, nuances, and complexities; <b>E2b.7:</b> provides a sense of closure to the writing.
Examples:	<i>Examples of responses to literature include:</i> <ul style="list-style-type: none"><li>• <i>An evaluation of a piece of literature or several pieces of literature.</i></li><li>• <i>A comparison of a piece of literature with its media (video, tape, radio, television, ballet, artistic) presentation.</i></li><li>• <i>A personal response to a literary work.</i></li><li>• <i>An analysis of the significance of a section of a novel in terms of its significance to the novel as a whole.</i></li><li>• <i>An evaluation of the role played by setting or character in novel.</i></li><li>• <i>An analysis of the effect of a minor character on the plot of a novel.</i></li><li>• <i>An explanation or interpretation of a recurring motif in a novel, short story, or a play.</i></li><li>• <i>A comparison of two literary works.</i></li></ul>
Standard:	<b>E2c:</b> The student produces a narrative (fictional or autobiographical) account that:
Components:	<b>E2c.1:</b> engages the reader by establishing a context, creating a point of view, and otherwise developing reader interest; <b>E2c.2:</b> establishes a situation, plot, point of view, setting, and conflict (and for autobiography, the significance of events and of conclusions that can be drawn from the events); <b>E2c.3:</b> creates an organizing structure; <b>E2c.4:</b> includes sensory details and concrete language to develop plot and character; <b>E2c.5:</b> excludes extraneous details and inconsistencies; <b>E2c.6:</b> develops complex characters; <b>E2c.7:</b> uses a range of appropriate strategies, such as dialogue, tension or suspense, naming, pacing, and specific narrative action, e.g.; movement, gestures, expressions; <b>E2c.8:</b> provides a sense of closure to the writing.
Examples:	<i>Examples of narrative accounts include:</i> <ul style="list-style-type: none"><li>• <i>A biographical account.</i></li><li>• <i>A fiction or non-fiction story.</i></li><li>• <i>A personal narrative.</i></li></ul>

- A narrative poem or song based on a hero.
- An historical account.
- A parody of a particular narrative style; e.g. fable, soap opera.
- A response to an autobiographical incident prompt.

Standard:

**E2d:** The student produces a narrative procedure that:

Components:

**E2d.1:** engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;

**E2d.2:** provides a guide to action to action for a complicated procedure in order to anticipate a reader's needs; creates expectations through predictable structures, e.g. headings; and provides smooth transitions between steps;

**E2d.3:** makes use of appropriate writing strategies, such as creating a visual hierarchy and using white space and graphics as appropriate;

**E2d.4:** includes relevant information;

**E2d.5:** excludes extraneous information;

**E2d.6:** anticipates problems, mistakes, and misunderstandings that might arise for the reader;

**E2d.7:** provides a sense of closure to the writing.

Examples:

*Examples of narrative procedures include:*

- A set of rules for organizing a class meeting.
- A set of instructions for playing computer games.
- A set of instructions for using media technology.
- A report of a mathematical investigation.
- A set of instructions for evaluating searches on the web.

Standard:

**E2e:** The student produces a persuasive essay that:

Components:

**E2e.1:** engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;

**E2e.2:** develops a controlling idea that makes a clear and knowledgeable judgment;

**E2e.3:** creates an organizing structure that is appropriate to the needs, values, and interests of a specified audience, and arranges details, reasons, examples, and anecdotes effectively and persuasively;

**E2e.4:** includes appropriate information and arguments;

**E2e.5:** excludes information and arguments that are irrelevant;

**E2e.6:** anticipates and addresses reader concerns and counter-arguments;

**E2e.7:** supports arguments with detailed evidence, citing sources of information as appropriate;

**E2e.8:** uses a range of strategies to elaborate and persuade, such as definitions, descriptions, illustrations, examples from evidence, and anecdotes;

**E2e.9:** provides a sense of closure to the writing.

Examples:

*Examples of persuasive essays include:*

- A position paper.
- A problem-solution paper.
- An opening statement for a debate.
- An evaluation of a product or a policy.

- *A critique of a public policy.*
- *An editorial on a current issue that uses reasoned arguments to support an opinion.*

Standard:	<b>E2f:</b> The student produces a reflective essay that:
Components:	<b>E2f.1:</b> engages the reader by establishing a context, creating a persona, and otherwise developing reader interest; <b>E2f.2:</b> analyzes a condition or situation of significance; <b>E2f.3:</b> develops a commonplace, concrete occasion as the basis for the reflection, e.g. personal observation or experience; <b>E2f.4:</b> creates an organizing structure appropriate to purpose and audience; <b>E2f.5:</b> uses a variety of writing strategies, such as concrete details, comparing and contrasting, naming, describing, creating a scenario; <b>E2f.6:</b> provides a sense of closure to the writing.

Examples:	<i>Examples of reflective essays include:</i> <ul style="list-style-type: none"><li>• <i>An analysis of the significance of a proverb or quotation.</i></li><li>• <i>A report about a concrete occasion and its implications over time.</i></li><li>• <i>An essay comparing a school issue to broader societal concerns.</i></li><li>• <i>A paper explaining how some experiences, conditions, or concerns have universal significance.</i></li><li>• <i>A self-reflective essay evaluating a portfolio to be submitted.</i></li><li>• <i>A comparison of a scene from a work of fiction with a lesson learned from a personal experience.</i></li><li>• <i>A paper about a common childhood experience from a more adult perspective.</i></li></ul>
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Strand:	<b>E3 Speaking, Listening, and Viewing</b>
	Speaking, listening, and viewing are fundamental processes which people use to express, explore, and learn about ideas. The functions of speaking, listening, and viewing include gathering and sharing information; persuading others; expressing and understanding ideas; coordinating activities with others; and selecting and critically analyzing messages. The contexts of these communication functions include one-to-one conferences, small group interactions, large audiences and meetings, and interactions with broadcast media.

Standard	<b>E3a:</b> The student participates in one-to-one conferences with a teacher, paraprofessional, or adult volunteer, in which the student:
Components:	<b>E3a.1:</b> initiates new topics in addition to responding to adult-initiated topics; <b>E3a.2:</b> asks relevant questions; <b>E3a.3:</b> responds to questions with appropriate elaboration; <b>E3a.4:</b> uses language cues to indicate different levels of certainty or hypothesizing, e.g., “what if...,” “very likely...,” “I’m unsure whether...”; <b>E3a.5:</b> confirms understanding by paraphrasing the adult’s directions or suggestions.

Examples:	<i>Examples of one-to-one interactions include:</i> <ul style="list-style-type: none"><li>• <i>Book talks using panels, literature circles, or round tables.</i></li><li>• <i>Analytical discussion of movies or television program with a teacher or parent in a one to one situation.</i></li></ul>
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- *Student-teacher conferences regarding a draft of an essay, the student's progress on a mathematics assignment, or the state of a science project.*
- *Assessment interview by a teacher about an author or book.*
- *Discussion of portfolio artifacts.*

- Standard: **E3b:** The student participates in group meetings, in which the student:
- Components: **E3b.1** displays appropriate turn-taking behaviors;  
**E3b.2:** actively solicits another person's comment or opinion;  
**E3b.3:** offers own opinion forcefully without dominating;  
**E3b.4:** responds appropriately to comments and questions;  
**E3b.5:** volunteers contributions and responds when directly solicited by teacher or discussion leader;  
**E3b.6:** gives reasons in support of opinions expressed;  
**E3b.7:** clarifies, illustrates, or expands on a response when asked to do so; asks classmates for similar expansions;  
**E3b.8:** employs a group decision-technique such as brainstorming or problem-solving sequence (e.g. recognize problem, define problem, identify possible solutions, select optimal solution, implement solution, evaluate solution);  
**E3b.9:** divides labor so as to achieve the overall group goal efficiently.

- Examples: *Examples of activities involving group meetings include:*
- *Develop and negotiate a classroom rubric.*
  - *Engage in classroom town meetings.*
  - *Participate in book talks with other students.*
  - *Work as part of a group to solve a complex mathematical task.*
  - *Role-play.*
  - *Participate in peer writing response groups.*

- Standard: **E3c:** The student prepares and delivers an individual presentation, in which the student:
- Components: **E3c.1:** shapes information to achieve a particular purpose and to appeal to the interests and background knowledge of audience members;  
**E3c.2:** shapes content and organization according to criteria for importance and impact rather than according to availability of information in resource materials;  
**E3c.3:** uses notes or other memory aids to structure the presentation;  
**E3c.4:** develops several main points relating to a single thesis;  
**E3c.5:** engages the audience with appropriate verbal cues and eye contact;  
**E3c.6:** projects a sense of individuality and personality in selecting and organizing content and in delivery.

- Examples: *Examples of presentations include:*
- *A presentation of project plans or a report for an Applied Learning project.*
  - *A report that analyzes several historical records of a single event and attempts to understand the reasons for the similarities and differences.*
  - *A report that presents data collected to prove/disprove a particular hypothesis, along with an appropriate conclusion.*

	<ul style="list-style-type: none"><li>• A talk that outlines a plan of action for implementing a new school policy and the reasoning supporting the selected plan over other options.</li><li>• A report that analyzes a trend running through several literary works.</li></ul>
Standard:	<b>E3d:</b> The student makes informed judgments about television, radio, and film productions; that is, the student:
Components:	<b>E3d.1:</b> demonstrates an awareness of the presence of the media in the daily lives of most people; <b>E3d.2:</b> evaluates the role of the media in focusing attention and in forming opinion; <b>E3d.3:</b> judges the extent to which the media are a source of entertainment as well as a source of information; <b>E3d.4:</b> defines the role of advertising as part of media presentation.
Examples:	<i>Examples of activities through which students might produce evidence of making informed judgments about television, radio, and film production include:</i> <ul style="list-style-type: none"><li>• Maintain a week's log to document personal viewing habits, and analyze the information collected in the log.</li><li>• Summarize patterns of media exposure in writing or in an oral report.</li><li>• Identify the appeal of popular television shows and films for particular audiences.</li><li>• Explain the use of "propaganda techniques" (e.g. bandwagon, glittering generality commercials).</li><li>• Analyze the characteristics of different television genres (e.g., the talk show, the situation comedy, the public affairs show).</li><li>• Analyze and evaluate information available on the internet.</li></ul>
Standard:	<b>E3e:</b> The student listens to and analyzes a public speaking performance; that is, the student:
Components:	<b>E3e.1:</b> takes notes on salient information; <b>E3e.2:</b> accurately summarizes the essence of each speaker's response; <b>E3e.3:</b> formulates a judgment about the issues under discussion.
Examples:	<i>Examples of activities through which students might provide evidence of analysis of public speaking include:</i> <ul style="list-style-type: none"><li>• Take notes of a meeting of a local governing group.</li><li>• Analyze an address by a political leader (e.g., demagoguery, political bias, propaganda techniques, and political correctness).</li></ul>
Strand:	<b>E4 Conventions, Grammar and Usage of the English Language</b>
	Having control of the conventions and grammar of the English language means having the ability to represent oneself appropriately with regard to current standards of correctness (e.g., spelling, punctuation, paragraphing, capitalization, subject-verb agreement). Usage involves the appropriate application of conventions and grammar in both written and spoken formats
Standard:	<b>E4a:</b> The student independently and habitually demonstrates an understanding of the rules of the English language in written and oral work, and selects the structures and features of language appropriate to the purpose, audience, and context of the work. The student demonstrates control of:
Components:	<b>E4a.1:</b> grammar;

- E4a.2:** paragraph structure;
- E4a.3:** punctuation;
- E4a.4:** sentence construction;
- E4a.5:** spelling;
- E4a.6:** usage.

Examples:

*Examples of activities through which students might demonstrate an understanding of the rules of the English language include:*

- *Demonstrate in a piece of writing the ability to manage the conventions, grammar, and usage of English so that they aid rather than interfere with reading,*
- *Independently and accurately proofreads the student's own writing or the writing of others, using dictionaries, thesauruses, and other resources as appropriate*
- *Apply the conventions of language during formal oral presentations.*
- *Demonstrate use of a variety of sentence patterns.*

Standard:

**E4b:** The student analyzes and subsequently revises work to clarify it or make it more effective in communicating the intended message or thought. The student's revisions should be made in light of the purposes, audiences, and contexts that apply to the work. Strategies for revising include:

Components:

- E4b.1:** adding or deleting details;
- E4b.2:** adding or deleting explanations;
- E4b.3:** clarifying difficult passages;
- E4b.4:** rearranging words, sentences, and paragraphs to improve or clarify meaning;
- E4b.5:** sharpening the focus;
- E4b.6:** reconsidering the organizational structure;
- E4b.7:** rethinking and/or rewriting the piece in light of different audiences and purposes.

Examples:

*Examples of activities through which students might provide evidence of analyzing and revising written work include:*

- *Incorporate into revised drafts, as appropriate, suggestions taken from critiques made by peers and teachers.*
- *Produce a series of distinctly different drafts that result in a polished piece of writing or presentation.*
- *Critique the writing or presentation of a peer*
- *Describe the reasons for stylistic choices made as a writer or presenter.*
- *Produce a series of papers on the same topic, each serving a different purpose.*
- *Manage a writing portfolio and/or electronic portfolio*

Strand:

**E5 Literature**

Literature consists of poetry, fiction, non-fiction, and essays as distinguished from instructional, expository or journalistic writing.

Standard:

**E5a:** The student responds to non-fiction, fiction, poetry, and drama using interpretive, critical, and evaluative processes; that is, the student:

Components:

**E5a.1:** makes thematic connections among literary texts, public discourse, and media;

- E5a.2:** evaluates the impact of authors' decisions regarding word choice, style, content, and literary elements;
- E5a.3:** identifies the characteristics of literary forms and genres;
- E5a.4:** evaluates literary merit;
- E5a.5:** explains the effect of point of view;
- E5a.6:** makes inferences and draws conclusions about fictional and non-fictional contexts, events, characters, settings, themes, and styles;
- E5a.7:** interprets the effect of literary devices, such as figurative language, allusion, diction, dialogue, description, symbolism;
- E5a.8:** identifies the stance of a writer in shaping the presentation of a subject;
- E5a.9:** identifies ambiguities, subtleties, contradictions, ironies, and nuances;
- E5a.10:** understands the role of tone in presenting literature (both fictional and non-fictional);
- E5a.11:** demonstrates how literary works (both fictional and non-fictional) reflect the culture that shaped them.

Examples:

*Examples of responding to literature include:*

- *Analyze stereotypical characters in popular fiction.*
- *Evaluate the effect of literary devices in a number of poems by one author or poems on a common topic.*
- *Compare the literary merits of two or more short stories, biographies of one individual, novels, or plays.*
- *Compare two different video presentations of a literary work.*
- *Compare two works written on the same topic or theme.*
- *Identify and analyze the persona of the writer.*
- *Compare two literary texts that share a similar theme.*
- *Identify and explain the author's point of view toward an issue raised in one of an author's works.*
- *Identify and explain the literary, cultural, and social context of a literary work.*

Standard:

**E5b:** The student produces work in at least one literary genre that follows the conventions of the genre.

Examples:

*Examples of literary genres include:*

- *A reflective essay.*
- *A memoir.*
- *A short story.*
- *A short play.*
- *A poem.*
- *A vignette.*

Strand:

## **E6 Public Documents**

A public document is a document that focuses on civic issues or matters of public policy at the community level or beyond. These documents, ranging from speeches to editorials to radio and television spots to pamphlets, do at least one of the following: take issue with a controversial public policy; suggest an alternative course of action; analyze and defend a contemporary public policy; define a public problem and suggest policy.

Standard:

**E6a:** The student identifies strategies common to public documents and public discourse, including:

- Components: **E6a.1:** effective use of argument;  
**E6a.2:** use of the power of anecdote;  
**E6a.3:** anticipation of counter claims;  
**E6a.4:** appeal to audiences both friendly and hostile to the position presented;  
**E6a.5:** use of emotionally laden words and imagery;  
**E6a.6:** citing of appropriate references or authorities.

- Examples: *Examples of activities through which students might provide evidence of identifying strategies used in public documents include:*
- *Identify the main point in a political speech.*
  - *Evaluate an editorial.*
  - *Examine campaign literature to determine underlying assumptions.*
  - *Examine a range of articles published in a magazine or newspaper and drawing inferences about the political stance of that magazine or newspaper.*

- Standard: **E6b:** The student creates public documents, in which the student:
- Components: **E6b.1:** exhibits an awareness of the importance of precise word choice and the power of imagery and/or s  
**E6b.2:** utilizes and recognizes the power of logical arguments based on appealing to a reader's emotions;  
**E6b.3:** uses arguments that are appropriate in terms of the knowledge, values, and degree of understanding of the intended audience;  
**E6b.4:** uses a range of strategies to appeal to readers.

- Examples: *Examples of public documents include:*
- *A proposal for changing an existing social or school policy.*
  - *An analysis of a school policy.*
  - *A letter to an elected official or editor taking a position on an issue or concern.*
  - *A multi-media presentation to school officials, student council, public officials, etc.*

Strand: **E7 Functional Documents**

A functional document is a document that exists in order to get things done, usually within a relatively limited setting such as a social club, a business, an office, a church, or an agency. These often take the form of memoranda, letters, instructions, and statements of organizational policies. Functional documents require that particular attention be paid to issue of layout, presentation, and particularly to audience and the way different audiences will interact with the documents.

- Standard: **E7a:** The student identifies strategies common to effective functional documents, including:
- Components: **E7a.1:** visual appeal, e.g. format, graphics, white space, and headers;  
**E7a.2:** logic of the sequence in which the directions are given;  
**E7a.3:** point out possible reader misunderstandings and misconceptions;

- Examples: *Examples of activities through which students might provide evidence of*
- *Critiquing functional documents include:*
  - *Analyze a manual.*
  - *Analyze a contract.*

- *Review a loan application/bank statement.*
- *Examine tax documents.*
- *Evaluate advertisements.*
- *Critique web sites.*

Standard: **E7b:** The student creates functional documents appropriate to audience and purpose, in which the student:

- Components: **E7b.1:** reports, organizes, and conveys information and ideas accurately;  
**E7b.2:** includes relevant narrative details, such as scenarios, definitions, and examples;  
**E7b.3:** anticipates readers' problems, mistakes, and misunderstandings;  
**E7b.4:** uses a variety of formatting techniques, such as headings, subordinate terms, foregrounding of main ideas, hierarchical structures, graphics, and color;  
**E7b.5:** employs consistent and appropriate word choices.

Examples: *Examples of functional documents include:*

- *A summary of a meeting.*
- *A manual.*
- *A proposal.*
- *A set of instructions.*
- *A recommendation.*
- *A web site.*

The process standards of **problem solving, reasoning and proof, connections communication, and representation** are interwoven and independent with the content standards and are necessary for the comprehensive understanding of mathematics.

Strand: **M1 Numbers and Operations**

Pre-Kindergarten through Grade 12 instructional programs should enable all students to:

- understand numbers, ways of representing numbers, relationships among numbers, and number systems;
- understand meanings of operations and how they relate to one another;
- understand how to compute fluently and make reasonable estimates.

In Grades 9–12, all students should:

- Standards:
- M1a:** connect physical, verbal and symbolic representations of irrational numbers and properties of special numbers, i.e.,  $\sqrt{2}$ ,  $\pi$ ;
  - M1b:** compare, order, and determine equivalent forms for rational and irrational numbers;
  - M1c:** define the concept of complex numbers in the context of the square root of a negative number;
  - M1d:** using powers and roots including rational exponents, simplify number expressions;
  - M1e:** define the properties of matrices;
  - M1f:** identify and explain which mathematical properties hold for a given set or operations for the real number system, i.e., density, closure, commutative, associative, distributive;
  - M1g:** solve equations and inequalities using the inverse relationship of operations to include powers and roots;
  - M1h:** organize and analyze data using the operations of addition, subtraction, and scalar multiplication for matrices;
  - M1i:** estimate the approximate value of square and cube roots without the use of a calculator;
  - M1j:** use estimation to judge the reasonableness of numerical computations and their results;
  - M1k:** develop fluency in operations with real numbers using mental computation, paper and pencil calculations, and technology;
  - M1l:** Use properties of the number system to judge the validity of results and justify each step of a procedure.

Strand: **M2 Algebra**

Pre-Kindergarten through Grade 12 instructional programs should enable all students to:

- understand patterns, relations, and functions;
- represent and analyze mathematical situations and structures using algebraic symbols;
- use mathematical models to represent and understand quantitative relationships;
- analyze change in various contexts.

In Grades 9–12, all students should:

- Standards:
- M2a:** analyze, generalize, and create a variety of mathematical patterns;
  - M2b:** analyze, interpret, and translate between relationships of patterns, functions, and relationships represented in tables, graphs, and matrices;
  - M2c:** identify, describe, and compare the characteristics and properties of functions and relations including linear and nonlinear;
  - M2d:** represent linear and nonlinear functions with tables, graphs, verbal rules, and symbolic rules and interpret these representations;
  - M2e:** use algebraic representations and functions to generalize geometric properties and relationships;
  - M2f:** write, solve, and interpret the relationship of equivalent forms for equations, inequalities, and systems of equations;
  - M2g:** explain and demonstrate the relationship between various representations of a linear equation;
  - M2h:** add, subtract, and multiply polynomials and divide polynomials by monomials;
  - M2i:** translate between numeric and symbolic form of a sequence or series;
  - M2j:** apply direct and inverse variation to both real-world and mathematical models;
  - M2k:** solve and analyze real-world problems that can be modeled using linear, and nonlinear functions;
  - M2l:** solve and analyze real-world problems that can be modeled using systems of equations and inequalities;
  - M2m:** predict a reasonable conclusion for a problem being modeled, and verify the conclusion through solving the problem;
  - M2n:** approximate and interpret rates of change from graphical and numerical data;
  - M2o:** identify and explain how changes in parameters affect graphs of functions;
  - M2p:** explain and graph the relationship between two variables for linear, periodic exponential, quadratic relationships and a limiting value.

Strand: **M3 Geometry**

Pre-Kindergarten through Grade 12 instructional programs should enable all students to:

- analyze characteristics and properties of two- and three- dimensional geometric shapes and develop mathematical arguments about geometric relationships;
- specify locations and describe spatial relationships using coordinate geometry and other representational systems;
- apply transformations and use symmetry to analyze mathematical situations;
- use visualization, spatial reasoning, and geometric modeling to solve problems.

In Grades 9–12, all students should:

- Standards:
- M3a:** identify undefined terms and explain the need for undefined terms;
  - M3b:** use a variety of ways to represent geometric ideas and recognize relationships among them including coordinates, networks, transformations, and matrices;
  - M3c:** identify and explain relationships among classes of two- and three-dimensional geometric objects, i.e., sides, angles, etc.;

- M3d:** make conjectures, test, and prove relationships among two- and three-dimensional geometric objects, i.e., congruent triangles;
- M3e:** distinguish between postulates and theorems and apply them appropriately;
- M3f:** identify and explain examples of induction and deductive;
- M3g:** analyze geometric situations using Cartesian coordinates and other appropriate coordinate systems;
- M3h:** use rectangular coordinates; calculate midpoints of segments, slopes of lines and segments, and distances between two points to solve problems;
- M3h:** use sketches, coordinates, function notation, and matrices to represent translations, reflections, rotations, and dilations of objects in the plane;
- M3i:** draw and construct representations for two-dimensional objects using a variety of tools;
- M3j:** construct vertex-edge graphs to model and solve problems;
- M3k:** identify and explain projections and cross sections by visualizing different perspectives of three-dimensional objects and spaces;
- M3l:** Solve problems by applying properties and theorems of lines, angles, polygons, and circles.

Strand: **M4 Measurement**

Pre-Kindergarten through Grade 12 instructional programs should enable all students to:

- understand measurable attributes of objects and the units, systems, and processes of measurement;
- apply appropriate techniques, tools, and formulas to determine measurements.

In Grades 9–12, all students should:

- Standards:
- M4a:** use the appropriate unit or dimensional analysis in measurement situations;
  - M4b:** explain the effect of changes in the measurement of one attribute of an object relating to changes on other attributes;
  - M4c:** recognize and apply alternative methods of measurement;
  - M4d:** apply appropriate formulas for the area, surface area, and volume of geometric figures, including cones, spheres, and cylinders;
  - M4e:** analyze and explain precision, accuracy, and approximate error in measurement situations.

Strand: **M5 Data Analysis and Probability**

Pre-Kindergarten through Grade 12 instructional programs should enable all students to:

- formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them;
- select and use appropriate statistical methods to analyze data;
- develop and evaluate inferences and predictions that are based on data;
- understand and apply basic concepts of probability.

In Grades 9–12, all students should:

- Standards:
- M5a:** classify and describe data as single (univariate) or two variable (bivariate) and as quantitative (measurement) or qualitative (categorical) data;
  - M5b:** design surveys and apply random sampling techniques to avoid bias in data collection;
  - M5c:** use multiple graphical displays and statistical measures to display and interpret the relationship between two variables;
  - M5d:** compare different sets of data by using summary statistics and select the appropriate graphical representation;
  - M5e:** explain the ways representations can skew data or bias presentations;
  - M5f:** describe and explain the characteristics and limitations of various sampling methods;
  - M5g:** describe and explain how the validity of predictions from a data set are affected by the relative size of a sample and the population;
  - M5h:** use counting techniques and/or combinations to solve explain probability problems;
  - M5i:** describe, create, and analyze a sample space, then calculate the probability;
  - M5j:** use the concept of conditional probability and independent events to apply and interpret the results of a set;
  - M5k:** calculate and explain the probability of compound events;
  - M5l:** use sampling or simulation to construct empirical probability distributions to compare and explain corresponding theoretical probabilities;
  - M5m:** differentiate and explain the relationship between the probability of an event and the odds of an event.

Strand: **M6 Problem Solving**

- Standard: **M6a:** Pre-Kindergarten through Grade 12 instructional programs should enable all students to:
- build new mathematical knowledge through problem solving;
  - solve problems that arise in mathematics and in other contexts;
  - apply and adapt a variety of appropriate strategies to solve problems;
  - monitor and reflect on the process of mathematical problem solving.

Strand: **M7 Reasoning and Proof**

- Standard: **M7a:** Pre-Kindergarten through Grade 12 instructional programs should enable all students to:
- recognize reasoning and proof as fundamental aspects of mathematics;
  - make and investigate mathematical conjectures;
  - develop and evaluate mathematical arguments and proofs;
  - select and use various types of reasoning and methods of proof.

Strand: **M8 Communication**

- Standard: **M8a:** Pre-Kindergarten through Grade 12 instructional programs should enable all students to:
- organize and consolidate their mathematical thinking through communication;

- communicate their mathematical thinking coherently and clearly to peers, teachers, and others;
- analyze and evaluate the mathematical thinking and strategies of others;
- use the language of mathematics to express mathematical ideas precisely.

Strand:

**M9 Connections**

Standard:

- M9a:** Pre-Kindergarten through Grade 12 instructional programs should enable all students to:
- recognize and use connections among mathematical ideas;
  - understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
  - recognize and apply mathematics in contexts outside of mathematics.

Strand

**M10 Representation**

Standard:

- M10a:** Pre-Kindergarten through Grade 12 instructional programs should enable all students to:
- create and use representations to organize, record, and communicate mathematical ideas;
  - select, apply, and translate among mathematical representations to solve problems;
  - use representations to model and interpret physical, social, and mathematical phenomena.

**Key Scientific Concepts**

In each DoDEA high school science course, students further the development of major concepts and processes including:

- Systems, order, and organization
- Evidence, models, and explanation
- Change, constancy, equilibrium and measurement
- Theories of evolution such as biological, chemical and geological
- Form and function

**Standards Included in Every Course**

Included in every high school science course are the strands of scientific inquiry, the history and nature of science, science in personal and social perspectives, science and technology, and specific content standards. These standards provide all students with a facility in scientific investigations and an ability to make connections across the sciences, mathematics, and technology.

Each science course contributes to the student’s content knowledge, the development of process skills, and the development of science literacy, to make the study of science a worthwhile lifetime endeavor. Specific courses engage students in deepening their knowledge, skills and understandings related to the standards.

**DoDEA High School Science Courses**

Courses that directly address and support the DoDEA high school science standards and provide students with optional and expanded opportunities for learning in specific science areas are:

- Biology, Human Anatomy & Physiology, Marine Biology, Oceanography, AP Biology,
- Environmental Science
- Physics Applications in the Community; Physics; AP Physics B, AP Physics C
- Chemistry Applications in the Community; Chemistry, AP Chemistry
- Earth and Space Science, Astronomy
- Science Technology Society, Science Research

Strand:

**S1 Scientific Inquiry**

The student extends their understanding of scientific inquiry and their ability to conduct scientific investigations; that is, the student:

Standards:

- S1a:** constructs questions that initiate and guide scientific investigations.
- S1b:** designs and conducts scientific investigations using established procedures that are safe, humane, and ethical.
- S1c:** uses technology and mathematics to systematically gather, record, analyze, explain, and interpret data.
- S1d:** formulates and revises scientific conclusions, explanations and models (physical, conceptual, mathematical) based on scientific knowledge, logic, and evidence.
- S1e:** recognizes, analyzes and evaluates alternative explanations and models.
- S1f:** evaluates and defends scientific arguments, acknowledging references and contributions of others.
- S1g:** communicates the scientific inquiry process using appropriate scientific language and mathematics.

Strand:

**S2 History and Nature of Science**

The student demonstrates understanding of science as a human endeavor, examining the nature of scientific knowledge and historical perspectives; that is, the student:

Standards:

- S2a:** describes how the work of scientists is influenced by their ethical standards and by societal, cultural, and personal beliefs, and how scientists use the habits of mind (such as: reasoning, insight, creativity, intellectual honesty, tolerance for ambiguity and openness to new ideas) in their work.
- S2b:** compares and contrasts the difference between science and other ways of knowing through use of empirical standards, logical arguments, and skepticism.
- S2c:** assesses the work of scientists showing that all scientific ideas depend on experimental and observational confirmation and are subject to change as new evidence becomes available.
- S2d:** describes the contributions of diverse cultures to scientific knowledge and the changes to scientific thinking that evolve over time, building upon earlier knowledge.

Strand:

**S3 Science in Personal and Social Perspectives**

The student demonstrates an understanding of the impact each individual, community, and human enterprise has on natural conditions and resources from local, national, and global perspectives; that is, the student:

Standards:

- S3a:** employs the tenets of personal and community health, safety and resource conservation.
- S3b:** identifies, accesses and uses data to construct explanations about the characteristics, rates, and sources of changes in populations, natural resources, and environmental quality.
- S3c:** assesses potential danger and risk of natural and human-induced hazards.
- S3d:** analyzes the relationships among technological, social, political, and economic changes and the impact on humans and the environment.

Strand:

**S4 Science and Technology**

The student demonstrates abilities of technological design and understandings about science, engineering and technology; that is, the student:

Standards:

- S4a:** uses technology to perform scientific investigations to secure valid and reliable results.
- S4b:** identifies and/or constructs a problem or need in relation to technological designs; proposes new designs and chooses between alternative solutions.
- S4c:** constructs understandings about the fields of science and engineering, the interrelationships between science and technology, and explains their contribution to society.
- S4d:** analyzes innovations in science and technology with respect to alternatives, risks, costs and benefits to society and the environment.

Strand:

**S5 Biology**

The student demonstrates a conceptual understanding of the organization of life on Earth; that is, the student:

Standard:

**S5a:** describes, analyzes and compares structure, function, and organization of various cells.

Components:

**S5a.1:** All living organisms are made of cells. Cells are composed of a small number of chemical elements mainly carbon, hydrogen, nitrogen, oxygen, phosphorous, and sulfur. Carbon atoms can easily bond to several other carbon atoms in chains and rings to form the large complex molecules of life.

**S5a.2:** Every cell is covered by a selectively permeable membrane that controls what can enter and leave the cell. In all but quite primitive cells, a complex network of proteins provides organization and shape and, for animal cells, movement.

**S5a.3:** Within every cell are specialized parts for the containment of hereditary material, energy transfer, protein building, waste disposal, information feedback, and even movement. In addition, most cells both individually and in groups in multicellular organisms perform some specialized function that others do not.

**S5a.4:** Communication between cells is required to coordinate their diverse activities. Some cells secrete substances that spread only to nearby cells. Others secrete hormones, special molecules that are carried in the bloodstream to widely distributed cells that have specific receptor sites to which they attach. Along nerve cells, electrical impulses carry information much more rapidly than is possible by diffusion or blood flow.

Standard:

**S5b:** communicates an understanding of the biochemistry of life including organic compounds, enzymes, cellular respiration and photosynthesis.

Components:

**S5b.1:** Chemical bonds between atoms of carbon-containing (organic) molecules can be used to assemble larger macromolecules with biological activity (including proteins, DNA, carbohydrates, and lipids).

**S5b.2:** The work of the cell is carried out by the many different types of molecules it assembles, mostly proteins. Protein molecules are long, usually folded chains made from 20 different kinds of amino-acid molecules. The function of each protein molecule depends on its specific sequence of amino acids and the shape the chain takes is a consequence of attractions between the chain's parts.

**S5b.3:** Complex interactions among the different kinds of molecules in the cell cause distinct cycles of activities, such as growth and division. Cell behavior can also be affected by molecules from other parts of the organism or even other organisms.

**S5b.4:** Cell functions are regulated. Regulation occurs both through changes in the activity of the functions performed by proteins and through the selective expression of individual genes. This regulation allows cells to respond to their environment and to control and coordinate cell products, growth and division.

**S5b.5:** For the body to use food for energy and building materials, the food must be broken down through a series of biochemical processes into molecules that are absorbed and transported to cells.

- S5b.6:** In some animals and humans to release energy from food, oxygen must be supplied to cells, and carbon dioxide removed. Lungs take in oxygen for the combustion of food and eliminate the carbon dioxide produced. The exchange of the two gases takes place in the alveoli of the lungs. However, metabolic processes can change when there is limited oxygen or hostile environments.
- S5b.7:** The processes of photosynthesis and respiration in plants transfer energy from the Sun to living systems (e.g., chloroplasts in plant cells use energy from sunlight to combine molecules of carbon dioxide and water into complex, energy rich organic compounds, and release oxygen into the environment).
- Standard: **S5c:** describes the behavior of organisms and hypothesizes the relationship to nervous and endocrine systems and various external stimuli.
- Components: **S5c.1:** Characteristics can be observed at molecular, cellular, and whole-organism levels—in structure, chemistry, or behavior. These characteristics strongly influence what capabilities an organism will have and how it will react.
- S5c.2:** Multicellular organisms have nervous systems that help an organism adjust to changes in both its internal and external environments. Nervous systems are formed from specialized cells that carry impulses rapidly through their long cell extensions called axons. The nerve cells communicate with each other by secreting specific excitatory and inhibitory molecules. In sense organs, specialized cells detect light, sound, and specific chemicals that enable organisms to monitor what is going on in their environment.
- S5c.3:** The nervous system works by electrochemical signal transport from one nerve to the next. The hormonal system exerts its influences through chemicals that circulate in the blood. These two systems also affect each other by coordinating body functions.
- S5c.4:** Organisms have behavioral responses to internal changes and to external stimuli. Responses to external stimuli can result from interactions with the organism’s own species and others, as well as environmental changes. These responses either can be innate or learned.
- S5c.5:** Drugs, structural injuries, and chemical imbalances may mimic and/or block the molecules involved in transmitting nerve or hormone signals and therefore disturb normal operations of the brain and body.
- Standard: **S5d:** elaborates on the principles of genetics and explains the role of DNA, genes, chromosomes, and mutation in reproduction and heredity.
- S5d.1:** The many body cells in an individual can be very different from one another, even though they are all descended from a single stem cell and thus have essentially identical genetic instructions. Different genetic instructions are used in different types of cells, influenced by the cell’s environment and past history.
- S5d.2:** The genetic information encoded in DNA molecules provides instructions for assembling protein molecules. The individual units that make up the genetic code are virtually the same for all life forms. Before a cell divides, the instructions are duplicated so that each of the two new cells gets all the necessary information to perform life processes.

	<p><b>S5d.3:</b> The information passed from parents to offspring is coded in DNA molecules through a series of units called genes.</p> <p><b>S5d.4:</b> Genes are segments of DNA molecules. Inserting, deleting, or substituting DNA segments can alter genes. An altered gene may be passed on to every cell that develops from it. The resulting features may help, harm, or have little or no effect on the offspring's success in its environment.</p> <p><b>S5d.5:</b> The sorting and recombination of genes in sexual reproduction results in a great variety of possible gene combinations in the offspring of any two parents.</p> <p><b>S5d.6:</b> Changes in DNA (mutations) occur spontaneously at low rates. Some of these changes make no difference to the organism, whereas others can change cells and organisms. Only mutations in germ cells can create the variation that changes an organism's offspring.</p>
Standard:	<p><b>S5e:</b> relates theories of biological evolution to geologic time and addresses speciation, biodiversity, natural selection, and biological classification.</p>
Components:	<p><b>S5e.1:</b> Heritable characteristics influence what capabilities an organism will have and how it will react, and therefore influence how likely it is to survive and reproduce.</p> <p><b>S5e.2:</b> Offspring of advantaged individuals, in turn, are more likely than others to survive and reproduce in that environment. The proportion of individuals that have advantageous characteristics will increase.</p> <p><b>S5e.3:</b> New heritable characteristics can result from new combinations of existing genes or from mutations of genes in reproductive cells.</p> <p><b>S5e.4:</b> Natural selection leads to organisms that are well suited for survival in particular environments. When an environment changes, the survival value of some inherited characteristics may change.</p> <p><b>S5e.5:</b> Natural selection and its long-term consequences provide a scientific explanation for the fossil record of ancient life forms, as well as for the molecular similarities observed among the diverse species of living organisms.</p> <p><b>S5e.6:</b> Biological changes over time appear to be like the growth of a bush: Some branches survive from the beginning with little or no change, many die out altogether, and others branch repeatedly, sometimes giving rise to more complex organisms. Thus, the theory of evolution builds on what already exists, so the more variety there is, the more there can be in the future. However, long-term progress is not necessarily in some set direction.</p> <p><b>S5e.7:</b> The basic idea of biological evolution is that the Earth's present-day species developed from earlier, distinctly different species.</p>
Standard:	<p><b>S5f:</b> examines ecology as interrelationships of biotic and abiotic factors and explains the transfer of matter and energy within ecosystems.</p>
Components:	<p><b>S5f.1:</b> The interrelationships and interdependencies of organisms and environments establish a variety of ecosystems.</p> <p><b>S5f.2:</b> Understanding any one part of an ecosystem requires knowledge of how the parts interact with each other.</p>

- S5f.3:** The amount of life any environment can support is limited by the available energy, water, oxygen, and minerals, and by the ability of ecosystems to recycle the residue of dead organic materials.
- S5f.4:** Human activities can deliberately or inadvertently change the equilibrium in ecosystems. An ecosystem in equilibrium may return to the same state of equilibrium if the disturbances it experiences are small. However, large disturbances may also cause a shift in the equilibrium so that ecosystems eventually settle into a different new state of equilibrium.
- S5f.5:** In the long run, however, ecosystems always change when climate changes or when one or more new species appear as a result of migration or local evolution. Like many complex systems, ecosystems tend to have cyclic fluctuations around a state of rough equilibrium.
- S5f.6:** The complexity and organization of organisms accommodate the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain the organism. Plants alter the Earth's atmosphere by removing carbon dioxide from it, using the carbon to make sugars and releasing oxygen.
- S5f.7:** As matter and energy flows through different levels of organization of living systems – cells, tissues, organs, organisms, communities – and between living systems and the physical environment, chemical elements are recombined in different ways. Each recombination results in storage and dissipation of energy into the environment as heat. Matter and energy are conserved in each change.

Strand:

**S6 Physics**

The student demonstrates a conceptual understanding of the organization and interaction of matter and energy, and motion and forces; that is, the student:

Standards:

**S6a:** communicates an understanding of atomic and subatomic structure, addressing parts and properties of the atom, electron configuration, nuclear forces, radioactivity, and nuclear reactions.

Components:

**S6a.1:** Matter is made of minute particles called atoms, and atoms are composed of even smaller components. These components have measurable properties, such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and electrons holds the atom together.

**S6a.2:** The atom's nucleus is composed of protons and neutrons, which are much more massive than electrons. When an element has atoms that differ in the number of neutrons, these atoms are called different isotopes of the element.

**S6a.3:** Neutrons have a mass that is nearly identical to that of protons, but neutrons have no electric charge. Although neutrons have little effect on how an atom interacts with others, they do affect the mass and stability of the nucleus. Isotopes of the same element have the same number of protons (and therefore of electrons) but differ in the number of neutrons.

**S6a.4:** Atoms often join with one another in various combinations in distinct molecules or in repeating three-dimensional crystal patterns. An enormous variety of biological, chemical, and physical phenomena can be explained by changes in the arrangement and motion of atoms and molecules.

- S6a.5:** Energy levels are associated with configurations of atoms and molecules. Some changes of configuration require an input of energy whereas others release energy.
- S6a.6:** The nuclear forces that hold the nucleus of an atom together, at nuclear distances, are usually stronger than the electric forces that would make it fly apart.
- S6a.7:** Nuclear reactions convert a fraction of the mass of interacting particles into energy, and they can release much greater amounts of energy than atomic interactions. Fission is the splitting of a large nucleus into smaller pieces. Fusion is the joining of two nuclei at extremely high temperature and pressure.
- S6a.8:** Radioactive isotopes are unstable and undergo spontaneous nuclear reactions, emitting particles and/or wavelike radiation.
- Standard: **S6b:** analyzes and explains the relationship between structure and properties of matter (ions, molecules, compounds, elements) and uses those relationships to predict chemical properties of elements and placement on the Periodic Table.
- Components: **S6b.1:** The configuration of atoms in a molecule determines the molecule's properties. Shapes are particularly important in how large molecules interact with others.
- S6b.2:** When elements are listed in order by the masses of their atoms, the same sequence of properties appears over and over again in the list. The list is known as the Periodic Table.
- S6b.3:** Atoms interact with one another by transferring or sharing electrons that are furthest from the nucleus. These outer electrons govern the chemical properties of the element.
- S6b.4:** An element is composed of a single type of atom. When elements are listed in order according to the number of protons, repeated patterns of physical and chemical properties identify families of elements with similar properties.
- Standard: **S6c:** articulates and demonstrates the principles of motions and forces and applies them to examples of impact on objects.
- Components: **S6c.1:** An object's motion may be described by measurements of position, velocity, and acceleration from a specific point.
- S6c.2:** Objects change their motion only when a net force is applied. The magnitude of the change in motion can be calculated using the relationship  $F = ma$ , which is independent of the nature of the force. Whenever one object exerts force on another, a force equal in magnitude and opposite in direction is exerted on the first object.
- S6c.3:** Frictional force occurs between two objects in contact with each other, opposes the direction of motions and complicates the description of motion.
- S6c.4:** The strength of the gravitational attractive force between two objects is proportional to their masses and inversely proportional to the square of the distance between them.
- S6c.5:** The electrostatic force is a universal force that exists between any two charged objects. Opposite charges attract while like charges repel. The strength of the force is proportional to the charges, and, as with

gravitation, inversely proportional to the square of the distance between them.

**S6c.6:** Electricity and magnetism are two aspects of a single phenomenon. Moving electric charges produce magnetic fields, and moving magnets can be used to produce electrical current. The current can flow through a complete circuit and is proportional to voltage and inversely proportional to the total resistance.

**S6c.7:** Electrostatic forces acting within and between atoms are vastly stronger than the gravitational forces acting between the atoms. At the atomic level, electric forces between oppositely charged electrons and protons hold atoms and molecules together and thus are involved in all chemical reactions. On a larger scale, these forces hold solid and liquid materials together and act between objects when they are in contact—as in sticking or sliding friction.

Standard: **S6d:** analyzes the distinctions among thermal, potential, and kinetic energy and explains conservation of energy and its associated increase in disorder.

Components: **S6d.1:** Thermal energy consists of random motion and the vibration of atoms, molecules, and ions. The higher the temperature, the greater the atomic or molecular motion.

**S6d.2:** All energy can be considered to be either kinetic energy, which is the energy of motion; potential energy, which is the stored energy dependent on relative position; or energy contained by a field, such as electromagnetic waves.

**S6d.3:** The total energy of the universe is constant; it cannot be created or destroyed (conservation of energy). Energy can be transferred by collisions, as in chemical and nuclear reactions, or by waves, as in sound, light, and other types of radiation.

**S6d.4:** In a closed system, everything tends to become less organized over time. Thus, in all energy transfers, the overall effect is that the energy is dispersed. Examples are the transfer of energy from hotter to cooler objects by conduction, radiation, or convection, and the warming of our surroundings when we burn fuels.

Standard: **S6e:** differentiates the interactions between matter and energy and uses waves and wave properties (including light, sound, transverse, longitudinal and electromagnetic waves) to identify matter.

Components: **S6e.1:** Each kind of atom or molecule can gain or lose energy only in discrete packets whose magnitudes are inversely proportional to their wavelengths. These atoms and molecules can absorb and emit light only at wavelengths corresponding to these packets and those wavelengths can be used to identify a specific substance.

**S6e.2:** Waves, including sound, seismic waves, waves on water, and light waves, have energy and can transfer energy when they interact with matter.

**S6e.3:** A wave's speed is the product of its frequency and wavelength. The speed of any wave varies with the substance that it travels through; however, only electromagnetic waves can travel through space and they all travel at the speed of light.

**S6e.4:** Waves can superimpose on one another, bend around corners, reflect off surfaces, be absorbed by materials they encounter, and change direction when entering a new material. All these effects vary with wavelength. The observed wavelength of a wave depends upon the relative motion of the source and the observer.

**S6e.5:** Electromagnetic waves include radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, x-rays, and gamma rays. Electromagnetic waves result when a charged object is accelerated or decelerated.

**S6e.6:** Optics is the study of electromagnetic waves with wavelengths greater than x-rays and shorter than microwaves.

Strand:

**S7 Chemistry**

The student demonstrates a conceptual understanding of the organization and behavior of matter; that is, the student:

Standard:

**S7a:** communicates an understanding of atomic structure, addressing parts and properties of the atom, electron configuration and nuclear forces.

Components:

**S7a.1:** Matter is made of minute particles called atoms, and atoms are composed of even smaller components. These components have measurable properties, such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and electrons holds the atom together.

**S7a.2:** The atom's nucleus is composed of protons and neutrons, which are much more massive than electrons. When an element has atoms that differ in the number of neutrons, these atoms are called different isotopes of the element.

**S7a.3:** Neutrons have a mass that is nearly identical to that of protons, but neutrons have no electric charge. Although neutrons have little effect on how an atom interacts with others, they do affect the mass and stability of the nucleus. Isotopes of the same element have the same number of protons (and therefore of electrons) but differ in the number of neutrons.

**S7a.4:** The nuclear forces that hold the nucleus of an atom together, at nuclear distances, are usually stronger than the electric forces that would make it fly apart. Nuclear reactions convert a fraction of the mass of interacting particles into energy, and they can release much greater amounts of energy than atomic interactions. Fission is the splitting of a large nucleus into smaller pieces. Fusion is the joining of two nuclei at extremely high temperature and pressure, and is the process responsible for the energy of the sun and other stars.

**S7a.5:** Radioactive isotopes are unstable and undergo spontaneous nuclear reactions, emitting particles and/or wavelike radiation. The decay of any one nucleus cannot be predicted, but a large group of identical nuclei decay at a predictable rate. This predictability can be used to estimate the age of materials that contain radioactive isotopes.

**S7a.6:** Scientists continue to investigate atoms and have discovered even smaller constituents of which neutrons and protons are made.

Standard:

**S7b:** analyzes and demonstrates the relationship between structure and properties of matter (ions, molecules, compounds, elements) and uses

those relationships to predict chemical properties of elements and their placement on the Periodic Table.

- Components: **S7b.1:** An element is composed of a single type of atom. When elements are listed in order according to the number of protons (i.e., atomic number), repeating patterns of physical and chemical properties identify families of elements with similar properties. This “Periodic Table” is a consequence of the repeating pattern of outermost electrons and their permitted energies.
- S7b.2:** Atoms interact with one another by transferring or sharing electrons that are furthest from the nucleus. These outer electrons govern the chemical properties of the element.
- S7b.3:** The configuration of atoms in a molecule determines the molecule’s properties. Shapes are particularly important in how large molecules interact with others.
- S7b.4:** The physical properties of compounds reflect the nature of the interactions among its molecules. These interactions are determined by the structure of the molecule, including the constituent atoms and the distances and angles between them.
- S7b.5:** Solids, liquids, and gases differ in the distances and angles between molecules or atoms and therefore the energy that binds them together. In solids, the structure is nearly rigid; in liquids, molecules or atoms move around each other but do not move apart; and in gases, molecules or atoms move almost independently of each other and are mostly far apart.
- Standard: **S7c:** assesses interactions of matter focusing on chemical reactions and bonds and applies the concept of conservation of matter to those interactions.
- Components: **S7c.1:** Bonds between atoms are created when electrons are paired up by being transferred or shared. A substance composed of a single kind of atom is called an element. The atoms may be bonded together into molecules or crystalline solids. A compound is formed when two or more kinds of atoms bind together chemically.
- S7c.2:** The rate of reactions among atoms and molecules depends on how often they encounter one another, which is affected by the concentration, pressure, and temperature of the reacting materials. Some atoms and molecules are highly effective in encouraging the interaction of others.
- S7c.3:** Whenever the amount of energy in one place or form diminishes, the amount in other places or forms increases by the same amount.
- S7c.4:** Chemical reactions occur all around us – in health care, cooking, cosmetics, and automobiles. Complex chemical reactions involving carbon-based molecules take place constantly in every cell in our bodies.
- S7c.5:** Chemical reactions may release or consume energy. Some reactions such as the burning of fossil fuels release large amounts of energy by losing heat and by emitting light. Light can initiate many chemical reactions such as photosynthesis.
- S7c.6:** Different energy levels are associated with different configurations of atoms and molecules. Some changes of configuration require an input of energy whereas others release energy.

- S7c.7:** When energy of an isolated atom or molecule changes, it does so in a definite jump from one value to another, with no possible values in between. The change in energy occurs when radiation is absorbed or emitted, so the radiation also has distinct energy values. As a result, the light emitted or absorbed by separate atoms or molecules (as in a gas) can be used to identify what the substance is.
- S7c.8:** Energy is released whenever the nuclei of very heavy atoms, such as uranium or plutonium, split into middleweight ones, or when very light nuclei, such as those of hydrogen and helium, combine into heavier ones. The energy released in each nuclear reaction is very much greater than the energy given off in each chemical reaction.
- S7c.9:** A large number of important reactions involve the transfer of either electrons (oxidation/reduction reactions) or hydrogen ions (acid/base reactions) between reacting ions, molecules, or atoms. In other reactions, chemical bonds are broken by heat or light to form very reactive radicals with electrons ready to form new bonds. Radical reactions control many processes such as the presence of ozone and greenhouse gases in the atmosphere, burning and processing of fossil fuels, the formation of polymers, and explosions.
- S7c.10:** Chemical reactions can take place in a wide range of time periods. Reaction rates depend on how often the reacting atoms and molecules encounter one another, on temperature, and on the properties – including shape – of the reacting species.
- S7c.11:** Catalysts accelerate chemical reactions. Chemical reactions in living systems are catalyzed by protein molecules called enzymes.
- Standard: **S7d:** distinguishes the interactions of matter and energy and demonstrates the impact of variables (temperature, time, etc.) on those interactions.
- Components: **S7d.1:** The rate of reactions among atoms and molecules depends on how often they encounter one another over time, which is affected by the concentration, pressure, and temperature of the reacting materials. Some atoms and molecules are highly effective in encouraging the interaction of others.
- S7d.2:** Waves, including sound and seismic waves, waves on water, and light waves, have energy and can transfer energy when they interact with matter.
- S7d.3:** Electromagnetic waves result when a charged object is accelerated or decelerated. Electromagnetic waves include radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, x-rays, and gamma rays. The energy of electromagnetic waves is carried in packets whose magnitude is inversely proportional to the wavelength.
- S7d.4:** In metals, electrons flow easily whereas in insulating materials such as glass, they can hardly flow at all. Semiconducting materials have intermediate behavior. At low temperatures some materials become superconductors and offer no resistance to the flow of electrons.
- Standard: **S7e:** summarizes and illustrates the conservation of energy, the increase in disorder, and the different types of energy.
- Components: **S7e.1:** Heat energy in a material consists of the disordered motions of its atoms or molecules. In any interactions of atoms or molecules, the statistical odds are that they will end up with less order than they began—that is,

with the heat energy spread out more evenly. With huge numbers of atoms and molecules, the greater disorder is almost certain.

- S7e.2:** Transformations of energy usually produce some energy in the form of heat, which spreads around by radiation or conduction into cooler places. Although just as much total energy remains, the energy that is spread out more evenly means less can be done with it.
- S7e.3:** Energy can be transferred by collisions in chemical and nuclear reactions, by light waves and other radiations, and in many other ways. As these transfers occur, the matter involved becomes steadily less ordered.
- S7e.4:** Everything tends to become less organized and less orderly over time. Thus, in all energy transfers, the overall effect is that the energy is spread out uniformly. The quantity of energy distributed in its own way over time is called entropy.
- S7e.5:** All energy can be considered to be kinetic energy, potential energy, or energy contained in a field.

Strand:

**S8 Earth and Space Sciences**

The student demonstrates a conceptual understanding of the organization of Earth and other celestial bodies; that is, the student:

Standard:

**S8a:** categorizes the sources and types of energy in the Earth system, identifies the geologic activity (such as volcanoes, plate tectonics, and earthquakes) resulting from or causing that energy, and illustrates the impact of such activity on the inhabitants and the environment.

Components:

**S8a.1:** Earth systems have internal and external sources of energy, both of which create heat. The sun is the major external source of energy. Two primary sources of internal energy are the decay of radioactive isotopes and the gravitational energy from the Earth's original formation.

**S8a.2:** The outward transfer of Earth's internal heat drives convection circulation in the mantle that propels the plates across the face of the planet.

**S8a.3:** Heating of the Earth's surface and atmosphere by the sun drives convection within the atmosphere and oceans, producing winds and ocean currents.

**S8a.4:** Global climate is determined by energy transfer from the sun at and near the Earth's surface. This energy transfer is influenced by such factors as cloud cover, the Earth's rotation, and position of mountain ranges.

**S8a.5:** The solid crust of the Earth—including both the continents and the ocean basins—consists of separate plates that ride on a denser, hot, gradually deformable layer of the Earth. The crust sections move very slowly, pressing against one another in some places, pulling apart in other places. Ocean-floor plates may slide under continental plates, sinking deep into the Earth. The surface layers of these plates may fold forming mountain ranges.

**S8a.6:** Earthquakes often occur along the boundaries between colliding plates, and molten rock from below creates pressure that is released by volcanic eruptions, helping to build up mountains. Under the ocean basins, molten rock may well up between separating plates to create new ocean floor. Volcanic activity along the ocean floor may form undersea mountains, which can thrust above the ocean's surface to become islands.

Standard:	<b>S8b:</b> compares and contrasts the composition of Earth materials and the processes within the geochemical cycle that govern their formation (including rocks, minerals, fossils, and other natural resources).
Components:	<b>S8b.1:</b> The formation, weathering, sedimentation, and reformation of rock constitute a continuing “rock cycle” in which the total amount of material stays the same as its forms change. Old rocks at the surface gradually weather and form sediments that are buried, then compacted, heated, and often recrystallized into new rock. <b>S8b.2:</b> The slow movement of material within the Earth results from heat flowing out from the deep interior and the action of gravitational forces on regions of different density. <b>S8b.3:</b> The Earth is a system containing essentially a fixed amount of each stable chemical atom or element. Each element can exist in several different chemical reservoirs. Each element on Earth moves among reservoirs in the solid Earth, oceans, atmosphere, and organisms as part of the geochemical cycles. <b>S8b.4:</b> Movement of matter between reservoirs is driven by the Earth’s internal and external sources of energy. These movements are often accompanied by a change in the physical and chemical properties of the matter. For example, carbon occurs in rocks as limestone, in the atmosphere as carbon dioxide, in water as dissolved carbon dioxide, and in all organisms as complex molecules that control the chemistry of life. <b>S8b.5:</b> Every mineral is a product of the redistribution or recombination of its component chemical elements to form a stable substance. The process of mineral formation is known as crystallization. The process is dependent upon the concentration of the chemical elements present and the temperature/pressure conditions. <b>S8b.6:</b> Some minerals are very rare and some exist in great quantities, but—for practical purposes—the ability to recover them is just as important as their abundance. As minerals are depleted, obtaining them becomes more difficult. Recycling and the development of substitutes can reduce the rate of depletion.
Standard:	<b>S8c:</b> investigates and displays the relationships among weather, cloud cover, land features, atmosphere and oceans.
Components:	<b>S8c.1:</b> Weather (in the short run) and climate (in the long run) involve the transfer of energy in and out of the atmosphere. Solar radiation heats the land masses, oceans, and air. Transfer of heat energy at the boundaries between the atmosphere, the land masses, and the oceans results in layers of different temperatures and densities in both the ocean and atmosphere. The action of gravitational force on regions of different densities causes them to rise or fall—and such circulation, influenced by the rotation of the Earth, produces winds and ocean currents. <b>S8c.2:</b> Global climate is determined by energy transfer from the sun at and near the Earth’s surface. This energy transfer is influenced by dynamic processes such as cloud cover, and the Earth’s rotation, and static conditions such as the position of mountain ranges and oceans.
Standard:	<b>S8d:</b> presents and critiques theories on origin and evolution of the Earth’s systems and other celestial bodies.

- Components: **S8d.1:** Early in the history of the universe, matter, primarily light hydrogen and helium atoms, clumped together by gravitational attraction to form trillions of stars. Billions of galaxies, each of which is a gravitationally bound cluster of billions of stars, now form most of the visible mass in the universe.
- S8d.2:** Stars produce energy from nuclear reactions. These and other processes in stars have led to the formation of all the other elements.
- S8d.3:** The stars differ from each other in size, temperature, and age, but they appear to be made up of the same elements that are found on the Earth and to behave according to the same physical principles. Unlike our sun, most stars are in systems of two or more stars orbiting around one another.
- S8d.4:** The “big bang” theory places the origin of the universe between 10 and 20 billion years ago, when the universe began in a hot dense state. The current theory is that its entire contents expanded explosively from a hot, dense, chaotic mass. Stars condensed by gravity out of clouds of molecules of the lightest elements until nuclear fusion of the light elements into heavier ones began to occur. Fusion released great amounts of energy over millions of years. Eventually, some stars exploded, producing clouds of heavy elements from which other stars and planets could later condense. The process of star formation and destruction continues.
- S8d.5:** Geologic time can be estimated by observing rock sequences and using fossils to correlate the sequences at various locations. Current methods include use of radioactive isotopes present in rocks.
- S8d.6:** Interactions among the solid Earth, oceans, atmosphere, and organisms have resulted in ongoing change of the Earth system. Some changes (e.g., earthquakes, volcanic eruptions) can be observed during one’s lifetime while others (e.g., mountain building, plate movements) take place over hundreds of millions of years.
- Standard: **S8e:** accesses information about significant space explorations and assesses the value of such explorations.
- Components: **S8e.1:** The US Space Program has played a significant role in the collection of information about our solar system.
- S8e.2:** NASA is a federal agency that leads and directs the US Space Program. It conducts manned (Apollo, Shuttle, International Space Station) and unmanned missions (SETI, Voyager, Mars Project, Hubble Space Telescope,) to explore space.
- S8e.3:** The space program contributes to society through the development of commercial products such as a hybrid electric transit bus, portable blood collection products, and a hand-held e-mail device.
- S8e.4:** There are cost-benefits and risks associated with sending people into space (e.g., Apollo, Challenger incident).

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Social Studies: Grade 9 - World Regions/Cultures

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Standards Introduction: The standards for ninth grade students provide opportunities to expand knowledge of world cultures and world regions. The standards include major emphasis on the themes of Culture, Space and Place, Individuals, Groups and Institutions, and Power, Authority and Governance. Students learn to recognize characteristics of a community or culture and explain reasons for cultural diversity. The ability to compare and contrast regional geographic features throughout the world is an important student outcome. Activities include using texts, maps, charts, other resources, research, and technological skills to aid in historical analysis.

**SK – Skills** The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills so that the learner can:

Skills:

- SK1a:** interpret world maps.
- SK1b:** interpret data and create and design graphic displays (charts, graphs, diagrams, graphic organizers) using technology.
- SK1c:** infer information from captions, cartoons, political posters, photographs, etc.
- SK1d:** test the validity of information using primary sources (biographies, journals, interviews, letters).
- SK1e:** correlate and cross reference social studies materials (index, appendix, glossary).
- SK1f:** observe, analyze interpret and draw conclusions using the Internet and databases.
- SK1g:** create multimedia presentations using text, color, and importing graphics, sound, special effects and animation.

Strand/Theme:  
**SS1 Citizenship** Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards:

- SS1a:** model the qualities of being a global citizen.
- SS1b:** exhibit tolerance for people from other cultures.
- SS1c:** participate in service programs.

Strand/Theme:  
**SS2 Culture** Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards:

- SS2a:** compare and contrast cultures.
- SS2b:** analyze and describe how language, literature, the arts, and artifacts demonstrate beliefs and values and contribute to the transmission of culture.
- SS2c:** analyze changes in traditional cultures.
- SS2d:** explain reasons for cultural diversity and the need for tolerance.

Strand/Theme:

**SS3 Time, Continuity, and Change**

Social studies programs should include experiences that provide for the study of the way human beings view themselves in and over time, so that the learner can:

Standards:

- SS3a:** identify the influence of developed nations on developing nations.
- SS3b:** analyze the roles of art, music, literature, and folklore in historical development.
- SS3c:** describe the historical development of culture in a specific region.
- SS3d:** analyze attitudes, values, and behaviors of people in different historical contexts.

Strand/Theme:

**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

- SS4a:** apply geographical tools (e.g., maps, charts, tables, graphs) to analyze and solve problems.
- SS4b:** explain how topography, climate, vegetation, population, distribution, and resources impact a region or country.
- SS4c:** differentiate ways that humans shape and adapt the environment to meet their needs.

Strand/Theme:

**SS5 Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

- SS5a:** explore how gender, race, culture, nationality, family, economic, and religious status influence an individual's self concept.
- SS5b:** explain how knowledge and experiences broaden an individual's perception.
- SS5c:** describe how individuals can contribute to the well-being of others.

Strand/Theme:

**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

- SS6a:** identify groups based on language, religion, family, and nationality.
- SS6b:** discuss ways in which technological, political, economic, or environmental changes affect a social system.
- SS6c:** explain how groups and institutions influence and perpetuate people's values, beliefs, attitudes, events, and culture.
- SS6d:** compare differences in gender roles for various cultures.
- SS6e:** identify resources for participation in community/related projects.

Strand/Theme:

**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

- SS7a:** compare how countries' resources are allocated and utilized.
- SS7b:** analyze how the unequal distribution of wealth creates conflict.

**SS7c:** describe the significance of international economic organizations.

Strand/Theme:

**SS8 Power,  
Authority, and  
Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

Standards:

**SS8a:** compare and contrast basic political and economic systems.

**SS8b:** explain the development and role of international political organizations and multinational organizations.

**SS8c:** discuss how universal human rights are viewed by different political systems.

Strand/Theme:

**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

**SS9a:** explain how science and technology have transformed the physical world and have influenced economic and political institutions.

**SS9b:** evaluate the effects of technology on cultural values and the physical environment.

**SS9c:** explain societal changes in values, beliefs, and attitudes that have resulted from new scientific knowledge.

**SS9d:** identify laws and policies which affect science and technology.

Strand/Theme:

**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

**SS10a:** identify behaviors which foster global cooperation and create conflict.

**SS10b:** explain how technology and economics affect global cooperation.

**SS10c:** analyze how language, art, music, literature, belief systems, and other cultural elements can either connect people or cause misunderstandings.

**SS10d:** describe the historical development of a global consciousness and concept of a world citizen.

**SS10e:** develop an awareness of current events.

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## Social Studies: Anthropology

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Standards Introduction: The standards of anthropology emphasize the study of early and contemporary human beings in relation to culture and physical environment. Students study language development, social institutions, religion, the arts, physical and mental traits, and similarities and differences among cultures. Students will investigate cultures and plan and develop projects that illustrate cultural diversity of groups.

### **SK – Skills**

The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills, so that the learner can:

Skills: **SK1a:** select an appropriate strategy to solve a problem or plan a field study.  
**SK1b:** use a variety of sources to complete oral and written reports on anthropological inquiry.  
**SK1c:** access and use complex electronic databases and communication networks of all types including, but not limited to, the Internet.

Strand/Theme:

### **SS1 Citizenship**

Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards: **SS1a:** describe the concept of civilization.  
**SS1b:** identify why humans live in societal patterns.  
**SS1c:** explain how cultural views influence characteristics of citizenship.

Strand/Theme:

### **SS2 Culture**

Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards: **SS2a:** identify characteristics of culture.  
**SS2b:** Explain how various family structures, traditions, celebrations, and heritage affect societal systems.  
**SS2c:** Explain the value of cultural diversity and cohesion within and across groups.  
**SS2d:** Explain the major themes of anthropological inquiry.

Strand/Theme:

### **SS3 Time, Continuity, and Change**

Social studies programs should include experiences that provide for the study of the way human beings view themselves in and over time, so that the learner can:

Standards: **SS3a:** describe the changing relationship between human beings and their environment.  
**SS3b:** Compare and contrast differences in life styles for specific geographical locations and identify changes.  
**SS3c:** Describe ways in which technological, political, economic, or environmental changes affect the structure and function of a social system.  
**SS3d:** Relate how people interpret and view history differently.

Strand/Theme:  
**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

- SS4a:** describe the effects of physical environment and population on societal development.
- SS4b:** explain the effects of geography on patterns of global connections and interdependence.
- SS4c:** Identify cultural similarities and differences as influenced by the geography of a region.

Strand/Theme:  
**SS5 Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

- SS5a:** identify the theories of physical and physiological development of homo sapiens.
- SS5b:** describe the relationship of the individual to various cultures and ethnic groups.
- SS5c:** explain how racial, cultural, economic, and religious status influence an individual's self-concept.

Strand/Theme:  
**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

- SS6a:** explain how and why groups and institutions are formed.
- SS6b:** describe how individuals, groups, and institutions interact and how beliefs, values, and attitudes influence and perpetuate those interactions.
- SS6c:** explain the role of groups and institutions in furthering continuity and change.
- SS6d:** Identify cultural influences on individuals, groups, and institutions.

Strand/Theme:  
**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

- SS7a:** describe how civilizations/nations use resources to meet basic needs.
- SS7b:** explain how economics are influenced and affected by individuals, groups, and institutions.
- SS7c:** evaluate the relationship among cultural universals such as food, shelter, and economic systems.
- SS7d:** explain how economic factors such as the impact of money and monetary systems contribute to cultural change and global interdependence.

Strand/Theme:  
**SS8 Power, Authority, and Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

Standards:

- SS8a:** explain the development of and differences among political systems.

Social Studies Standards: Anthropology

- SS8b:** describe the need for and the development of rules and laws.
- SS8c:** compare government institutions, agencies, and organizations.
- SS8d:** explain the concepts and development of civil, equal, and universal human rights.

Strand/Theme:

**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

- SS9a:** explore the historical relationship of science and technology to societal systems.
- SS9b:** evaluate how science and technology have transformed the physical world and human society.
- SS9c:** determine how humans shape and adapt the environment to meet various needs.
- SS9d:** explain how changes in values, beliefs, and attitudes have resulted from scientific knowledge

Strand/Theme:

**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

- SS10a:** detail the historical development of a global consciousness and the concept of a world citizen.
- SS10b:** explain why certain areas of the world have been cradles of civilization.
- SS10c:** examine behaviors which foster global cooperation and conflict among individuals, communities, and nations.
- SS10d:** evaluate the effect of cultural conditions and motivations of global cooperation among societies

## Social Studies: Economics

Standards Introduction:	The standards of economics emphasize the major concepts in the study of economics. Students use a broad range of economic concepts as they examine the complex nature and essential characteristics of economic systems throughout the world. The problem of scarcity and the resulting need for societies to form economic systems are emphasized. Students focus on the market as the place where the consumers decide how they allocate their spending among competing goods and services. Students analyze the production, distribution, and accumulation of wealth. Students study the topics dealing with supply and demand, money and banking, the role of the federal government, the organization of business, and comparisons among economic systems.
<b>SK – Skills</b>	The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills, so that the learner can:
Skills:	<b>SK1a:</b> acquire information by reading print, visual and graphic materials, by on-site observations and by using databases <b>SK1b:</b> use economic data to engage in hypothetical and real decision making <b>SK1c:</b> plan and design budgetary graphs that reflect distribution of resources <b>SK1d:</b> access and use complex electronic databases and communication networks of all types
Strand/Theme: <b>SS1 Citizenship</b>	Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:
Standards:	<b>SS1a:</b> describe the role and responsibilities of the citizen within a free enterprise society. <b>SS1b:</b> explain how actions of citizens can affect the economic system. <b>SS1c:</b> determine how economic public policies stem from issues of public concern. <b>SS1d:</b> describe how the values and beliefs of individuals influence different economic situations.
Strand/Theme: <b>SS2 Culture</b>	Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:
Standards:	<b>SS2a:</b> identify the economic values and ideals of various cultures. <b>SS2b:</b> describe how economics often determines class and status.
Strand/Theme: <b>SS3 Time, Continuity, and Change</b>	Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and over time, so that the learner can:
Standards:	<b>SS3a:</b> explain the historical development of the leading economic systems. <b>SS3b:</b> use economic indicators to predict and evaluate economic trends.

**SS3c:** evaluate the role of institutions and interest groups in furthering economic continuity and change.

**SS3d:** examine the ways prominent economists have been influenced by their societies and environment.

Strand/Theme:

**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

**SS4a:** explain how economic patterns are affected by geography.

**SS4b:** describe how people use the earth's resources to meet their economic needs.

**SS4c:** explain the relationship between economic necessity and population movement.

Strand/Theme:

**SS5 Individual Development and Identity**

Social studies programs should include experience that provide for the study of individual development and identity, so that the learner can:

Standards:

**SS5a:** determine how economics influence individual and group behavior.

**SS5b:** explain how socioeconomic factors affect self-concept.

**SS5c:** explain the relationship between socioeconomic factors and personal and cultural opportunity.

Strand/Theme:

**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

**SS6a:** analyze the role of economics in the formation of institutions and groups (e.g., labor unions and corporations).

**SS6b:** explain how beliefs, values, and attitudes influence a society's economic development.

**SS6c:** describe how individuals, groups, and institutions influence economics.

Strand/Theme:

**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

**SS7a:** identify and define economic terminology relating to various economic systems.

**SS7b:** describe the principles and theories economists use to solve economic problems.

**SS7c:** trace the development of various economic systems.

**SS7d:** explain how decisions about spending and production made by households, businesses, and governments influence the nation's levels of income, employment, and prices.

Strand/Theme:

**SS8 Power, Authority, and Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

Standards:

**SS8a:** explain the relationship between politics and economics.

**SS8b:** describe the concept of international trade and its relationship to government regulations.

**SS8c:** evaluate the effects of technology, global economic interdependence, and competition on the development of national policies.

Strand/Theme:

**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

**SS9a:** determine how individuals and societies shape and adapt the environment to meet economic needs.

**SS9b:** explain how science and technology affect and influence economic development.

**SS9c:** analyze how technology affects a nation's work force and economy.

Strand/Theme:

**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

**SS10a:** evaluate economic behaviors which lead to and foster global conflicts.

**SS10b:** explain the basic characteristics of international trade (e.g., absolute and comparative advantage, barriers to trade, exchange rates, and balance of trade).

**SS10c:** cite examples to illustrate global economic interdependence and competition.

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## Social Studies: Psychology

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Standards Introduction: The standards of psychology engage students in an exploration of human behavior and the personal characteristics of individuals. Students examine methods used by professional psychologists to study human behavior. Students focus on human growth and development, learning, the effects of emotions on behavior, and adaptation to and interaction in a variety of environments. Students study motivational theory, theories of personality, and mental wellness, and illness.

**SK - Skills** The Social Studies program promotes essential skills to increase the students' ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills so that the learner can:

Skills: **SK1a:** acquire information from a variety of sources including written, graphic and experimental sources.  
**SK1b:** use rational decision making strategy for planning and problem solving.  
**SK1c:** conduct interviews and participate in self-awareness and group dynamic activities.  
**SK1d:** complete research through oral and written reports, interviews with resource people and visits to institutions.  
**SK1e:** access and use complex electronic databases and communication networks of all types.

Strand/Theme:  
**SS1 Citizenship** Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards: **SS1a:** exhibit sensitivity to attitudes and values of others.  
**SS1b:** recognize the social influence of groups on attitude development, (e.g., conformity, prejudice, and obedience to authority).  
**SS1c:** compare/contrast the effect of communication patterns and leadership styles on group interactions.

Strand/Theme:  
**SS2 Culture** Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards: **SS2a:** describe positive aspects of diversity.  
**SS2b:** explain why environment, cultural attitudes, and goal expectations influence perception of self and others.  
**SS2c:** examine the effects of prejudice on the individual and group.  
**SS2d:** analyze why behaviors do not occur in isolation.

Strand/Theme:  
**SS3 Time, Continuity, and Change** Social studies programs should include experiences that provide for the study of the way human beings view themselves in and over time, so that the learner can:

Standards: **SS3a:** identify classical and modern personality theorists with emphasis on Freud, Skinner, Maslow and Rogers.

**SS3b:** recognize psychological disorders that “short circuit” a person’s view of the world.

**SS3c:** evaluate the effects of perception, motivation, stress, environment, and personal experiences as they relate to one’s view of self and the surrounding world.

Strand/Theme:

**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

**SS4a:** develop an understanding of the unique nature of one’s personal environment through aesthetic modes of literary and visual expression.

**SS4b:** describe the effects of interaction between people and the environment.

**SS4c:** explain how geographic location affects one’s perception of the world.

Strand/Theme:

**SS5 Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

**SS5a:** evaluate the emotional, intellectual, and physical factors that influence the development of the individual from infancy to old age.

**SS5b:** examine basic survival, psychological, and self-actualization needs as they relate to individual development and identity.

**SS5c:** analyze the influence of groups on individual perceptions, prejudices, and values.

Strand/Theme:

**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

**SS6a:** analyze impact of group motives and values on the individual’s need to conform.

**SS6b:** examine how individuals, groups, and institutions react to stress and other emotional stimuli.

**SS6c:** apply conflict resolution techniques to a variety of scenarios.

Strand/Theme:

**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

**SS7a:** examine the impact of psychological research and media on the economy.

**SS7b:** evaluate the cost of mental health care services provided by government and/or the private sector.

**SS7c:** Explain how economics (e.g., employment, unemployment, affluence) influence and affect the behavior of individuals and groups.

Strand/Theme:

**SS8 Power, Authority, and Governance**

Social studies programs should include experiences that provide for the the study of how people create and change structures of power, authority, and governance, so the learner can:

Social Studies Standards: Psychology

- Standards:
- SS8a:** identify societal sanctions on unacceptable behavior.
  - SS8b:** locate and access information related to government-sponsored mental health studies and programs.
  - SS8c:** identify laws which have changed educational policies for mentally challenged citizens.

Strand/Theme:  
**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

- Standards:
- SS9a:** trace the changes in treatment for the mentally ill and show the impact on the fabric of society.
  - SS9b:** evaluate psychology as a behavioral science.
  - SS9c:** examine the impact of the media on the psychological development of the individual.
  - SS9d:** access sources of information pertaining to jobs and careers in the field of psychology.
  - SS9e:** analyze how age, perception, and emotion affect retrieval and processing of information.

Strand/Theme:  
**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

- Standards:
- SS10a:** identify physiological, psychological, and self-actualization needs common to all people.
  - SS10b:** evaluate the effects of media on our perception of the world.
  - SS10c:** discriminate stereotypical and prejudicial messages in the media.
  - SS10d:** analyze the impact of global events on an individual.

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## Social Studies: Sociology

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Standards Introduction: The standards for sociology deal with the study of the structure of society, its groups, institutions, and cultures. Students investigate societal and cultural phenomena that influence the behavior of groups and individuals. Students study current social problems and use methods of sociological investigation and research.

**SK – Skill** The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills, so that the learner can:

Skills:

- SK1a:** plan, design, and develop research projects relative to the study of institutions and society.
- SK1b:** participate in interviews, conduct case studies, and interact with agencies and community personnel who are working with people.
- SK1c:** correlate and cross reference social studies materials (indexes, appendices, glossaries).
- SK1d:** access and use complex electronic databases and communication networks of all types. Select an appropriate strategy to solve a societal problem and determine a rational course of action to solve that problem.

Strand/Theme:

**SS1 Citizenship** Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards:

- SS1a:** explain factors that affect social change.
- SS1b:** recognize group behavior as shown by fads, language, leadership, and tradition.
- SS1c:** identify how group behavior can be influenced through voting.
- SS1d:** analyze factors that encourage or impede social mobility.

Strand/Theme:

**SS2 Culture** Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards:

- SS2a:** classify the traits of culture as artifacts, beliefs, practices, or values.
- SS2b:** explore reasons for cultural diversity.
- SS2c:** discuss cultural pluralism in societal systems.
- SS2d:** describe how ethnocentrism and nationalism impact our relationships with other groups.

Strand/Theme:

**SS3 Time, Continuity, and Change** Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and over time, so that the learner can:

Standards:

- SS3a:** describe the changing relationship between human beings and their environment.
- SS3b:** identify factors that lead to group identification.
- SS3c:** explore the development and changing roles of the family.

**SS3d:** explain the impact of women in the work force on society.

**SS3e:** describe the problems faced by the elderly in societal systems.

Strand/Theme:

**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

**SS4a:** assess how location affects an individual or a group's perception of the world.

**SS4b:** recognize the interrelationship between geographical location and behavior.

Strand/Theme:

**SS5 Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

**SS5a:** describe the influences of various historical and contemporary cultures on the life of an individual.

**SS5b:** assess various institutional influences that affect personal goals.

**SS5c:** evaluate the effects of social class on individual aspirations and potential.

**SS5d:** explain how socialization transmits cultural beliefs and values.

**SS5e:** identify effects resulting from contact between two or more cultures.

Strand/Theme:

**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, institutions, so that the learner can:

Standards:

**SS6a:** apply sociological methodology to the basic institutions in our society.

**SS6b:** analyze the development of various institutions.

**SS6c:** identify societies' sanctions for unacceptable behavior.

**SS6d:** discuss criminal justice systems, and evaluate suggested reforms.

Strand/Theme:

**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

**SS7a:** describe how economic development affects the social system and societal values.

**SS7b:** describe various ways in which a society creates divisions of labor related to status, class, rank, and prestige.

**SS7c:** analyze social problems that arise from economic imbalance.

Strand/Theme:

**SS8 Power, Authority, and Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority and governance so that the learner can:

Standards:

**SS8a:** discuss criminal justice systems, and evaluate suggested reforms.

**SS8b:** describe how different forms of government (e.g., local, state, national, foreign) address social issues.

**SS8c:** explain factors that contribute to conflict and cooperation within and among nations.

**SS8d:** explain factors that contribute to conflict and cooperation within and among nations.

**SS8e:** analyze ideas and mechanisms to manage conflict and establish order and security.

**SS8f:** examine recurring issues involving rights, roles, and status of the individual.

Strand/Theme:

**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

**SS9a:** explain and apply existing scientific theory and modes of inquiry examining recurring social issues and problems.

**SS9b:** analyze how science and technology influence the core values, beliefs, and attitudes of society.

**SS9c:** evaluate how science and technology have transformed the physical world and human society.

Strand/Theme:

**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

**SS10a:** analyze the interrelationships between national and international institutions.

**SS10b:** identify and discuss universal human rights issues.

**SS10c:** explain the causes and effects of xenophobia.

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## Social Studies: Asian Culture

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Standards Introduction: Asian culture is designed to study the historical and current developments that have influenced culture characteristics of China, Japan, India, Korea and other Asian nations. Students study the historical developments of nations from pre-history to the present. The study of the historical development helps students identify the major characteristics of Asian society and how these characteristics influence foreign affairs, economics, and demographic trends.

### SK – Skills

The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills, so that the learner can:

Skills:

- SK1:** interpret climate, topographic, demographic and historical maps.
- SK1a:** formulate and communicate an opinion based on critical examination of information.
- SK1b:** use and cite a variety of primary and secondary sources to formulate and defend positions on issues both orally and in writing.
- SK1c:** design and develop a personal database.
- SK1d:** access and use electronic databases and communication networks of all types including the Internet.

Strand/Theme:  
**SS1 Citizenship**

Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards:

- SS1a:** describe changes in governments.
- SS1b:** exhibit tolerance for people from other cultures.
- SS1c:** be aware of the rights of citizens in societies.

Strand/Theme:  
**SS2 Culture**

Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards:

- SS2a:** recognize the diversity of Asian cultures.
- SS2b:** evaluate the roles of families and the influence of language in unifying or dividing Asian peoples.
- SS2c:** describe and interpret values and attitudes that pose obstacles to cross-cultural understanding.
- SS2d:** analyze how language, literature, the arts, artifacts, religions, and philosophies have contributed to the transmission of culture.

Strand/Theme:  
**SS3 Time, Continuity, and Change**

Social studies programs should include experiences that provide for the study of the way human beings view themselves in and over time, so that the learner can:

Standards:

- SS3a:** trace the arrivals of people to Asian lands.
- SS3b:** discuss economic and social changes that have resulted from contact with foreign nations.

Strand/Theme:  
**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

- SS4a:** analyze geographic explanations for the distribution of Asia's population.
- SS4b:** compare factors that contributed to the development of industry and agriculture.
- SS4c:** contrast life in rural and urban areas.
- SS4d:** analyze the ecological consequences of rapid economic development in Asia.
- SS4e:** compare land use in Asia with other parts of the world.

Strand/Theme:  
**SS5 Individual Development and Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

- SS5a:** evaluate how an individual's view of the world is affected by one's gender, class, religion, education, race, and family.
- SS5b:** describe experiences that broaden perceptions of Asian cultures.
- SS5c:** analyze conflicts which develop between one's individual needs and one's obligations and service to their nation.

Strand/Theme:  
**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

- SS6a:** assess how family life, women's roles, and minority rights have been impacted by changes in technology, politics, the economy, and the environment.
- SS6b:** explain how groups and institutions influence and perpetuate people's values, beliefs, attitudes, events, and culture.

Strand/Theme:  
**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

- SS7a:** analyze how trade is affected by relationships among Asian nations.
- SS7b:** describe the impact of international policies on economic development.

Strand/Theme:  
**SS8 Power, Authority, and Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

Standards:

- SS8a:** describe how cultural views have influenced the development and establishment of power.
- SS8b:** compare and contrast the political and economic systems in Asia.
- SS8c:** evaluate the concept of universal human rights in Asia.
- SS8d:** analyze the influences of foreign nations on Asian governments and economies.

Strand/Theme:

**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

- SS9a:** trace the development of technology and its effects on society.
- SS9b:** evaluate the conflicting ideas between traditional Asian societies and the modern “Western” culture.
- SS9c:** discuss the impact of education on a nation's scientific and technological advancements.

Strand/Theme:

**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

- SS10a:** describe how trade contributed to the exchanges of languages, art, belief systems, and scientific knowledge.
- SS10b:** analyze conditions and events that led to conflict and cooperation among Asian societies and foreign nations.
- SS10c:** evaluate the effect of world opinion on Asian policies when discussing human rights, the environment, and territorial disputes.
- SS10d:** analyze the impact of foreign influence on Asian cultures.

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## Social Studies: Minority Studies

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Standards Introduction: The standards for Minority Studies require students to study the cultural, sociological, and historical development of minorities. Students study the concepts of human, civil, and equal rights. Students examine the role of economical, political, cultural, and social processes in shaping patterns of human interdependence.

### **SK – Skills**

The Social Studies program promotes essential skills to increase the students ability to acquire information and manipulate data, develop and present policies and debates, construct new knowledge, and participate in groups. Each skill is dependent upon and enriched by all other skills, so that the learner can:

Skills:

- SK1:** select an appropriate strategy to solve a problem and determine a rational course of action.
- SK1a:** use a variety of primary and secondary resources to express and defend personal convictions.
- SK1b:** participate in persuading, compromising, debating, and negotiating in the resolution of conflicts and differences.
- SK1c:** participate in interviews, conduct case studies, and interact with agencies and community personnel who are working with people.

Strand/Theme:

### **SS1 Citizenship**

Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic, so that the learner can:

Standards:

- SS1a:** identify and explain the reasons for having fair and equitable laws and rules.
- SS1b:** demonstrate respect and tolerance for all groups.
- SS1c:** exemplify principles of good citizenship.
- SS1d:** evaluate and analyze the concepts of liberty and “justice for all.”

Strand/Theme:

### **SS2 Culture**

Social studies programs should include experiences that provide for the study of culture and cultural diversity, so that the learner can:

Standards:

- SS2a:** describe and evaluate values and attitudes that pose obstacles to cross-cultural understanding.
- SS2b:** identify characteristics of culture and tradition.
- SS2c:** examine the effects of cultural interactions.
- SS2d:** analyze how language, literature, the arts, and artifacts transmit varied cultural beliefs and values.
- SS2e:** Show how cultural values affect one’s personal life.

Strand/Theme:

### **SS3 Time, Continuity, and Change**

Social studies programs should include experiences that provide for the study of the way human beings view themselves in and over time, so that the learner can:

Standards:

- SS3a:** analyze liberty and “justice for all” from a variety of present-day and historical perspectives to include women, Native Americans, African Americans etc.

- SS3b:** develop timelines that clarify the relationship between historical events and the development of minority groups.
- SS3c:** identify religious, political and philosophical ideas that have influenced the course of history.
- SS3d:** trace the evolution and historical significance of oppressed and minority groups.
- SS3e:** use historical inquiry processes and resources.

Strand/Theme:

**SS4 Space and Place**

Social studies programs should include experiences that provide for the study of space and place, so that the learner can:

Standards:

- SS4a:** describe the demographic structure of a population.
- SS4b:** examine how economic, political, cultural, and social processes interact to shape patterns of human population, interdependence, cooperation, and conflict.
- SS4c:** trace the development of specific cultural groups in the different regions of the United States.

Strand/Theme:

**SS5 Individual Development Identity**

Social studies programs should include experiences that provide for the study of individual development and identity, so that the learner can:

Standards:

- SS5a:** examine personal beliefs and biases as they relate to discrimination.
- SS5b:** explain how an individual's view of the world is affected by one's gender, class, religion, age, education, race and family.
- SS5c:** use the perspective of diversity as a framework for the examination of intolerant behaviors.

Strand/Theme:

**SS6 Individuals, Groups, and Institutions**

Social studies programs should provide for the study of the interaction among individuals, groups, and institutions, so that the learner can:

Standards:

- SS6a:** predict/assess the effects of government policies on minority groups.
- SS6b:** explain how individuals, groups, and institutions perpetuate values, beliefs and attitudes.
- SS6c:** identify groups or historical figures that have influenced our individual or national identity.
- SS6d:** practice positive interpersonal behavior.
- SS6e:** examine the impact of intolerance on racial, cultural and religious groups.

Strand/Theme:

**SS7 Production, Distribution, and Consumption**

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services, so that the learner can:

Standards:

- SS7a:** examine how economic changes contribute to civil unrest.
- SS7b:** identify and analyze how policies are formulated in response to economic demand or the resolution of economic problems.
- SS7c:** examine the relationship between politics and the distribution of wealth.
- SS7d:** analyze our economic system and its impact on minorities/cultural groups.

Strand/Theme:  
**SS8 Power,  
Authority, and  
Governance**

Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority, and governance, so that the learner can:

Standards:

- SS8a:** analyze and explain the concepts of human, civil and equal rights.
- SS8b:** examine the impact of governmental policies on social issues and minority groups.
- SS8c:** examine how political, economic, cultural and social processes interact to shape patterns of human population, interdependence, cooperation and conflict.
- SS8d:** identify and analyze the complex nature of decision making to include weighing alternatives and assessing multiple perspectives.
- SS8e:** analyze current legislation that suggests continued intolerance.

Strand/Theme:  
**SS9 Science,  
Technology,  
and Society**

Social studies programs should include experiences that provide for the study of the relationships among science, technology, and society, so that the learner can:

Standards:

- SS9a:** discuss and explain how science, technology and economic activity have affected cultural and minority groups.
- SS9b:** analyze how core values, beliefs, and attitudes shape scientific and technological change.
- SS9c:** compare and contrast changes in standards of living and their impact on minority groups.
- SS9d:** discuss and explain intolerance within a cause and effect framework making inferences, hypotheses and predictions.

Strand/Theme:  
**SS10 Global  
Connections**

Social studies programs should include experiences that provide for the study of global connections and interdependence, so that the learner can:

Standards:

- SS10a:** identify stereotypical and prejudicial messages in the media.
- SS10b:** analyze the impact of global events on minority groups.
- SS10c:** Analyze and explain how language, art, music, literature, belief systems, and other cultural elements either connect people or cause conflict and misunderstanding.

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Social Studies: Contemporary Issues

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Standards Introduction:	Students of Contemporary Issues examine contemporary world problem areas. Emphasis is placed upon the role of the United States in these areas. Shaping of United States foreign policy, in addition to studying the relationship among the superpowers, is studied in detail. Students will study about world crises and problems (population, poverty, famine, and environmental degradation).
<b>SK – Skills</b>	<b>SK1: The students will acquire information from a variety of sources:</b> <b>SK1a:</b> Gather and organize information about a given contemporary event/issue from a variety of sources. <b>SK1b:</b> Show relationships between historical events and contemporary events/issues. <b>SK1c:</b> Compare and contrast different interpretations of key contemporary events/issues. <b>SK1d:</b> Evaluate documents related to a contemporary event or issue in terms of reliability, credibility, authority, authenticity, and completeness. <b>SK1e:</b> Establish a plan to detect bias, distortion of the facts, and propaganda by omission, suppression, or invention of facts.
<b>SK – Skills</b>	<b>SK2: The students will use information for problem solving, decision-making, and planning:</b> <b>SK2a:</b> Pose analytical questions or hypotheses that suggest solutions for an issue. <b>SK2b:</b> Formulate conclusions or generalizations that suggest solutions for an issue. <b>SK2c:</b> Evaluate a decision by raising new questions or issues for further investigation.
<b>SK – Skills</b>	<b>SK3: The students will develop skills in constructive interpersonal relationships and in social participation:</b> <b>SK3a:</b> Develop an ability to listen actively and critically. <b>SK3b:</b> Use questioning techniques to understand personal thoughts, develop ideas, or evaluate an event or issue. <b>SK3c:</b> View contemporary events/issues through the eyes of those who experience them. <b>SK3d:</b> Investigate the roles and contributions of individuals and groups in relation to key contemporary events/issues.
<b>SK – Skills</b>	<b>SK4: The students will participate effectively in civic affairs:</b> <b>SK4a:</b> Take, defend, and evaluate positions about attitudes that facilitate thoughtful and effective participation in public affairs. <b>SK4b:</b> Prioritize the solutions based on established criteria. <b>SK4c:</b> Propose an action plan to address the issue or to resolve the problem. <b>SK4d:</b> Evaluate the consequences for each solution or course of action proposed in an action plan.

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*The issues will be studied under the 10 Themes of Social Studies.*

In addition to the content standards, Health Education teachers must instill health literacy skills (HESK) into classroom activities. The six HESK have a two-fold benefit. First, they promote personal, family, and community health. Second, they teach essential and transferable skills that include accessing data, analyzing information, setting goals, and communicating ideas.

Strand:

**HESK Health Literacy Skills**

The student applies health literacy skills in concert with health concepts to enhance personal, family and community health; that is, the student will:

Standards:

- HESK1:** access valid health information;
- HESK2:** practice health-enhancing behavior;
- HESK3:** analyze influences on health;
- HESK4:** use interpersonal communications skills to enhance health;
- HESK5:** use goal setting and decision making skills to enhance health; and
- HESK6:** advocate for health.

Strand:

**HE1 Personal and Community Health**

The student understands the basic concepts of hygiene, health habits, and health promotion; that is, the student will:

Standards:

- HE1a:** evaluate the impact of technology on personal, family, and community health;
- HE1b:** analyze how family, peers, and community influence the health of the individual;
- HE1c:** evaluate health practices that delay the onset or reduce the risk of health problems during adulthood;
- HE1d:** examine environmental health risks in the community;
- HE1e:** evaluate claims made by promoters of health-related products and services; and
- HE1f:** analyze personal and community health careers in relation to personal interests and skills.

Strand:

**HE2 Safety and Injury Prevention**

The student demonstrates understanding of basic concepts related to safety, injury prevention or sudden illness, and prevention of child abuse and child neglect; that is, the student will:

Standards:

- HE2a:** evaluate the prevalence of risk taking behaviors related to accidents, unintentional injuries and violence among adolescents and young adults;
- HE2b:** analyze short- and long-term consequences of safe, risky, and harmful behaviors;
- HE2c:** demonstrate personal safety strategies for preventing/avoiding unsafe and violent situations in the home, at school, and in the community;
- HE2d:** describe symptoms of potential suicide and recommended preventive actions;
- HE2e:** Demonstrate steps for CPR and the Heimlich maneuver;
- HE2f:** analyze choices related to driving and transportation safety; and

**HE2g:** analyze careers related to safety and injury prevention in relation to personal interests and skills.

Strand:

**HE3 Nutrition and Physical Activity**

The student understands how healthful nutrition and physical activity contribute to growth and energy and help prevent chronic diseases such as heart disease, cancer, and diabetes; that is, the student will:

Standards:

**HE3a:** analyze physical inactivity and obesity trends in children, adolescents, and adults in the United States since 1995;

**HE3b:** analyze the complexity of internal and external influences on food choices and eating habits;

**HE3c:** compare and contrast school, family, and community sources for maintaining balanced nutrition; and

**HE3d:** report on careers related to physical activity and nutrition in relation to personal interests and skills.

Strand

**HE4 Mental Health**

The student understands how mental health contributes to general well-being; that is, the student will:

Standards:

**HE4a:** identify signs and symptoms of physical and emotional stress, potential suicide, eating disorders, clinical depression, and mental illness;

**HE4b:** analyze verbal and nonverbal skills needed to develop and maintain healthful interpersonal relationships;

**HE4c:** describe the influences of group identity on development of self-esteem and relationships with others;

**HE4d:** analyze message tactics and protective strategies to manage and diminish bullying, harassment, and other aggressive behaviors;

**HE4e:** evaluate personal coping strategies that address deployments and military community life;

**HE4f:** evaluate community mental health resources; and

**HE4g:** analyze careers related to mental health in relation to personal interests and skills.

Strand

**HE5 Alcohol, Tobacco, and Other Drugs**

The student understands licit and illicit drugs and how to prevent abuse and access intervention and treatment resources; that is, the student will:

Standards:

**HE5a:** analyze recent statistics for trends related to teenage alcohol, tobacco, and substance use and abuse;

**HE5b:** explain the importance of taking medicinal drugs in the dosage and duration as prescribed;

**HE5c:** identify local alcohol and other drug-related laws, including driving-related laws;

**HE5d:** evaluate local community resources for alcohol, tobacco, and other drug-related interventions and treatments available to teenagers and adults;

**HE5e:** Set personal goals for resisting peer pressure to use alcohol when underage and any use of tobacco or other illicit drugs;

- HE5f:** demonstrate avoidance strategies useful when pressured to use alcohol, tobacco, and other illicit drugs; and
- HE5g:** report on careers related to alcohol, tobacco, and other drug-related intervention and treatment in relation to personal interests and skills.

Strand

**HE6 Family Life and Human Sexuality**

The student understands the developmental changes that occur as he or she grows and matures through childhood to young adulthood and how these changes prepare one for adult roles in the family and society; that is, the student will:

Standards:

- HE6a:** analyze the anatomy and physiology of the human reproductive system;
- HE6b:** analyze roles and responsibilities of family members as they relate to the dynamics of total family health (e.g., external influences, media, job pressures, finances, and loss of family members);
- HE6c:** analyze issues related to healthful sexual relationships (e.g., respecting the individual's romantic/sexual limits, sexual abuse prevention);
- HE6d:** analyze routine preventive health practices (e.g., breast and testicular self-examination, and use of barriers to prevent contact with body fluids);
- HE6e:** analyze how interpersonal communications affect relationships;
- HE6f:** evaluate the effectiveness of various methods of family planning;
- HE6g:** describe strategies for preventing and reporting sexual discrimination, assault, harassment, and rape;
- HE6h:** analyze consequences of teenage pregnancy from different viewpoints;
- HE6i:** evaluate HIV and STD prevention, treatment, and control strategies; and
- HE6j:** research careers related to family life and human sexuality based on personal interests and skills.

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Physical Education: Required Personal Fitness (9–12)

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To a greater extent than in the core academic subjects, Physical Education teachers must infuse personal and social skill development in helping students meet and exceed the content standards. Consequently, the presentation of the Physical Education Standards is preceded by a list of complementary Personal and Social Development Skills (PESK). Including the PESK components in teaching the Physical Education standards is critical in promoting lifelong, healthy physical activity and in realizing the wide range of benefits associated with participation in dance, sports, games, and other physical activities.

Strand:

**PESK Personal and Social Development Skills** The student applies responsible personal and social development skills in a physical activity setting. In the Personal Fitness course all students will:

Standards:

- PESK1:** participate fully and communicate cooperatively with others;
- PESK2:** perform activities safely and follow rules of etiquette and ethical behavior;
- PESK3:** display age appropriate self-control and discipline;
- PESK4:** display a willingness to receive and use feedback to improve performance;
- PESK5:** accept the decisions of and respond positively to teachers/officials in charge of games/activities;
- PESL6:** choose healthful physical activities to experience fun, challenge, self-expression and/or social interaction;
- PESK7:** display an interest in and assist and encourage others' efforts;
- PESK8:** display behaviors that are supportive and inclusive;
- PESK9:** self-initiate behaviors that contribute to personal and partner/group effort;
- PESK10:** adjust behavior to prevent/reconcile conflicts.

Strand:

**PE1 Motor Skills and Movement Patterns** Competency in motor skills and movement patterns is needed to perform a variety of physical activities. In the Personal Fitness course, all students will:

Standards:

- PE1a:** demonstrate proper form and execution of warm-up and cool-down exercises specific to selected physical fitness development activities;
- PE1b:** demonstrate proper muscle-stretching techniques in flexibility development activities;
- PE1c:** demonstrate proper posture and training techniques in muscular strength and endurance activities; and
- PE1d:** demonstrate proper posture and training techniques in aerobic fitness activities.

Strand:

**PE2 Physical Activity and Fitness** A physically active lifestyle is essential to maintain a health-enhancing level of physical fitness. In the Personal Fitness course, all students will:

Standards:

- PE2a:** engage in a self-assessment of health- and skill-related fitness;
- PE2b:** analyze fitness assessment data, set goals, and implement a personal plan for physical fitness development;

- PE2c:** apply FITT (frequency, intensity, time, and type) training principles to aerobic fitness development activities based on personal fitness goals;
- PE2d:** evaluate personal fitness development plan and progress toward achievement of personal fitness goals;
- PE2e:** analyze the relationship of aerobic fitness (cardiovascular and cardio-respiratory) to disease prevention and heart-rate recovery after vigorous physical activity;
- PE2f:** record and analyze progress in reaching personal fitness development goals in a muscular stretching and strengthening program;
- PE2g:** record and analyze progress in reaching personal fitness development goals in an aerobic fitness development program;
- PE2h:** examine how physical fitness development can promote health and wellness throughout life;
- PE2i:** identify reliable sources of fitness-related information on the Internet;
- PE2j:** measure personal body composition and distinguish the important functions of lean and fat body mass;
- PE2k:** examine the relationship between proper posture, body mechanics, and efficient movement in selected physical fitness activities; and
- PE2l:** identify physical exercises that can be harmful to the body and explain why they should be avoided (e.g., neck circles, deep knee bends, double leg lifts, back arching).

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Physical Education: Required Lifetime Sports (9–12)

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To a greater extent than in the core academic subjects, Physical Education teachers must infuse personal and social skill development in helping students meet and exceed the content standards. Consequently, the presentation of the Physical Education Standards is preceded by a list of complementary Personal and Social Development Skills (PESK). Including the PESK components in teaching the Physical Education standards is critical in promoting lifelong, healthy physical activity and in realizing the wide range of benefits associated with participation in dance, sports, games, and other physical activities.

Strand:

**PESK Personal and Social Development Skills** The student applies responsible personal and social development skills in a physical activity setting. In the Lifetime Sports course all students will:

Standards:

- PESK1:** participate fully and communicate cooperatively with others;
- PESK2:** perform activities safely and follow rules of etiquette and ethical behavior;
- PESK3:** display age appropriate self-control and discipline;
- PESK4:** display a willingness to receive and use feedback to improve performance;
- PESK5:** accept the decisions of and respond positively to teachers/officials in charge of games/activities;
- PESL6:** choose healthful physical activities to experience fun, challenge, self-expression and/or social interaction;
- PESK7:** display an interest in and assist and encourage others' efforts;
- PESK8:** display behaviors that are supportive and inclusive;
- PESK9:** self-initiate behaviors that contribute to personal and partner/group effort;
- PESK10:** adjust behavior to prevent/reconcile conflicts.

Strand:

**PE1 Motor Skills and Movement Patterns** Application of movement concepts and procedures is needed to perform a variety of physical activities. In the Lifetime Sports course, all students will:

Standards:

- PE1a:** demonstrate competency in basic skills in a few lifetime sports;
- PE1b:** evaluate personal progress towards skill competency;
- PE1c:** analyze and adjust performance using informal self- and peer assessment;
- PE1d:** set realistic, personal skill development goals;
- PE1e:** monitor progress and modify strategies for achieving personal lifetime sports skills goals; and
- PE1f:** demonstrate skill in applying rules and strategies in a few lifetime sports.

Strand:

**PE2 Physical Activity and Fitness** A physically active lifestyle is essential to maintain a health-enhancing level of physical fitness. In the Lifetime Sports course, all students will:

Standards:

- PE2a:** engage in a variety of lifetime sports that promote personal health and fitness goals, documenting frequency, duration, and reasoning;

- PE2b:** develop personal warm-up and cool-down procedures tailored for specific lifetime sports;
- PE2c:** apply appropriate stretching and strengthening exercises in preparation for lifetime sports participation;
- PE2d:** analyze fitness level conditioning procedures associated with readiness for lifetime sports participation;
- PE2e:** demonstrate appropriate body alignment and breathing when performing lifetime sport skills;
- PE2f:** analyze common lifetime sports injuries and their prevention and treatment;
- PE2g:** assess lifetime sports opportunities available for school-age youth in the community; and
- PE2h:** modify rules, equipment, facilities to meet varying conditions for lifetime sports participation.

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Physical Education: Required Physical Activity and Nutrition (9–12)

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To a greater extent than in the core academic subjects, Physical Education teachers must infuse personal and social skill development in helping students meet and exceed the content standards. Consequently, the presentation of the Physical Education Standards is preceded by a list of complementary Personal and Social Development Skills (PESK). Including the PESK components in teaching the Physical Education standards is critical in promoting lifelong, healthy physical activity and in realizing the wide range of benefits associated with participation in dance, sports, games, and other physical activities.

Strand:

**PESK Personal and Social Development Skills** The student applies responsible personal and social development skills in a physical activity setting. In the Physical Activity and Nutrition course all students will:

Standards:

- PESK1:** participate fully and communicate cooperatively with others;
- PESK2:** perform activities safely and follow rules of etiquette and ethical behavior;
- PESK3:** display age appropriate self-control and discipline;
- PESK4:** display a willingness to receive and use feedback to improve performance;
- PESK5:** accept the decisions of and respond positively to teachers/officials in charge of games/activities;
- PESL6:** choose healthful physical activities to experience fun, challenge, self-expression and/or social interaction;
- PESK7:** display an interest in and assist and encourage others' efforts;
- PESK8:** display behaviors that are supportive and inclusive;
- PESK9:** self-initiate behaviors that contribute to personal and partner/group effort;
- PESK10:** adjust behavior to prevent/reconcile conflicts.

Strand:

**PE1 Motor Skills and Movement Patterns** Competency in motor skills and movement patterns is needed to perform a variety of physical activities. In the Physical Activity and Nutrition course, all students will:

Standards:

- PE1a:** plan and implement a personal/group physical activity learning project, focusing on an alternative to traditional sports;
- PE1b:** demonstrate knowledge and movement skill readiness in an activity that is an alternative to traditional sports;
- PE1c:** demonstrate conditioning activities that develop the basic fitness qualities needed to perform a selected alternative physical activity; and
- PE1d:** self-assess performance of alternative physical activity skills and evaluate and adjust alternative physical activity learning plan.

Strand:

**PE2 Physical Activity and Fitness** A physically active lifestyle is essential to maintain a health-enhancing level of physical fitness. In the Physical Activity and Nutrition course, all students will:

Standards:

- PE2a:** identify the health and fitness benefits of selected alternative physical activity;

- PE2b:** evaluate personal fitness requirements for participation in selected alternative physical activity;
- PE2c:** understand the relationship of caloric intake, energy expenditure, and weight management;
- PE2d:** analyze personal energy balance by documenting personal food intake and daily physical activity, using food and activity diaries; and
- PE2e:** identify ways to balance nutritional needs with physical activity energy expenditure.

## Foreign Language: Level III

Performance Descriptions:	In Level III, students continue to develop oral proficiency skills. This enables them to perform routine language functions on a variety of topics. Students are able to ask and answer questions, sustain conversation and express ideas with increasing facility. Students continue to develop reading and writing skills appropriate to the level in cultural contexts. Students demonstrate increased appreciation of the culture and people of the target language.
Strand: <b>FL1 Speaking, Listening, and Understanding</b>	Speaking, listening, and understanding are fundamental processes which people use to express, explore, and learn about ideas. The student speaks and understands the target language as a result of various instructional strategies focusing on oral proficiency. These include use of the target language in familiar situations to enhance vocabulary development and oral proficiency skills.
Standard:	<b>FL1a:</b> The student understands and interprets spoken expression in the target language on a variety of topics with increasing facility, and comprehends short conversations and narrative passages. The student:
Components:	<b>FL1a.1:</b> builds and expands vocabulary in the target language; <b>FL1a.2:</b> continues to refine an understanding of the sound system of the target language; and discriminates individual sounds and intonation of the target language; <b>FL1a.3:</b> understands basic idiomatic expressions and cognates; <b>FL1a.4:</b> responds appropriately to spoken commands; and <b>FL1a.5:</b> comprehends the main ideas in a variety of spoken presentations.
Examples:	<i>Examples of activities through which students provide evidence of listening and understanding include:</i> <ul style="list-style-type: none"><li>• <i>Understand and respond to appropriately to teacher instructions.</i></li><li>• <i>Listen to popular songs and interpret meaning.</i></li><li>• <i>Answer simple questions about a listening activity in the target language with graphic fill-ins.</i></li><li>• <i>Listen for a series of events in a listening activity.</i></li></ul>
Standard:	<b>FL1b:</b> The student engages in conversations; provides and obtains information, expresses feelings and emotions, and exchanges opinions in the target language. The student:
Components:	<b>FL1b.1:</b> engages in basic classroom interactions; <b>FL1b.2:</b> uses basic idiomatic expressions and expressions of courtesy; <b>FL1b.3:</b> uses the target language in everyday situations; and <b>FL1b.4:</b> demonstrates increasing control of vocabulary.
Examples:	<i>Examples of activities which provide evidence of speaking include:</i> <ul style="list-style-type: none"><li>• <i>Create short conversations and narrative passages.</i></li><li>• <i>Formulate answers to questions based on personal experiences.</i></li><li>• <i>Initiate questions.</i></li><li>• <i>Discuss simple topics related to self and immediate environment.</i></li><li>• <i>Describe and compare qualities, people, and things.</i></li><li>•</li></ul>

Strand:  
**FL2 Reading and Writing**

Reading is a process of understanding the written target language. It requires students to recognize the printed word, interpret the text, and demonstrates comprehension of the text in the target language. Writing is a process through which the writer shapes the target language to communicate effectively.

Standard: **FL2a:** The student reads material in the target language. The student:

Component: **FL2a.1:** reads and comprehends written directions;  
**FL2a.2:** reads a passage;  
**FL2a.3:** recognizes cognates and words in context; and  
**FL2a.4:** reads aloud using correct pronunciation, inflection, and intonation.

Examples: *Examples of activities through which students provide evidence of reading material in the target language include:*

- Organize key information read using essays, newspapers, magazines and internet resources.
- Categorize newspaper clippings about employment opportunities, apartment availability, furniture, restaurants and entertainment.
- Recite a simple literary passage.

Standard: **FL2b:** The student comprehends and interprets the main idea of a variety of written materials in the target language. The student:

Components: **FL2b.1:** expands reading vocabulary;  
**FL2b.2:** reads and comprehends functional readings and/or literature from a variety of genres;  
**FL2b.3:** predicts meaning of key words in a selection; and  
**FL2b.4:** understands new vocabulary with contextual clues.

Examples: *Examples of activities through which students provide evidence of reading material in the target language include:*

- Analyze functional text as well as novice level literary text.
- Produce commercials from media sources.
- Summarize current event acquired via the internet.

Standard: **FL2c:** The student writes words and simple expressions in the target language. The student:

Components: **FL2c.1:** writes forms of familiar spoken language using idiomatic expressions and colloquialisms;  
**FL2c.2:** researches and writes reports on a variety of topics; and  
**FL2c.3:** writes descriptions about diverse themes using variations of patterns previously learned.

Examples: *Examples of activities through which students provide evidence writing in the target language include:*

- Write about current events.
- Investigate historical events and create time lines.
- Clarify directions.
- List recommendations on a variety of topics (e.g., how to be a good student, travel etc.).
- Creates travel or other brochures.

Standard: **FL2d:** The student demonstrates written communication in the target language for a variety of needs. The student:

Components: **FL2d.1:** writes questions to obtain information;  
**FL2d.2:** writes appropriate answers to questions on familiar topics; and  
**FL2d.3:** creates a writing sample with point of view and purpose.

Examples: *Examples of activities through which students provide evidence writing in the target language include:*

- Write a “Dear Abby” letter seeking advice.
- Respond to a classmate’s “Dear Abby” letter.
- Produce pen pal letters, e-mails, and chat with other students via the internet.
- Review a movie or a restaurant.
- Complete an authentic document requesting information (e.g., job and visa application, or document from the internet).

Standard: **FL2e:** The student demonstrates communicative and interpretative skills in both reading and writing in the target language. The student:

Component: **FL2e.1:** reads and comprehends material, and produces written work that reflects understanding of text.

Examples: *Examples of activities through which students provide evidence of reading material and writing in the target language include:*

- Interpret an essay question and write a response following set criteria.
- Read a selection on a controversial topic and write responses to be presented in a classroom debate.
- Read historical information and write about the importance of a particular event.
- Analyze cultural selections and write comparisons and contrasts to their own heritage.

Strand:  
**FL3 Cultures**

The understanding of another culture includes the relationships among the perspectives (attitudes, values), the practices (patterns of social interactions), and the products (foods, book, games, etc.) of a society.

Standard: **FL3a:** The student demonstrates an understanding of the different aspects of the culture studied. The student:

Components: **FL3a.1:** recognizes attitudes, values and beliefs;  
**FL3a.2:** explores formal social, political and economic institutions;  
**FL3a.3:** examines celebrations, holidays, traditions, folk stories, legends;  
**FL3a.4:** discovers foods; and  
**FL3a.5:** explores fine arts, literature and entertainment.

Examples: *Examples of activities through which students provide evidence of cultural understanding and sensitivity of the target language include:*

- Draw a picture that exemplifies the stereotype of the average person of the culture studied. (Students compare the pictures with those of the other students and tally the most recurrent traits.)
- Learn to associate the main accents with the different regions of the country.
- Choose a typical product of the culture studied and present it to the class (ex: model car, ice cream etc.).

- *Learn about the school system of the culture studied.*
- *Listen and learn the most popular fairy tales of the culture studied.*
- *Learn about dishes from different regions.*
- *Listen, learn, and sing a song from a popular pop singer.*
- *Bring the covers of the most popular magazines in the target language in order to identify and discuss the most famous people of the moment.*

Standard:	<b>FL3b:</b> The student reinforces and expands their knowledge of other disciplines through the culture studied, and vice versa. The student:
Components:	<b>FL3b.1:</b> connects information studied in other subjects to their learning of the culture studied and vice versa; and <b>FL3b.2:</b> applies the concepts acquired in the culture studied in other curricular areas.
Examples:	<i>Examples of activities through which students provide evidence of cultural understanding and sensitivity of the target language include:</i> <ul style="list-style-type: none"><li>• <i>Search (and possibly visit) a statue or a famous piece of art of the country of the culture studied and make a model or a drawing for art class.</i></li><li>• <i>Learn and identify some cognates and borrowings from the target language and his/her native language and report them in his/her English class.</i></li><li>• <i>Report in geography class on the landscape of the culture studied as a project.</i></li></ul>
Standard:	<b>FL3c:</b> The student expands his/her views of the world through the exploration of the culture studied by making parallels between the culture studied and his/her own. The student:
Components:	<b>FL3c.1:</b> discovers and compares similarities and differences between the two cultures; <b>FL3c.2:</b> develops an awareness and understanding of alternative views; <b>FL3c.3:</b> analyzes and evaluates similarities and differences between the two cultures; and <b>FL3c.4:</b> develops the ability to hypothesize about cultural systems in general.
Examples:	<i>Examples of activities through which students provide evidence of cultural understanding and sensitivity of the target language include:</i> <ul style="list-style-type: none"><li>• <i>Identify and compare the different ways to express respect in the culture studied and his/her own culture.</i></li><li>• <i>Learn about the most popular children's games in the culture studied.</i></li><li>• <i>Compare the ads from two magazines of both cultures and look for the products that are advertised most frequently.</i></li><li>• <i>Hypothesize how a newspaper from the culture studied would advertise a certain product (a simple catchy slogan, etc.) after being given a logo that represents a certain product.</i></li></ul>
Standard:	<b>FL3d:</b> The student demonstrates cultural understandings by interacting in real-life situations, applying appropriate social protocols and language. The student:
Components:	<b>FL3d.1:</b> communicates on a personal level with target language speakers; <b>FL3d.2:</b> participates in community celebrations in the target culture; and

**FL3d.3:** involves him/herself in local community events and activities or simulated real-life situations.

Examples:

*Examples of activities through which students provide evidence of cultural understanding and sensitivity of the target language include:*

- *Write a letter or email to a student of the same grade in a school in the culture studied.*
- *Call the weather forecast office and inquire about the forecast in the culture studied for the weekend.*
- *Send a birthday holiday card to a native speaker in the community of the culture studied.*
- *Write a letter of recommendation for a friend who would like to work as a volunteer in the local hospital during the weekends.*

Strand:

**VA1 Media, Techniques, and Processes**

Demonstrates understanding and can apply media, techniques, and processes.

Standards:

- VA1a:** The student demonstrates increasing proficiency in the production of two- and three-dimensional art forms by using a variety of materials and advanced technology.
- VA1b:** The student produces a portfolio that incorporates a variety of works of art to include media, technological, tools, techniques, and processes.
- VA1c:** The student uses and explains how media, technological tools, techniques, and processes are used to solve visual art problems.
- VA1d:** The student uses art materials and tools, including technology, in a safe and responsible manner.
- VA1e:** The student understands and analyzes the elements and principles of color theory.

Strand:

**VA2 Structures and Functions**

Demonstrates knowledge of structures and functions.

Standards:

- VA2a:** The student demonstrates an increased proficiency in the use of the elements of art and principles of design.
- VA2b:** The student creates works of art that demonstrate a variety of purposes and intents.
- VA2c:** The student selects and uses the elements of art and principles of design to communicate ideas, solve visual problems and develop personal expression.

Strand:

**VA3 Subject Matter, Symbols, and Ideas**

Chooses and evaluates a range of subject matter, symbols, and ideas.

Standards:

- VA3a:** The student creates a work of art to communicate intended meaning using information and ideas from a variety of sources.
- VA3b:** The student considers and compares the sources for subject matter, symbols and ideas in personal work and that of others.

Strand:

**VA4 History and Culture**

Demonstrates understanding of the visual arts in relation to history and cultures.

Standards:

- VA4a:** The student demonstrates knowledge of and compares the characteristics and purposes of works of art representing various cultures, historical periods, and artists.
- VA4b:** The student recognizes and describes works of art according to artist and style.
- VA4c:** The student compares and contrasts works of art in terms of history, aesthetics and culture.
- VA4d:** The student compares the cultural diversity of American art with that of the host nation and other cultures.

Strand:

**VA5 Characteristics and Merits of Work**

Reflects upon and assesses the characteristics and merits of their work and the work of others.

Standards:

- VA5a:** The student demonstrates knowledge and understanding that works of art can be analyzed by using a formal system of evaluation to determine merit without bias.
- VA5b:** The student describes and analyzes visual characteristics of works of art using visual art terminology.
- VA5c:** The student compares and contrasts the quality, craftsmanship, and effectiveness of personal work and that of others by using a formal system.

Strand:

**VA6 Connections to Other Disciplines**

Makes connections between the visual arts and the other disciplines.

Standards:

- VA6a:** The student identifies how art and other disciplines are interrelated, and that they play a role in daily life.
- VA6b:** The student demonstrates knowledge and understanding that there are a variety of careers and leisure pursuits in the visual arts.
- VA6c:** The student applies visual art problem-solving skills to other disciplinary studies.
- VA6d:** The student identifies and compare works of art that share similar subjects, themes, purposes, historical periods or technologies.

Strand:

**VA7 Technology Integration**

Understands and creates art through technology.

Standards:

- VA7a:** The student knows and understands that technology is an important art tools for the 21<sup>st</sup> Century.
- VA7b:** The student creates original works of art by accessing and manipulating images from a variety of sources.
- VA7c:** The student creates a portfolio that demonstrates increased competency and complexity by using technological tools and materials.

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Music: Grade 9 - 12

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Strand:

**MU1** Performs alone and/or with others a varied repertoire of music

- Standards:
- MU1a:** The student performs Level 3 (Refer to Glossary) instrumental/3-part vocal music demonstrating correct posture, playing position, breath, bow, or stick control.
  - MU1b:** The student demonstrates well-developed ensemble skills with technical accuracy in tone quality, articulation, pitch, phrasing, and rhythm.
  - MU1c:** The student demonstrates expression, interpretation and harmonic balance in performance and sight-reading.

Strand:

**MU2** Reads and notates music

- Standards:
- MU2a:** The student reads and notates music with changes of simple meters using whole, half, quarter, eighth, sixteenth, and dotted notes/rests, to include sight-reading short examples and taking rhythmic dictation.
  - MU2b:** The student identifies tonal centers; reads and notates music in at least 8 keys to include some relative minors.
  - MU2c:** The student interprets standard symbols and terms for tempo, articulation, and expression.

Strand:

**MU3** Listens to, responds to, and describes music

- Standards:
- MU3a:** The student identifies and explains musical events and techniques that are used to provide unity, variety, and tension and release in a musical work.
  - MU3b:** The student uses appropriate terminology to describe musical events occurring in musical performance.
  - MU3c:** The student analyzes aural examples of a varied repertoire and indicates the use of the elements of music and expressive devices.
  - MU3d:** The student creates simple melodies, harmonies, arrangements, or improvisations based on given criteria.

Strand:

**MU4 History and Culture** Demonstrates understanding of music in relation to history and culture.

- Standards:
- MU4a:** The student classifies music according to genre, style, medium, historical period, and culture.
  - MU4b:** The student compares and contrasts music from various styles and cultures, to include the host nation.
  - MU4c:** The student performs music of different historical periods and cultures.

Strand:

**MU5 Characteristics and Merits of Works and Performances**

Reflects upon and assesses the characteristics and merits in performances in their music and the music of others.

Standards:

**MU5a:** The student uses specific criteria for making informed, critical evaluations of the quality and effectiveness of performances, musical works, and arrangements.

**MU5b:** The student uses specific criteria for evaluating his or her own performances or arrangements.

**MU5c:** The student evaluates a performance, composition, or arrangement by comparing it to similar or exemplary works.

Strand:

**MU6 Connections to Other Disciplines**

Makes connections between music and the other disciplines.

Standards:

**MU6a:** The student integrates music with other disciplines.

**MU6b:** The student identifies the contributions of music and other disciplines in a multi-disciplinary project or performance.

**MU6c:** The student researches music career opportunities.

Strand:

**MU7 Technology Integration**

Understands and creates music through technology.

Standards:

**MU7a:** The student uses technological tools to research music, musicians, careers, historical periods, and interdisciplinary connections.

**MU7b:** The student participates in creating a simple musical work using a variety of technological tools with increased competency.

**MU7c:** The student uses technology for self-assessment.

**MU7d:** The student develops an awareness of music career opportunities in technology.