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English/Language Arts: Grade 8

Strand:

E1 Reading

Reading is a process which 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 for grade eight (900L-1150L). The materials should include traditional and contemporary literature (both fiction and non-fiction) as well as magazines, newspapers, textbooks, and on-line material. 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 text 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:

- *Construct a book review.*
- *Participate in formal or informal book talk.*
- *Produce a literary response paper.*
- *Create an annotated book list organized according to author, theme, or genre.*
- *Produce a research report.*

Standard:

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

Components:

E1c.1: restates or summarizes information;
E1c.2: relates new information to prior knowledge and experience;
E1c.3: extends ideas;
E1c.4: makes connections to related topics or information.

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">• <i>Use information to support or enhance a project.</i>• <i>Incorporate expert opinions into a speech or position paper.</i>• <i>Develop a proposal based on data obtained from reading informational texts.</i>• <i>Write a report of information that draws from multiple sources.</i>• <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>
Standard:	E1d: The student demonstrates familiarity with a variety of public documents (i.e., documents that focus on civic issues or matters of public policy at the community level and beyond) and produces written or oral work that does one or more of the following:
Components:	E1d.1: identifies the social context of the document; E1d.2: identifies the author’s purpose and stance; E1d.3: analyzes the arguments and positions advanced and the evidence offered in support of them, or formulates an argument and offers evidence to support it; E1d.4: examines or makes use of the appeal of a document to audiences both friendly and hostile to the position presented; E1d.5: identifies or uses commonly used persuasive techniques.
Examples:	<p><i>Examples of activities through which students might produce evidence of familiarity with public documents include:</i></p> <ul style="list-style-type: none">• <i>Summarize and critique two or more local newspaper articles related to the same topic or issue.</i>• <i>Respond to a public address made by an adult, e.g., the principal, a PTA/PTO officer, a visiting author.</i>• <i>Write a letter to the editor in response to an editorial or to an article of local or national importance.</i>• <i>Explain a local document to someone who has never heard of it (e.g., a school related directive, a community related brochure, or an informational pamphlet).</i>
Standard:	E1e: The student demonstrates familiarity with a variety of functional documents (i.e. documents that exist in order to get things done) and produces written or oral work that does one or more of the following:
Components:	E1e.1: identifies the institutional context of the document; E1e.2: identifies the sequence of activities needed to carry out a procedure; E1e.3: analyzes or uses the formatting techniques used to make a document user-friendly; E1e.4: identifies any information that is either extraneous or missing in terms of audience and purpose or makes effective use of relevant information.
Examples:	<p><i>Examples of activities through which students might produce evidence of familiarity with functional documents include:</i></p> <ul style="list-style-type: none">• <i>Write a memo or conduct a briefing on procedures to be followed in a given situation.</i>

- *Produce a manual setting out school rules.*
- *Revise a set of instructions to improve their clarity.*

Strand:

E2 Writing

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.

Standard:

E2a: The student produces a report that:

Components:

E2a.1: engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;

E2a.2: develops a controlling idea that conveys a perspective on the subject;

E2a.3: creates an organizing structure appropriate to a specific purpose, audience and context;

E2a.4: includes appropriate facts and details;

E2a.5: excludes extraneous and inappropriate information;

E2a.6: 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, and explaining benefits or limitations;

E2a.7: provides a sense of closure to the writing.

Examples:

Examples of reports include:

- *An informative report (comparing and contrasting attributes, e.g., comparing and contrasting the attributes of two or more countries).*
- *A saturation report (a report that recounts substantial information on a topic gathered by a student over a period of time).*
- *A chapter book.*
- *A multimedia presentation using research gained from print and other media sources.*
- *A report produced as part of studies in subjects such as science, social studies, and mathematics.*
- *A report of information on an item of personal interest or experience.*

Standard:

E2b: The student produces a response to literature that:

Components:

E2b.1: engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;

E2b.2: advances a judgment that is interpretive, analytic, evaluative, or reflective;

E2b.3: supports judgment through references to the text, references to other works, authors, or non-print media, or references to personal knowledge;

E2b.4: demonstrates an understanding of the literary work.

E2b.5: anticipates and answers a reader's questions;

E2b.6: provides a sense of closure to the writing.

Examples:

Examples of responses to literature include:

- *A literary response paper.*

- *A book or movie review.*
- *A literary analysis paper.*
- *A comparison of a piece of literature with its media presentation.*
- *An interpretation of a narrative poem.*
- *A pamphlet.*
- *A diary.*
- *A newspaper or magazine article.*

Standard: **E2c:** The student produces a narrative account (fictional or autobiographical) that:

- Components:
- E2c.1:** engages the reader by establishing a context, creating a point of view, and otherwise developing reader interest;
 - E2c.2:** 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 those events);
 - E2c.3:** creates an organizing structure;
 - E2c.4:** includes sensory details and concrete language to develop plot and character;
 - E2c.5:** excludes extraneous details and inconsistencies;
 - E2c.6:** develops complex characters;
 - E2c.7:** uses a range of appropriate strategies, such as dialogue, tension or suspense, naming, and specific narrative action, e.g., movement, gestures, expressions;
 - E2c.8:** provides a sense of closure to the writing.

- Examples:
- Examples of narrative accounts include:*
- *A biographical account.*
 - *A problem-solution essay.*
 - *A fiction or non-fiction story.*
 - *A personal narrative.*
 - *A historical account.*
 - *A news account of an event, fiction or non-fiction.*

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 for a relatively complicated procedure in order to anticipate a reader's needs; creates expectations through predictable structures, e.g., headings; and provides 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.*
- *An explanation of a mathematical procedure.*
- *A report of information explaining steps and/or procedures for a familiar activity.*
- *A storyboard.*

Standard:	E2e: The student produces a persuasive essay that:
Components:	<p>E2e.1: engages the reader by establishing a context, creating a persona, and otherwise developing reader interest;</p> <p>E2e.2: develops a controlling idea that makes a clear and knowledgeable judgment;</p> <p>E2e.3: creates and organizes a structure that is appropriate to the needs, values, and interests of a specified audience and arranges details, reasons, examples, and anecdotes effectively and persuasively;</p> <p>E2e.4: includes appropriate information and arguments;</p> <p>E2e.5: excludes information and arguments that are irrelevant;</p> <p>E2e.6: anticipates and addresses reader concerns and counter-arguments;</p> <p>E2e.7: supports arguments with detailed evidence, citing sources of information as appropriate;</p> <p>E2e.8: provides a sense of closure to the writing.</p>

Examples:	<p><i>Examples of persuasive essays include:</i></p> <ul style="list-style-type: none"> • <i>A position paper.</i> • <i>An evaluation of a product or policy.</i> • <i>An editorial on a current issue that uses reasoned arguments to support an opinion.</i> • <i>A speech for a candidate for school or public office.</i> • <i>A multimedia presentation based on a text read.</i> • <i>An informational web site.</i> • <i>A commercial script</i>
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Strand:	<p>E3 Speaking, Listening, and Viewing</p> <p>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.</p>
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Standard:	E3a: The student participates in one-to-one conferences with a teacher, paraprofessional, or adult volunteer, in which the student:
Components:	<p>E3a.1: initiates new topics in addition to responding to adult-initiated topics;</p> <p>E3a.2: asks relevant questions;</p> <p>E3a.3: responds to questions with appropriate elaboration;</p>

- E3a.4:** uses language cues to indicate different levels of certainty or hypothesizing, e.g., “what if...,” “very likely...,” “I’m unsure whether...”;
- E3a.5:** confirms understanding by paraphrasing the adult’s directions or suggestions.

Examples:

Examples of one-to-one interactions include:

- *Book Talks with a teacher or parent.*
- *Analytical discussions of a movie or television program with a teacher or parent.*
- *Student-teacher conferences regarding a draft of an essay, the student’s progress on a mathematics assignment or the status of a science project.*
- *Interviews with teachers or adults.*
- *Discussion with a teacher or parent about a portfolio of work.*

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-making technique such as a brainstorming or a problem-solving sequence (e.g., recognize problem, define problem, identify possible solutions, select optimal solution, implement solution, evaluate solution).

Examples:

Examples of activities involving group meetings include:

- *Create a plan for a group project (e.g., organize a presentation to be made to the class; plan a science project.)*
- *Develop and negotiate a class rubric.*
- *Engage in classroom town meetings.*
- *Take part in book talks with other students.*
- *Work as part of a group to solve a complex mathematical task.*
- *Role-play to better understand a certain historical event.*
- *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.*
- *A talk that outlines a plan of action for implementing a new school policy and the reasoning supporting the selected plan over other options.*
- *A report that analyzes a trend running through several literary works.*

Standard:

E3d: The student makes informed judgments about television, radio, and film productions; that is, the student:

Components:

- E3d.1:** demonstrates an awareness of the presence of the media in the daily lives of most people;
- E3d.2:** evaluates the role of the media in focusing attention and in forming opinion;
- E3d.3:** judges the extent to which the media are a source of entertainment as well as a source of information;
- E3d.4:** defines the role of advertising as part of media presentation.

Examples:

Examples of activities through which students might produce evidence of making informed judgments about television, radio, and film productions include:

- *Present a paper or report on reasons for selecting one media choice over another.*
- *Prepare a report on the benefits obtained (including information learned) from media exposure.*
- *Summarize patterns of media exposure in writing or in oral reports.*
- *Analyze the appeal of popular television shows and films for particular audiences.*
- *Describe the appeal of particularly memorable commercials.*
- *Explain the use of “propaganda techniques” (e.g., bandwagon, glittering generalities, celebrity) in television commercials.*

Strand:

**E4 Conventions,
Grammar and
Usage of the
English Language**

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:

E4a: The student 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:

E4a.1: grammar;

	<p>E4a.2: paragraph structure;</p> <p>E4a.3: punctuation;</p> <p>E4a.4: sentence construction;</p> <p>E4a.5: spelling;</p> <p>E4a.6: usage.</p>
Examples:	<p><i>Examples of activities through which students might demonstrate an understanding of the rules of the English language include:</i></p> <ul style="list-style-type: none"> • <i>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.</i> • <i>Proofread own writing or the writing of others, using dictionaries and other resources, including the teacher or peers as appropriate.</i> • <i>Observe conventions of language during formal oral presentations.</i> • <i>Revise a piece of writing by combining sentences.</i>
Standard:	<p>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:</p>
Components:	<p>E4b.1: adding or deleting details;</p> <p>E4b.2: adding or deleting explanations;</p> <p>E4b.3: clarifying difficult passages;</p> <p>E4b.4: rearranging words, sentences, and paragraphs to improve or clarify meaning;</p> <p>E4b.5: sharpening the focus;</p> <p>E4b.6: reconsidering the organizational structure.</p>
Examples:	<p><i>Examples of activities through which students might produce evidence of analyzing and revising work include:</i></p> <ul style="list-style-type: none"> • <i>Incorporate into revised drafts, as appropriate, suggestions taken from critiques made by peers and teachers.</i> • <i>Produce a series of distinctly different drafts that result in a polished piece of writing or a presentation.</i> • <i>Describe the reasons for stylistic choices made as a writer or presenter.</i> • <i>Critique the writing or oral presentation of a peer.</i>
Strand:	<p>E5 Literature Literature consists of poetry, fiction, non-fiction, and essays as distinguished from instructional, expository, or journalistic writing.</p>
Standards:	<p>E5a: The student responds to non-fiction, fiction, poetry, and drama using interpretive, critical, and evaluative processes; that is, the student:</p>
Components:	<p>E5a.1: identifies recurring themes across works;</p> <p>E5a.2: interprets the impact of authors’ decisions regarding word choice and content, and literary elements;</p> <p>E5a.3: identifies the characteristics of literary forms and genres;</p>

- E5a.4:** evaluates literary merit;
- E5a.5:** identifies the effect of point of view;
- E5a.6:** analyzes the reasons for character's actions, taking into account the situation and basic motivation of the character;
- E5a.7:** identifies stereotypical characters as opposed to fully developed characters;
- E5a.8:** identifies the effect of literary devices such as figurative language, allusion, diction, dialogue, and description;
- E5a.9:** makes inferences and draws conclusions about fictional and non-fictional contexts, events, characters, settings and themes.

Examples:

Examples of activities through which students might produce evidence of responding to literature include:

- *Analyze stereotypical characters in a popular television production.*
- *Examine themes in the work (fiction or non-fiction) of one popular young-adult author.*
- *Compare the literary merits of two or more short stories, biographies of one individual, novels, or plays.*
- *Evaluate the effect of literary devices in a number of poems by one author or poems on a common topic.*
- *Write or perform a skit based on a story.*
- *Write a parody.*
- *Speculate about point of view in a work read by the class.*

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 personal essay.*
- *A short story.*
- *A short play.*
- *A poem.*
- *A vignette.*

Mathematics Curriculum Content Standards

Mathematics: Grade 8

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
Essential To Know:	Students represent and compare the magnitude of numbers appropriately using exponential, scientific, and calculator notation.
Standard:	M1a: Instructional programs should enable all students to understand numbers, ways of representing numbers, relationships among numbers, and number systems. In eighth grade all students should:
Components/Expectations:	M1a.1: explain the meaning of exponents that are negative and zero; M1a.2: use scientific, exponential and calculator notation to express very large or small numbers; M1a.3: expand scientific notation to include negative exponents
Standard:	M1b: Instructional programs should enable all students to understand meanings of operations and how they relate to one another. In eighth grade all students should:
Components/Expectations:	M1b.1: explain and use the additive and multiplicative identities and the additive and multiplicative inverses; M1b.2: apply order of operations to simplify expressions and perform appropriate operation(s) involving numbers written in exponential notation or radical form.
Standard:	M1c: Instructional programs should enable all students to understand how to compute fluently and make reasonable estimates. In eighth grade all students should:
Component/Expectation:	M1c.1: make reasonable estimates and then solve problems that include rational numbers, ratios, and proportions.
Strand:	M2 Algebra
Essential To Know:	Students model and solve real world problems using various representations such as graphs, tables, and equations.
Standard:	M2a: Instructional programs should enable all students to understand patterns, relations, and functions. In eighth grade all students should:
Components/Expectations:	M2a.1: generalize patterns and sequences by describing the way to find the n th term; M2a.2: identify functions as linear or nonlinear and contrast their properties using tables, graphs, or equations.
Standard:	M2b: Instructional programs should enable all students to represent and analyze mathematical situations and structures using algebraic symbols. In eighth grade all students should:
Components/Expectations:	M2b.1: analyze relationships between linear equations and their graphs by connecting the meaning of intercepts and slope to the context of the situation;

	<p>M2b.2: use symbolic algebra to represent situations and to solve problems involving linear and nonlinear relationships;</p> <p>M2b.3: recognize, generate, and justify equivalent forms of algebraic expressions;</p> <p>M2b.4: solve linear equations and inequalities;</p> <p>M2b.5: represent situations using systems of linear equations and solve graphically.</p>
Standard:	<p>M2c: Instructional programs should enable all students to use mathematical models to represent and understand quantitative relationships. In eighth grade all students should:</p>
Component/Expectation:	<p>M2c.1: model and solve problems using various representations, i.e., graphs, tables, and equations.</p>
Standard:	<p>M2d: Instructional programs should enable all students to analyze change in various contexts. In eighth grade all students should:</p>
Components/Expectations:	<p>M2d.1: connect the rate of change to the slope of a line;</p> <p>M2d.2: analyze changes in linear relationships using graphs;</p> <p>M2d.3: describe and compare how changes in an equation affect the related graph.</p>
Strand:	<p>M3 Geometry</p>
Essential To Know:	<p>Students apply the Pythagorean theorem by constructing figures that meet specific conditions.</p>
Standard:	<p>M3a: 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. In eighth grade all students should:</p>
Components/Expectations:	<p>M3a.1: understand relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects;</p> <p>M3a.2: verify the Pythagorean Theorem;</p> <p>M3a.3: apply the Pythagorean Theorem to determine if a triangle is a right triangle or to find a missing side of a right triangle;</p> <p>M3a.4: identify and describe angle relationships formed by parallel lines cut by a transversal using appropriate terminology, i.e., alternate interior, alternate exterior, supplementary, vertical angles, corresponding angles, complementary, consecutive interior.</p>
Standard:	<p>M3b: Instructional programs should enable all students to specify locations and describe spatial relationships using coordinate geometry and other representational systems. In eighth grade all students should:</p>
Component/Expectation:	<p>M3b.1: plot ordered pairs of rational numbers on the coordinate plane in all four quadrants.</p>
Standard:	<p>M3c: Instructional programs should enable all students to apply transformations and use symmetry to analyze mathematical situations.</p>
Standard:	<p>M3d: Instructional programs should enable all students to use visualization, spatial reasoning, and geometric modeling to solve problems.</p>

Component/Expectation:	M3d.1: use geometric models to represent and explain numerical and algebraic relationships.
Strand:	M4 Measurement
Essential To Know:	Students use strategies to determine the surface area and volume of prisms, pyramids and cylinders.
Standard:	M4a: Instructional programs should enable all students to understand measurable attributes of objects and the units, systems, and processes of measurement. In eighth grade all students should:
Component/Expectation:	M4a.1: describe and demonstrate how perimeter, area, and volume are affected by changes of scale.
Standard:	M4b: Instructional programs should enable all students to apply appropriate techniques, tools, and formulas to determine measurements. In eighth grade all students should:
Components/Expectations:	<p>M4b.1: develop strategies to determine the surface area and volume of selected prisms, pyramids and cylinders;</p> <p>M4b.2: use formulas to a specified level of precision in finding the surface area and volume of prisms, pyramids and cylinders and the volume of spheres and cones;</p> <p>M4b.3: find the sum of the interior and exterior angles of regular convex polygons with and without the use of a protractor;</p> <p>M4b.4: solve simple rate problems.</p>
Strand:	M5 Data Analysis and Probability
Essential To Know:	<p>Students construct convincing and appropriate arguments based on analysis of data and interpretation of graphs.</p> <p>Students explain the difference between independent and dependent events.</p>
Standard:	M5a: 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. In eighth grade all students should:
Component/Expectation:	M5a.1: differentiate between discrete and continuous data and appropriate ways to represent each.
Standard:	M5b: Instructional programs should enable all students to select and use appropriate statistical methods to analyze data. In eighth grade all students should:
Components/Expectations:	<p>M5b.1: find, interpret and appropriately use measures of center, quartile, and interquartile range to compare two sets of data;</p> <p>M5b.2: find the equation of a line of best fit for data represented as a scatter plot.</p>
Standard:	M5c: Instructional programs should enable all students to develop and evaluate inferences and predictions that are based on data. In eighth grade all students should:

Components/Expectations:	<p>M5c.1: describe sampling methods and analyze effects of random versus biased sampling and justify conclusions;</p> <p>M5c.2: construct convincing and appropriate arguments for a conclusion based on analysis of data presented;</p> <p>M5c.3: recognize faulty arguments or common errors in data analysis.</p>
Standard:	<p>M5d: Instructional programs should enable all students to understand and apply basic concepts of probability. In eighth grade all students should:</p>
Components/Expectations:	<p>M5d.1: compute the probability of the occurrence of independent and simple dependent events;</p> <p>M5d.2: distinguish between permutations and combinations.</p>
Strand:	<p>M6 Problem Solving</p>
Standard:	<p>M6a: Instructional programs from pre-kindergarten through grade 12 should enable all students to:</p> <ul style="list-style-type: none"> • 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:	<p>M7 Reasoning and Proof</p>
Standard:	<p>M7a: Instructional programs from pre-kindergarten through grade 12 should enable all students to:</p> <ul style="list-style-type: none"> • 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:	<p>M8 Communication</p>
Standard:	<p>M8a: Instructional programs from pre-kindergarten through grade 12 should enable all students to:</p> <ul style="list-style-type: none"> • 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:	<p>M9 Connections</p>
Standard:	<p>M9a: Instructional programs from pre-kindergarten through grade 12 should enable all students to:</p> <ul style="list-style-type: none"> • 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:** Instructional programs from pre-kindergarten through grade 12 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.

Science: Grade 8

Strand:

S1 Scientific Inquiry The student demonstrates abilities necessary to do scientific inquiry and an understanding about scientific inquiry; that is, the student:

Standards:

- S1a:** develops research questions that can be answered through scientific investigations.
- S1b:** accesses, evaluates and uses information from a variety of reliable scientific sources.
- S1c:** designs, conducts and records scientific investigations following the general procedures of scientific inquiry.
- S1d:** applies appropriate tools and techniques to systematically collect, record, analyze, and interpret data.
- S1e:** develops logical descriptions, explanations, predictions, and models using evidence.
- S1f:** recognizes and analyzes interpretations, conclusions, and predictions based upon alternative evidence and explanations.
- S1g:** communicates scientific procedures, explanations, and conclusions using appropriate scientific language and writing, and mathematics.

Strand:

S2 History and Nature of Science The student demonstrates an understanding of science as a human endeavor and the history and nature of science; that is, the student:

Standards:

- S2a:** cites examples of scientists from diverse backgrounds, and explains how they use scientific habits of mind (such as: reasoning, insight, skill, creativity, intellectual honesty, tolerance for ambiguity, skepticisms, and openness to new ideas) in their work.
- S2b:** explains how scientists formulate and test their explanations, revising when necessary.
- S2c:** investigates and explains how scientists communicate their results and ideas, and describes and identifies situations in which scientists disagree about interpretation of evidence.
- S2d:** examines the effects of science on cultural development and states the relationship between scientific innovation and human history.

Strand:

S3 Science in Personal and Social Perspectives The student demonstrates an understanding of safety, natural and human hazards, and their risks and benefits; that is, the student:

Standards:

- S3a:** demonstrates personal and group safety and resource conservation when engaged in science.
- S3b:** thinks critically and analyzes risks and benefits associated with natural, chemical, biological, and personal hazards.
- S3c:** evaluates the interrelationships of environmental degradation on the global community.

Strand:

S4 Science and Technology

The student demonstrates an understanding about science and technology and the nature of technological design; that is, the student:

Standards:

- S4a:** assesses societal challenges that may inspire scientific research.
- S4b:** evaluates an invention or design and proposes modifications.
- S4c:** identifies a technological problem and develops a plan for design, implementation, and evaluation.
- S4d:** explores how technological risks lead to new technologies and how unintended consequences impact society.
- S4e:** analyzes how technology responds to societal, political, and economic needs.

Strand:

S5 Physical Science

The student demonstrates a conceptual understanding of matter, motions and forces, and transfer of energy; that is, the student:

Standards:

- S5a:** examines density, boiling point, and chemical reactivity of materials and explains conservation of matter.
 - Density is a basic identifying property of matter. The density of a substance indicates how tight the particles of a substance are packed together within the substance. The tighter the particles are packed, the higher the density of the substance.
 - Solubility is the measure of how well substances dissolve with other substances. Water is the universal solvent. Many substances dissolve in water, which may greatly facilitate reactions between them.
 - The temperature at which a substance changes from a liquid state to a gaseous state is known as its boiling point.
 - Chemical reactivity is how matter behaves during a chemical reaction. Many factors can influence chemical reaction rates temperature, acidity, and concentration.
 - The number of atoms in a chemical or physical change stays the same. Their total mass remains the same, no matter how the atoms are rearranged.
 - The conservation of matter states that matter can neither be created nor destroyed, but its form may be changed.
- S5b:** determines and communicates the relationship between motions and forces, including inertia and net effects of balanced and unbalanced forces.
 - Inertia exists when objects remain at rest or move at constant speed and direction because the forces acting on the objects are balanced.
 - An unbalanced force will cause changes in the speed or direction of an object's motion.
- S5c:** compares and explains different forms of energy as heat, light, electrical, mechanical, sound, and chemical.
 - Vibrations (e.g., sound) move at different speeds in different materials, have different wavelengths, and set up wave-like disturbances that spread away from the source.
 - Light interacts with matter by refraction, reflection, scattering, and absorption.

- The sun releases energy by emitting light and heat. A tiny fraction of that energy reaches the Earth as wavelengths in such forms as infrared, visible light, and ultraviolet radiation.
- Chemical energy is produced by chemical reactions and is dependent upon the arrangements of atoms.
- Mechanical energy is in moving bodies.

Strand:

S6 Life Science

The student demonstrates a conceptual understanding of the structure and function of living systems, populations and ecosystems; that is, the student:

Standards:

- S6a:** applies the concept of system failure to disease in the human organism at the cellular, tissue, organ, and system levels.
- Like other multicellular organisms, humans have body systems for obtaining and providing energy, defense, reproduction, and the coordination of body functions.
 - A disease is an abnormal condition in the structures or functions of an organism. Some diseases (e.g., heart disease, anemia, diabetes) are the result of internal failures of cells, tissues, organs and systems. Others are due to the damage caused by harmful chemicals (e.g., asbestos, lead, arsenic) and the infection by organisms (e.g., yellow fever, food poisoning).
 - Toxic substances, some dietary habits, and personal behavior may be harmful to one's health. Some effects show up right away, others may take many years to show signs of harmful effects.
 - Viruses, bacteria, fungi, and parasites may infect the human body and interfere with normal body structures and functions.
 - White blood cells engulf invaders or produce antibodies that attack them or mark them for killing by other white cells. The antibodies produced will remain and can fight off subsequent invaders of the same kind.
- S6b:** determines and compares the role of heredity and natural selection for survival of human and non-human organisms.
- Small differences between parents and offspring can accumulate through selective breeding and/or genetic mutations in successive generations. The descendants can be very different from their ancestors as a result of this process.
 - Individual organisms with certain favorable heritable characteristics (traits) are more likely than others to survive and have offspring. Changes in the environment can affect the survival of individual organisms or the entire species.
 - The proportion of individuals that have advantageous characteristics will increase. This is how natural selection serves as a mechanism for evolution.
- S6c:** generalizes how adaptive characteristics of a species (a population) influence their chance for survival or possible extinction.
- Animals and plants have a great variety of body plans and internal structures that contribute to their being able to make or find food and reproduce.

- Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations.
- Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproduction success in a particular environment.

Strand:

S7 Earth and Space Sciences

The student demonstrates a conceptual understanding of the Earth's systems and history; that is, the student:

Standards:

- S7a:** analyzes and evaluates the impact of constructive and destructive forces on the Earth and its inhabitants over geologic time.
- The Earth's processes we see today, including erosion, movement of lithospheric plates, and changes in atmosphere composition, are consistent to those that occurred in the past.
 - Earthquakes and volcanoes can have a radical effect on the Earth and its inhabitants.
 - Comets and asteroids orbit the sun. On rare occasions their orbital paths cross Earth's orbit and sometimes impact the ground resulting in climatic changes.
 - Landforms are the result of a combination of constructive and destructive forces.
- S7b:** examines and interprets the Earth's stratigraphic record in relation to constructive and destructive forces.
- Scientists examine the Earth's rock layers to learn more about its geologic history. They examine rock layers to determine the age, origin, history, catastrophic events and fossil/mineral content of rocks.
 - A study of the Earth's history provides evidence about the changes that took place with the planet's main features – distribution of land and sea, features of the crust, composition of the atmosphere, global climates, and populations of living organisms in the biosphere. Fossils provide evidence of how life and environmental conditions have changed.
- S7c:** compares the Sun to other stars and galaxies.
- Stars differ from each other in many ways (e.g., size, temperature, age, location).
 - The Sun is many thousands of times closer to the Earth than any other star. Light from the sun takes a few minutes to reach the Earth, but light from the next nearest star takes a few years to arrive. The trip to that star would take the fastest rocket thousands of years. Some distant galaxies are so far away that their light takes several billion years to reach the Earth. People on Earth, therefore, see them as they were that long ago in the past.
 - The Sun is a medium-sized star located near the edge of a disk-shaped galaxy of stars, part of which can be seen as a glowing band of light that spans the sky on a very clear night. The universe contains many billions of galaxies, and each galaxy contains many billions of stars. To the naked eye, even the closest of these galaxies is no more than a dim, fuzzy spot.

Social Studies: Grade 8 – United States History: Pre-Columbian to 1877

Standards Introduction: The standards for the eighth grade enable students to explore in depth the history of the United States from its origin to 1877. Students use key concepts of chronology, causality, conflict, and change to show connections among patterns of historical change and continuity. Students use knowledge from texts, maps, stories, charts, diagrams and research to inform decision making about public issues. Students should analyze the influence of various forms of public opinion on the development of public policy.

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:

SK1a: interpret United States maps.

SK1b: interpret data and create graphic displays (charts, graphs, diagrams, graphic organizers and time lines) using technology.

SK1c: infer information from captions, cartoons, photographs, etc.

SK1d: use primary sources (art work, biographies, journals, interviews, letters) to collect, analyze, summarize, and synthesize information.

SK1e: correlate and cross reference social studies materials (index, appendix, glossary).

SK1f: research information using text based databases.

SK1g: create a multimedia presentation using text, color, and importing graphics, sound, special effects and/or 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: explain the citizen's role and influence on public policy decisions.

SS1b: display tolerance for all cultures.

SS1c: describe the origins of key ideals and documents of democratic government.

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 common elements of culture.

SS2b: discuss the impact of immigrant cultures on native societies.

SS2c: explain and describe how language, literature, the arts, and artifacts demonstrate beliefs and values and contribute to cultures.

SS2d: summarize how economic conditions affected cultural patterns.

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:** survey the timing and pattern of American settlement as affected by world events.
- SS3b:** investigate, interpret and analyze multiple historical viewpoints as related to important events.
- SS3c:** summarize the economic, political, and social changes that resulted from conflicts and compromises.
- SS3d:** explain the gradual transformation of US society from agrarian to industrial.
- SS3e:** outline the history of political parties.

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 settlement patterns and population density.
- SS4b:** analyze the ecological and societal consequences of the Europeans on the New World.
- SS4c:** compare and contrast land use patterns in America.
- SS4d:** distinguish the natural resources and geographical features necessary for trade and industry.

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:** interpret the conflict between industrialization and individual needs.
- SS5b:** analyze the qualities needed for successful leadership.
- SS5c:** relate how religious beliefs influence the development of American culture.
- SS5d:** explore the motivations for immigration and migration.

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 the institution of slavery.
- SS6b:** describe how society in North America became stratified.
- SS6c:** identify the philosophical strands underlying the formation of democratic ideals.
- SS6d:** assess the basic socioeconomic interests in the US and their impact on formation of the government.
- SS6e:** recognize the role of the media and its effects on historical events.

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: chart the economic factors underlying the national and international rivalry in the Americas.

SS7b: delineate the financial problems faced by the United States in establishing a sound fiscal system.

SS7c: outline the differences in the economic structures of US regions.

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 governments (e.g., colonial, confederated).

SS8b: evaluate the factors that promote independence, self-government, and self-determination.

SS8c: explain the purposes of government and how its powers are acquired, used, and justified.

SS8d: examine the impact of conflicts on the American government system.

SS8e: explain how and why the Constitution has been interpreted to exclude certain groups from its protection and 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: relate how new skills and inventions led to the “Age of Exploration.”

SS9b: survey American scientific developments and contributions to the advancement of science.

SS9c: evaluate policies proposed to deal with social changes that result from new technologies.

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: compare native American civilizations with their contemporary societies/civilizations.

SS10b: analyze how the success of the American Revolution was aided by the European power struggle and triggered an era of worldwide revolutionary movements.

SS10c: discuss the external and internal influences on US foreign policy.

SS10d: compare world policies toward slavery and abolition.

Foreign Language: Grade 8

Performance Descriptions: In Level II, students continue to develop oral proficiency skills. Students continue to develop reading and writing skills appropriate to the level of study. Students continue to demonstrate an appreciation of the culture and people of the target language.

Strand:

FL1 Speaking, Listening, and Understanding

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:

FL1a: The student understands and interprets spoken expression in the target language on a variety of topics. The student:

Components:

FL1a.1: builds and expands basic vocabulary in the target language;
FL1a.2: refines understanding of the sound system of the target language, and discriminates individual sounds and intonation of the target language.
FL1a.3: understands basic idiomatic expressions and cognates; and
FL1a.4: responds appropriately to spoken commands;
FL1a.5: comprehends the main ideas in a variety of spoken presentations.

Examples:

Examples of activities through which students provide evidence of listening and understanding include:

- *Understand and respond to instructions in classroom situations.*
- *Listen to folk songs and poetry.*
- *Answer simple questions about a listening activity.*
- *Paraphrase main ideas from a spoken presentation in the native language.*
- *Listen and take notes from a listening activity with visuals.*
- *Listen for and sort details in a listening activity with graphic fill-ins.*

Standard:

FL1b: The student engages in conversations; provides and obtains information, expresses feelings and emotions, and exchanges opinions in the target language. The student:

Components:

FL1b.1: engages in basic classroom interactions;
FL1b.2: uses basic idiomatic expressions and expressions of courtesy; and
FL1b.3: uses the target language in everyday situations.

Examples:

Examples of activities which provide evidence of speaking include:

- *Engage in simple conversations.*
- *Identify classroom objects.*
- *Describe self and others.*
- *Create simple dialogues based upon everyday situations.*
- *Initiate and respond to simple questions.*

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 simple written directions;

FL2a.2: reads a passage;

FL2a.3: recognizes cognates and words in context;

FL2a.4: reads aloud using correct pronunciation, inflection, and intonation.

Examples:

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

- *Read and comprehend a variety of authentic material such as menus, maps, short articles and graphs.*
- *Read basic forms of communication, such as lists, post cards, messages, and environmental print and create a personal one.*

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: predicts meaning of key words in a simple selection;

FL2b.3: understands new vocabulary with contextual clues;

FL2b.4: recognizes impersonal expressions.

Examples:

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

- *Use contextual clues in cultural readings to respond with new vocabulary.*
- *Interpret and role play simple children's stories, myths and legends.*
- *Retell current events obtained 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.

FL2c.2: presents a simple written report on familiar topics;

FL2c.3: writes descriptions of familiar topics;

FL2c.4: utilizes impersonal expressions.

Examples:

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

- *Write a post card describing a real or imagined vacation.*
- *Create a schedule describing daily routines.*
- *Produce basic forms of communication including notes, invitations and basic instructions creates a pictorial menu.*
- *Create a pictorial menu.*

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 of writing in the target language include:*

- Collaborate with other students writing questions and answers to simple interview questions about self and others.
- Contact tourism board in target culture requesting travel information.
- Write short functional messages in a variety of situations, including e-mail and internet resources.
- Create a commercial, advertisement, or short recitation.

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 cultural selections or other functional text and summarize, graph or produce other written expression.
- Read simple short stories, legends or myths and write simple reviews expressing likes and dislikes.
- Read and reply to letters, requests and e-mails.

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:*

- Learn appropriate slang words/expressions used by teenagers in the culture studied.
- Learn the difference between formal and informal expressions.
- Learn how people from the culture studied express basic needs and/or seek help in cases of emergency.
- Learn about the most important economical resources of the country (ex: fashion, farming, industry, etc.).

- *Identify on a map the main geographical areas of the country where certain typical products are made.*
- *Dramatize a passage from a popular folk story.*
- *Make candy grams for parents celebrating a holiday in the culture studied.*
- *Study a simple recipe of the country of the culture studied.*
- *Learn about the most common games in the culture studied.*
- *Write an outline of the most important writers in the culture studied and place them into their historical time periods.*
- *Listen, record, and present to the class a selection of a radio program of the culture studied.*

Standard: **FL3b:** The student reinforces and expands their knowledge of other disciplines through the culture studied, and vice versa. The student:

Components: **FL3b.1:** connects information studied in other subjects to their learning of the culture studied and vice versa; and

FL3b.2: applies the concepts acquired in the culture studied in other curricular areas.

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

- *Learn the story of the capital of the country or a legend tied with the history of the culture studied and present it to his/her history class.*
- *Draw a picture representing a famous character from a folk story in the culture studied (Santa Claus, etc.) for an art project.*
- *Draw a food pyramid of the culture studied and compare it to his/her own in health class.*
- *Make a calendar in his/her computer class on which he/she marks the most important holidays of the culture studied.*

Standard: **FL3c:** 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: **FL3c.1:** discovers and compares similarities and differences between the two cultures;

FL3c.2: develops an awareness and understanding of alternative views.

FL3c.3: analyzes and evaluates similarities and differences between the two cultures; and

FL3c.4: develops the ability to hypothesize about cultural systems in general.

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

- *Contrast verbal and nonverbal behaviors in the culture studied and his/her own.*
- *Learn simple proverbs in the target language and search for the corresponding ones in his/her native language.*
- *Explore the appropriate behaviors in the culture studied in certain situations, such as dining with guests; e.g., what is considered to be good manners during dinner in the culture studied.*

- *Analyze the differences on a given topic; such as work habits, between the culture studied and his/her own culture and write a report.*
- *Hypothesize what sports and pastimes are offered in the area after being given a postcard of a ski resort in the culture studied.*

Standard: **FL3d:** The student demonstrates cultural understandings by interacting in real-life situations, applying appropriate social protocols and language. The student:

Components: **FL3d.1:** communicates on a personal level with target language speakers;
FL3d.2: 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:*

- *Contact one facility in the culture studied, such as the movie theater, the swimming pool, or the museum, to find out about opening and closing times.*
- *Fill out a form to subscribe to a local magazine.*
- *Make a costume celebrating a holiday in the culture studied, take a photo and send it to a native speaker friend, explaining how he/she celebrated that holiday.*
- *Prepare a telephone call to the local tourist office to find out about the excursion offered.*

Health Education: Grade 8

Health Education Standards are being revised and will be available by Fall 2004.

Physical Education – Grade 8

Strand:

PE1 Movement

Movement skills are explored through a broad spectrum of sequentially planned activities in which students learn to move efficiently, creatively, and effectively. Instruction in these skills is further enhanced by a thorough knowledge and understanding of the underlying mechanics, principles, and concepts of efficient skill utilization and applications of information literacy skills, thinking skills, and positive attitudes to performance. Ultimately, movement skill development should provide a foundation for and desire to develop and maintain a healthful, physically active lifestyle.

Standard:

The student will demonstrate competency in varied movement forms and show proficiency in a few, applying appropriate concepts and attitudes to performance; that is, the student:

PE1a: demonstrates competency in varied movement forms and shows proficiency in a few.

Components:

PE1a.1: applies combinations of specialized motor skills and patterns in a variety of modified sports and other activities.

PE1a.2: demonstrates minimal competency in several modified individual, dual and team sports and strives for proficiency in one or more.

PE1a.3: demonstrates minimal competency in several rhythmic-dance activities and strives for proficiency in one or more.

PE1a.4: develops one's personal style in selected forms of movement.

PE1a.5: assesses skill achievement and improvement in a variety of modified sports and other activities.

Standard:

PE1b: applies movement concepts and procedures to performance.

Components:

PE1b.1: recognizes developmental progression towards skill proficiency in selected partially modified sports and activities.

PE1b.2: recognizes developmental progression towards skill proficiency in selected rhythmic/dance activities.

PE1b.3: justifies the importance of safety in all physical education activities.

PE1b.4: Uses rules and more complex strategies in modified sports activities.

PE1b.5: identifies terminology, equipment and facilities used in modified sports activities.

PE1b.6: applies safe procedures consistently.

Standard:

PE1c: develops positive attitudes related to movement performance.

Components:

PE1c.1: appreciates that proficiency in playing in partially modified sports and other activities can be achieved with sufficient time and effort.

PE1c.2: displays a high regard for skill excellence in form and function in movement performance.

Strand:

PE2 Physical Activity and Fitness

Physical fitness education is designed to lead students to value a healthful, active lifestyle. Students learn physical activity and fitness concepts and are involved in learning experiences that help them apply appropriate concepts, skills and attitudes to all of their physical activities and fitness experiences. Positive physical activity related attitudes and behaviors developed in youth significantly contribute to an enjoyable active lifestyle.

Standard:

The student will exhibit a physically active lifestyle, applying appropriate physical activity and fitness concepts and attitudes to the development of a health-enhancing level of physical fitness; that is, the student:

PE2a: exhibits a physically active lifestyle and strives to achieve a health-enhancing level of physical fitness.

Components:

PE2a.1: monitors participation in a personal plan for daily physical activity.

PE2a.2: undergoes appropriate and consistent warm-ups and cool-downs competently.

PE2a.3: implements a conditioning program that is practical and based on personal fitness goals.

PE2a.4: experiences power walking to develop fitness.

PE2a.5: differentiates among heart rate levels before, during, and after exercise.

PE2a.6: demonstrates using safe and appropriate body mechanics while simulating carrying backpacks and other heavy objects.

PE2a.7: demonstrates muscular relaxation techniques used for managing stress.

PE2a.8: demonstrates deep-breathing techniques used for relaxation.

PE2a.9: applies safe practices and precautions during physical activity.

PE2a.10: simulates applying basic first aid skills for muscular and skeletal injuries common to exercise and physical activity.

Standard:

PE2b: applies concepts related to the development of a physically active lifestyle and health-enhancing level of physical fitness.

Components:

PE2b.1: analyzes how changing information, abilities, priorities, and responsibilities alter choices for participation in daily physical activity.

PE2b.2: identifies the role of physical activity in the prevention of heart disease, cancer, and diabetes.

PE2b.3: identifies common youth and adult health disorders associated with low-level fitness and physical inactivity.

PE2b.4: proposes plans for appropriate exercise and physical activities for pre-school children, senior citizens, and/or persons with disabilities.

PE2b.5:analyzes differences among the components of health and skill related fitness.

PE2b.6:describes how to carry backpacks or other heavy objects with biomechanical efficiency.

PE2b.7:recognizes how to use physical activity, exercise, muscular relaxation, and deep breathing to manage stress.

PE2b.8:analyzes the role of exercise in healthful weight control.

PE2b.9:distinguishes between the terms for “overweight” and “obese.”

PE2b.10:explains the importance of water consumption during physical activity.

PE2b.11:describe the relationship between eating a healthful breakfast and physical fitness.

PE2b.12:identifies how involvement in physical activities can be considered as a natural alternative to the use of illicit alcohol, tobacco, and other drugs.

PE2b.13:analyzes precautions to avoid drowning and promotes water safety.

PE2b.14:analyzes safe practices associated with preventing injuries associated with bicycling, skating, and skateboarding.

PE2b.15:analyzes the impact of weather extremes and environmental conditions on exercise.

PE2b.16:describes the health dangers of using anabolic steroids and other selected supplements.

PE2b.17:identifies strategies to prevent shin splints and injuries that may occur during periods of rapid growth.

PE2b.18:describes the accuracy of fitness-related information from peers, the media, and the internet.

PE2b.19:describes the adequacy of fitness-related equipment, technology, and facilities available in the school in the community.

Standard:

PE2c: develops positive attitudes related to a physically active lifestyle and health-enhancing level of physical fitness.

Components:

PE2c.1:displays a high regard toward exercise and daily physical activity.

PE2c.2:recognizes the value of being physically active in school, at home, and in the community.

PE2c.3:shows kindness in assisting special populations to enjoy physical activity and fitness.

PE2c.4:chooses to make decisions about physical activity and fitness based on a health and wellness ethic.

Strand:

PE3 Responsible Personal and Social Development

Through purposeful physical education experiences, students enhance self-respect, positive social interactions, self-direction, and their appreciation for individual differences. In striving to be the best they can be, students are encouraged to appraise their skills and talents realistically, set reasonable performance goals, make a commitment to continuous improvement, take appropriate and safe risks to achieve their goals, and persevere. They are encouraged to demonstrate responsible and safe behavior, effective communication, cooperation, and sportsmanship. Students will understand that physical activity provides opportunities for fun, enjoyment, challenge, self-expression, and aesthetic development. To further enrich their lives, students will analyze history, culture, and careers related to physical education.

Standard:

The student will demonstrate responsible and safe behavior, applying appropriate concepts and attitudes to personal and social development, that is, the student:

PE3a: exhibits self-management, sportsmanship, teamwork, and literacy skills in movement and physical activity performance.

Components:

PE3a.1: performs to expectations when following rules and safety procedures.

PE3a.2: promotes the wearing of proper attire, correct use of equipment and facilities, and safe practices during physical activities.

PE3a.3: perfects self-discipline.

PE3a.4: uses positive disagreement when avoiding or solving conflicts consistently.

PE3a.5: uses honesty, clarity, and sensitivity when expressing feelings appropriately.

PE3a.6: perseveres when participating in physical activities.

PE3a.7: sets goals to enhance one's cooperation with others.

PE3a.8: cultivates one's maturity in working cooperatively without direct supervision.

PE3a.9: compliments others' genuine efforts.

PE3a.10: perfects one's ability to give and receive appropriate verbal and nonverbal feedback.

Standard:

PE3b: applies historical, cultural, and career concepts to movement and physical activity performance.

Components:

PE3b.1: draws conclusions about the heritage of selected games, sports, and dances in selected culture and/or historical period.

PE3b.2: examines variances in patterns of physical activity in selected culture and/or historical period.

PE3b.3: analyzes the trends in adding additional sports to Olympic competitions.

PE3b.4: analyzes specific physical education-related occupational requisites in relationship to personal abilities, interests, and possible career goals.

Standard:	PE3c: develops positive attitudes related to the personal and social benefits of movement and physical activity.
Components:	PE3c.1: respects how heredity, family upbringing, culture, and individual choice relate to one's unique talents in sports and dance. PE3c.2: supports the rights and dignity of others. PE3c.3: supports meaningful and appropriate inclusion of students with special physical, emotional, or intellectual needs in physical activities. PE3c.4: adjusts thinking and action(s) after intrapersonal reflection. PE3c.5: promotes respect for authority. PE3c.6: creates opportunities for fun and enjoyment through participation in physical activities. PE3c.7: commits to long-range goals consistent with personal skill potential, striving for a "personal best." PE3c.8: values the great feeling of success that can be derived from the accomplishment of a skill. PE3c.9: combines practices of courtesy, respect for others, and fair play during physical activities. PE3c.10: incorporates realistic adventure and challenge in physical activities. PE3c.11: demonstrates one's competitive spirit by striving to win fairly and accepting defeat rationally. PE3c.12: values the feeling of success that accompanies achievement of proficiency in a physical activity.

Visual Arts – Grade 8

Strand:

VA1 Media, Techniques, and Processes

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

Standards:

VA1a: The student creates works of art that demonstrate knowledge of media, computer technology, techniques and processes.

VA1b: The student creates two- and three-dimensional works of art that reflect a higher level of competency and craftsmanship.

VA1c: The student uses multiple techniques, tools, and processes to solve specific visual arts problems.

VA1d: The student uses art materials and tools, including technology, in a safe and responsible manner.

Strand:

VA2 Structures and Functions

Demonstrates knowledge of structures and functions.

Standards:

VA2a: The student demonstrates an understanding and applies elements of art and principles of design to all forms of art production.

VA2b: The student identifies and explains the purpose and intent of a work of art.

VA2c: The student selects and applies the elements of art and principles of design to improve the communication of ideas.

Strand:

VA3 Subject Matter, Symbols, and Ideas

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

Standard:

VA3a: The student identifies specific subjects, symbols and ideas in works of art of different eras and cultures.

VA3b: The student examines art work in progress and revise for clarity of expression.

VA3c: The student creates works of art that use a variety of subjects, symbols and ideas from a variety of sources.

Strand:

VA4 History and Culture

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

Standards:

VA4a: The student demonstrates an understanding of how social, cultural, ecological, economic, religious and political conditions influence the function, meaning and execution of art.

VA4b: The student compares the function and meaning of art objects within cultural and historical contexts.

VA4c: The student explains the relationship of works of art in terms of history, aesthetics, and cultural context.

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 describes the visual characteristics of art using art terminology.

VA5b: The student justifies responses and interpretations for works of art using historical references and/or principles of design.

VA5c: The student evaluates works of art using a formal system.

Strand:

VA6 Connections to Other Disciplines

Makes connections between the visual arts and the other disciplines.

Standards:

VA6a: The student makes connections between concepts in the visual arts and other disciplines.

VA6b: The student identifies potential career and leisure pursuits in the arts.

VA6c: The student identifies techniques of problem-solving used in art and other disciplines.

VA6d: The student compares characteristics of works in the visual arts that share similar subject matter, themes, purposes, historical periods or technology.

Strand:

VA7 Technology Integration

Understands and creates art through technology.

Standards:

VA7a: The student creates works using higher order of problem-solving skills, which demonstrate increased competency.

VA7b: The student creates original works of art by accessing and manipulating images from traditional and technological sources.

VA7c: The student integrates traditional art production techniques with new technology to create art.

Music – Grade 8

Strand:

MU1

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

Standards:

MU1a: The student performs Level 2 (refer to Glossary) music demonstrating correct posture, playing position, breath, bow, or stick control.

MU1b: The student performs with increasing technical accuracy in tone quality, articulation/diction, pitch, phrasing, and rhythm within an ensemble.

MU1c: The student demonstrates expression and interpretation in various styles.

Strand:

MU2

Reads and notates music

Standards:

MU2a: The student reads and notates music with changes of simple meters using whole, half, quarter, eighth 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 5 keys.

MU2c: The student defines and uses standard symbols and terms for tempo, articulation, and expression.

Strand:

MU3

Listens to, responds to, and describes music

Standards:

MU3a: The student listens to performances of musical genres including pop, folk, classical and jazz.

MU3b: The student responds to and/or describes musical events (i.e. changes in instrumentation, form and tempo) using appropriate terminology.

MU3c: The student demonstrates knowledge of meter, rhythm, form, tonality, and style in analysis of music.

MU3d: The student explores simple improvisation.

Strand:

MU4 History and Culture

Demonstrates understanding of music in relation to history and culture.

Standard:

MU4a: The student describes distinguishing historical or cultural characteristics of listening examples.

MU4b: The student compares distinguishing historical or cultural characteristics of listening examples, to include the host nation.

MU4c: The student performs music of different cultures and historical periods.

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.

Standard:

MU5a: The student develops criteria for evaluating the quality and effectiveness of musical performances and musical works.

MU5b: The student applies criteria to personal listening preferences and performances.

MU5c: The student evaluates the quality and effectiveness of performances.

Strand:

MU6 Connections to Other Disciplines

Makes connections between music and the other disciplines.

Standard:

MU6a: The student integrates music with other disciplines.

MU6b: The student links music and one other discipline in a multi-disciplinary project or performance.

MU6c: The student identifies and explores music career opportunities.

Strand:

MU7 Technology Integration

Understands and creates music through technology.

Standard:

MU7a: The student uses a variety of technological tools to access information and resource materials relating to music.

MU7b: The student explores creating an original work of music by using a variety of technology tools with increased competency.

MU7c: The student identifies and experiments with musical styles and sound quality using technology.

MU7d: The student develops an awareness of music career opportunities in new technologies.