

GRADE EIGHT

Essential Academic Learning Requirements (EALRS)

with

Grade Level Expectations (GLEs)

and/or

Benchmark Indicators

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Grade Eight
Grade Level Expectations and/or Benchmarks

Understanding the EALRs and GLEs

An **Essential Academic Learning Requirement (EALR)** is a broad statement of the learning, what we expect each student to know and be able to do, that applies to a content standard for grades K-10.

The **Component** is a K-10 statement that further defines the EALR. There is at least one component for each EALR.

The **Grade Level Expectation (GLE)** is a statement of the essential content or process to be learned. The statement, specific to one or more grades, defines the Component for that grade.

The **Evidence of Learning** is a bulleted list of student demonstrations that provide educators with common illustrations of the learning. Because the bulleted list is not exhaustive, educators are encouraged to seek additional evidence of student learning. The examples (e.g.) are cross-curricular as often as possible to illustrate how writing is used across disciplines.

The GLE Numbering System identifies the **EALR**, the **Component**, and the **GLE**. For example, in the number 3.2.1, the first number stands for the EALR, the second for the Component, the third for the GLE. *Grade levels or bands are not referenced in the numbering system.* See the following example:

EALR 3---The student writes clearly and effectively		
Component 3.2: Uses appropriate style.		
Grade 2	3.2.1	Writes with voice <ul style="list-style-type: none">• Uses word choice to show emotion and interest• Uses “book language”(e.g., fairy tale language -- “once upon a time,” or “in a faraway land”)

As of December, 2005, Grade Level Expectations have been defined for the subject areas of **Reading, Math, Writing, Science and Communication**. The other core subjects – **Social Studies, Arts, and Health and Fitness** – have development indicators or benchmarks and/or draft Grade Level Expectations.

Washington State curriculum and the Essential Academic Learning Requirements are available by content area in their entirety at www.k12.wa.us/CurriculumInstruct/EALR_GLE.aspx. The website of the Washington State Office of the Superintendent of Public Instruction is www.k12.wa.us.

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READING

In eighth grade, students integrate a variety of comprehension and vocabulary strategies. They are able to adapt their reading to different types of text. Oral and written responses analyze and/or synthesize information from multiple sources to deepen understanding of the content. Students refine their understanding of the author's craft, commenting and critically evaluating text. They continue to analyze and/or synthesize information from multiple sources to deepen understanding of the content. Students continue to read for pleasure.

Reading EALR 1: The student understands and uses different skills and strategies to read.

Note: Each grade-level expectation assumes the student is reading grade-level text. Since reading is a process, some grade-level indicators and evidences of learning apply to multiple grade-levels. What changes is the text complexity as students move through the grade levels.

Component 1.2 Use vocabulary (word meaning) strategies to comprehend text.

1.2.2 Apply strategies to comprehend words and ideas.

- Use word origins to determine the meaning of unknown words.
- Use abstract, derived root words, prefixes, and suffixes from Greek and Latin to analyze the meaning of complex words (e.g., statistic, statistician).
- Use vocabulary strategies to understand new words and concepts in informational/expository text and literary/narrative text.
- Use graphic features to clarify and extend meaning (e.g., science processes, diagrams).

Component 1.3 Build vocabulary through wide reading.

1.3.2 Understand and apply content/academic vocabulary critical to the meaning of the text, including vocabularies relevant to different contexts, cultures, and communities.

- Integrate new vocabulary from informational/expository text and literary/narrative text (including text from a variety of cultures and communities; (e.g., *lift* as used in England compared to the U.S.A.) into written and oral communication.
- Explain the meaning of content-specific vocabulary words (e.g., photosynthesis, democracy, algorithms).
- Select, from multiple choices, the meaning of a word identified in the text.
- Transfer knowledge of vocabulary learned in content areas to comprehend other grade-level informational/expository text and literary/narrative text (e.g., definition of *solar* in science transferred to understanding science fiction text).

Component 1.4 Apply word recognition skills and strategies to read fluently.

1.4.2 Apply fluency to enhance comprehension.

- Read grade-level and informational/expository text and literary/narrative text orally with accuracy, using appropriate pacing, phrasing, and expression.
- Read aloud unpracticed grade-level text with fluency in a range of 145-155+ words correct per minute.

1.4.3 Apply different reading rates to match text.

- Adjust reading rate by speeding up or slowing down based on purpose (e.g., pleasure, informational reading, task-oriented reading), text level of difficulty, form, and style.

Reading EALR 2: The student understands the meaning of what is read.

Component 2.1 Demonstrate evidence of reading comprehension.

2.1.3 Apply comprehension monitoring strategies during and after reading: determine importance using theme, main idea, and supporting details in grade-level informational/expository text and/or literary/narrative text.

- State both literal and/or inferred main ideas and provide supporting text-based details.
- State the theme/message and supporting details in culturally relevant literary/narrative text.
- Choose, from multiple choices, a title that best fits the selection and provide details from the text to support the choice.
- Select, from multiple choices, a sentence that best states the theme or main idea of a story, poem, or selection.
- Organize theme, main idea and supporting details into a self-created graphic organizer to enhance text comprehension.

2.1.4 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and exposition: use prior knowledge.

- Use previous experience, knowledge of current issues, information previously learned to make connections, draw conclusions, and generalize about what is read (e.g., relate what is learned in chemistry to new learning in biology; connect the author's perspective and/or the historical context to text).

2.1.5 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: predict and infer.

- Make inferences based on implicit and explicit information drawn from text and provide justification for those inferences.
- Make, confirm, and revise predictions based on prior knowledge and evidence from the text (e.g., using main idea statements, predict what kind of information the author will present next).
- Select, from multiple choices, a prediction, inference, or assumption that could be made from the text.
- Organize information to support a prediction or inference in a self-created graphic organizer.

2.1.6 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: monitor for meaning, create mental images, and generate and answer questions.

- Monitor for meaning by identifying where and why comprehension was lost and use comprehension-repair strategies to regain meaning.
- Develop questions before, during, and after reading and use knowledge of questioning strategies to locate answers.
- Use mental imagery while reading.
- Organize images and information into a self-created graphic organizer to enhance text comprehension.

2.1.7 Apply comprehension monitoring strategies for informational and technical materials, complex narratives, and expositions: determine importance and summarize text.

- Create an informational summary that includes an introductory statement, main ideas, and supporting text-based details; make connections among the key ideas from the entire text; use own words in an objective voice; is accurate to the original text; and avoids interpretation or judgment.
- Create a literary summary that includes an introduction stating the theme and/or author's message supported by text-based evidence; use own words in an objective voice; is accurate to the original text.
- Select, from multiple choices, a sentence that best summarizes the text.
- Organize summary information for informational/expository, technical materials, and complex narratives into a self-created graphic organizer to enhance text comprehension.

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Component 2.2 Understand and apply knowledge of text components to comprehend text.

2.2.1 Analyze an author's use of time, order, and/or sequence to extend comprehension of text.

- Analyze an author's development of time and sequence through the use of literary devices such as foreshadowing, flashbacks, dream sequences, parallel episodes and the use of traditional and/or cultural-based organizational patterns.
- Explain the use of order or steps in a process to convey meaning in an informational/expository text (e.g., scientific experiments, legislative processes, mathematical procedures, Native American talking circles and ceremonies).

2.2.2 Apply understanding of complex organizational features of printed text and electronic sources.

- Use text features to verify, support, or clarify meaning.
- Select, from multiple choices, the purpose of a specific text feature and/or information learned from a text feature.
- Use the features of electronic information to communicate, gain information, or research a topic.

2.2.3 Understand and analyze story elements.

- Interpret how situations, actions, and other characters influence a character's personality and development.
- Explain how a story's plots and subplots contribute to (or don't advance) the conflict and resolution.
- Explain the influence of setting on mood, character, and plot.
- Explain the author's point of view and interpret how it influences the text.
- Compare/contrast common recurring themes in books by the same or different authors.

2.2.4 Apply understanding of text organizational structures.

- Recognize and use knowledge of previously taught text organizational structures (*description, comparison and contrast, sequential order, chronological order, cause and effect, order of importance, process/procedural, concept/definition, and problem/solution*) to aid comprehension.
- Identify text written in *episodic* and *generalization/principle* organizational structure to find and/or organize information and comprehend text.

Component 2.3 Expand comprehension by analyzing, interpreting, and synthesizing information and ideas in literary and informational text.

2.3.1 Analyze informational/expository text and literary/narrative text for similarities and differences and cause and effect relationships.

- Compare and contrast information from multiple sources to gain a broader understanding of a topic (e.g., compare and contrast a variety of ecosystems using text-based evidence).
- Compare and contrast how characters react to the same event using text-based evidence.
- Select, from multiple choices, a sentence that tells how two text elements are alike or different (e.g., characters, events, information/facts).
- Explain how certain actions cause certain effects (e.g., how the women's suffrage movement changed the face of politics today or how Indian boarding schools contributed to the loss of Native American languages and culture; how the internment of Japanese Americans during World War II affected traditional Japanese family structure).

2.3.2 Analyze and evaluate informational materials for relevance in meeting a specific purpose.

- Examine information from a variety of sources, select appropriate information based on purpose, and defend selection citing evidence from text.

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2.3.3 Evaluate the author’s use of literary devices to enhance comprehension.

- Judge the effectiveness of the author’s use of literary devices and explain their use to convey meaning.
- Select, from multiple choices, a sentence from the story/poem/selection that is an example of a specific literary device.

2.3.4 Synthesize information from a variety of sources.

- Integrate information from different sources (e.g., newspaper article, biographical sketch, poem, oral records) to draw conclusions about character traits and/or author’s assumptions.

Component 2.4 Think critically and analyze author’s use of language, style, purpose, and perspective in literary and informational text.

2.4.1 Analyze informational/expository text and literary/narrative text to draw conclusions and develop insights.

- Draw conclusions from grade-level text (e.g., the most important idea the author is trying to make in the story/poem/selection, what inspiration might be drawn from the story/poem/selection, who might benefit from reading the story/poem/selection).
- Select, from multiple choices, a statement that best represents the most important conclusion that may be drawn from the selection.

2.4.2 Analyze author’s purpose and evaluate an author’s style of writing to influence different audiences.

- Identify and discuss different authors’ use of sentence structure, literary devices, and word choice to impact tone, message, and/or reader’s reaction.
- Explain and provide examples of how an author uses a wide variety of language structures to create an intended effect (e.g., words or phrases from another language, dialect, simile, and metaphor).
- Examine the author’s use of language registry (e.g., frozen, formal, consultative, casual, intimate) and how this influences meaning and different audiences.
- Select, from multiple choices, a sentence that explains why an author includes a specific technique.

2.4.3 Analyze and evaluate text for validity and accuracy.

- Examine and critique the logic (reasoning, assumptions, and beliefs) and use of evidence (existing and missing information; primary and secondary sources) in an author’s argument or defense of a claim.

2.4.4 Analyze and evaluate the effectiveness of the author’s use of persuasive devices to influence an audience.

- Examine and explain the intended effects of persuasive vocabulary (e.g., loaded words, exaggeration, emotional words, euphemisms) that the author uses to influence reader’s opinions or actions.
- Examine and explain the intended effects of propaganda techniques the author uses to influence readers’ perspectives.
- Judge the author’s effectiveness in the use of persuasive devices to influence an audience.

2.4.5 Analyze text to generalize, express insight, or respond by connecting to other texts or situations.

- Generalize about universal themes, human nature, cultural and historical perspectives, etc., from reading multiple texts.
- Select, from multiple choices, a sentence that describes the most important idea, concept, or conclusion that can be drawn from the selection.
- Provide a response to text that expresses an insight (e.g., author’s perspective, the nature of conflict) or use text-based information to solve a problem not identified in the text (e.g., use information in an article about fitness to design an exercise routine).

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2.4.6 Analyze treatment of concepts within, among, and beyond multiple texts.

- Compare and contrast treatments of similar concepts and themes within multiple texts (e.g., how the idea of coming of age is presented in multiple texts representing a variety of cultures).
- Select, from multiple choices, a sentence that tells how two pieces of information are alike or different.

2.4.7 Analyze and evaluate the reasoning and ideas underlying an author's beliefs and assumptions within multiple texts.

- Examine informational/expository text and literary/narrative text to show how they reflect the heritage, traditions, and beliefs of the author.
- Compare and critique two author's beliefs and assumptions about a single topic or issue, citing text-based evidence and decide which author presents the stronger argument.
- Make judgments about how effectively an author has supported his/her belief and/or assumptions, citing text-based evidence.
- Select, from multiple choices, a sentence that identifies the author's opinions, assumptions, and beliefs.
- Select, from multiple choices, a sentence that describes the faulty reasoning of the author or character.

Reading EALR 3: The student reads different materials for a variety of purposes.

Component 3.1 Read to learn new information.

3.1.1 Analyze web-based and other resource materials (including primary sources and secondary sources) for relevance in answering research questions.

- Examine resource materials to determine appropriate primary sources and secondary sources to use for investigating a question, topic, or issue (e.g., encyclopedia and other reference materials, pamphlets, book excerpts, newspaper and magazine articles, letters to an editor).

Component 3.2 Read to perform a task.

3.2.2 Apply understanding of complex information, including functional documents, to perform a task.

- Use functional documents to perform a task (e.g., read applications, legal documents, and use that information to perform everyday life functions).

Component 3.3 Read for career applications.

3.3.1 Understand and apply appropriate reading strategies for interpreting technical and non-technical documents used in job-related settings.

- Select, use, monitor, and adjust appropriate strategies for different reading purposes (e.g., skim/scan for big ideas, close reading for details, inferring information from graphs and charts).
- Use professional-level materials, including electronic information, that match career or academic interests to make decisions.
- Select and use appropriate skills for reading a variety of documents (e.g., maps, graphs, blueprints, computer manuals).

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Component 3.4 Read for literary experience in a variety of genres.

3.4.2 Analyze traditional and contemporary literature written in a variety of genres.

- Respond to literature written in a variety of genres (e.g., explain why certain genres are best suited to convey a specific message or invoke a particular response from the reader).
- Analyze the characteristics and structural elements/essential attributes in a variety of poetic forms (e.g., epic, sonnet, ballad, haiku, free verse).

3.4.3 Understand and analyze recurring themes in literature.

- Identify motivations and reactions of literary characters from different cultures or historical periods when confronting similar conflicts.
- Identify and analyze recurring themes in literature across literary genres (e.g., themes of good vs. evil or heroism as expressed in plays, poetry, short stories).

3.4.4 Analyze how great literary works from a variety of cultures contribute to the understanding of self, others, and the world.

- Compare and contrast traditional, classic, and/or contemporary works of literature that deal with similar topics and problems (e.g., uses of power, family and community structures; meaning of loyalty, freedom, and responsibility).
- Relate literary works to the traditions, themes, and issues of the era they represent (e.g., the generation gap, women and children in the workforce).

Reading EALR 4: The student sets goals and evaluates progress to improve reading.

Component 4.1 Assess reading strengths and need for improvement.

4.1.2 Evaluate reading progress and apply goal setting strategies and monitor progress toward meeting reading goals.

- Set goals for reading and develop a reading improvement plan.
- Track reading progress through the use of such tools as portfolios, learning logs, self-scoring rubrics, or strategy charts.

Component 4.2 Develop interests and share reading experiences.

4.2.1 Evaluate books and authors to share reading experiences with others.

- Discuss responses to literary experiences and/or ideas gleaned from informational/expository text with others.

MATHEMATICS

Math EALR 1: The student understands and applies the concepts and procedures of mathematics.

Component 1.1: Understand and apply concepts and procedures from number sense.

Number and numeration

1.1.1 Understand the concept of rational numbers including whole number powers and square roots of square numbers.

- Explain the meaning of a whole number exponent.
- Read and use exponential notation to represent large numbers (e.g., $2500 = 50^2$).
- Identify a square number and find its root.
- Identify different representations of rational numbers and select the best representation in the situation (e.g., percent for sales discount or sales tax, fraction for probability, and decimals for money, distance [4.35 kilometers], batting averages).
- Write a squared number.

1.1.2 Understand the relative values of rational numbers including whole number powers and square roots of square numbers.

- Compare and order rational numbers using models or implementing strategies.
- Order different representations of rational numbers.
- Place symbolic representations of rational numbers on a number line including whole number powers and square roots of square numbers.

1.1.3 Apply properties of addition, multiplication, and the distributive property to the rational number system.

- Illustrate and explain the distributive property of multiplication over addition (e.g., using an area model or picture).
- Use the distributive property to simplify expressions including those using integers.
- Use the distributive property to factor expressions (e.g., $3 \cdot 9 + 3 = 3 \cdot (9 + 1)$).
- Identify the multiplicative inverse of a number.

1.1.4 Apply ratio, percent, and direct proportion in situations.

- Solve problems involving ratio and proportion (e.g., similar figures, scale drawings, rates, find unit pricing, increase or decrease a recipe, find the portions for a group converting between different units of measure, or finding medicinal dosages).
- Solve problems involving percentages (e.g., percent increase/decrease, tax, commission, discount).
- Explain advantages and disadvantages of different representations of ratios or percents in a given situation (e.g., using $1/8$ versus $12\frac{1}{2}\%$).
- Determine an unknown value for a dimension or a number of events or objects using ratio or proportion.
- Complete a proportion in a situation.

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Computation

1.1.5 Understand the meaning of operations on rational numbers (including square roots of square numbers and whole number powers).

- Create a problem situation to match a given rational number equation.
- Explain the meaning of negative and zero exponents.
- Demonstrate or describe the meaning of multiplication and division of integers using words, visual, or physical models.
- Create a problem situation involving multiplication or division of integers.
- Explain solutions when dividing by fractions (e.g., when dividing by a number between 0 and 1, the result is larger than the dividend).

1.1.6 Apply computational procedures with fluency on rational numbers including whole number powers and square roots of square numbers.

- Compute with rational numbers using order of operations.
- Compute fluently with rational numbers in all forms except exponential.
- Write and solve problems that involve computation with rational numbers.
- Solve problems using rational numbers with whole number powers.
- Solve problems using rational numbers with square roots of perfect squares (e.g., given a square garden with an area of nine square meters, how much fence would be needed to encompass a garden twice the size of the original garden).

1.1.7 Understand and apply strategies and tools to complete tasks involving computation on rational numbers.

- Select and justify appropriate strategies and tools (e.g., mental computation, estimation, calculators, and paper and pencil) to compute in a problem situation.
- Describe strategies for mentally solving problems involving integers and exponents.
- Use calculators to compute with whole number powers beyond the cubed numbers.
- Use calculators to compute square roots of perfect squares greater than 100.

Estimation

1.1.8 Apply estimation strategies to predict or determine the reasonableness of answers in situations involving computation on rational numbers in any form including whole number powers and square roots of square numbers.

- Identify when an approximation is appropriate.
- Explain situations involving rational numbers where estimates are sufficient and others for which exact value is required.
- Justify why an estimate would be used rather than an exact answer in a given situation.
- Describe various strategies used during estimation involving integers.
- Use estimation to predict or to verify the reasonableness of calculated results.

Component 1.2: Understand and apply concepts and procedures from measurement.

Attributes, units, and systems

1.2.1 Analyze how a change in a linear dimension affects volume and surface area of rectangular prisms and right cylinders.

- Compare the impact that a change in one dimension has on volume and surface area in right cylinders and rectangular prisms.
- Describe the relationships among linear dimensions, volume, and surface area (e.g., changing the length of a side affects the surface area and volume).
- Solve problems involving the effects of changes in one dimension on area (e.g., given a box with certain dimensions, make the volume of the box y cubic units by changing only one dimension of the box).

1.2.2. Understand and apply derived units of measurement.

- Explain the concept of a rate.
- Explain how division of measurements produces a derived unit of measurement (e.g., miles traveled divided by hours traveled yields the derived unit [miles per hour]).
- Find a rate of change in a situation (e.g., increase per year in stamp cost) and label the results.
- Use unit analysis to find equivalent rates (e.g., miles per hour to feet per second).
- Use rate to determine a measured outcome.

1.2.3 Understand why different situations require different levels of precision.

- Explain the relationships among units within both the customary and metric system (e.g., kilograms to grams, feet to inches).
- Justify the use of a unit of measure (e.g., measuring to order fencing requires a different precision than if one is selling land and needs to be precise about borders).
- Compare situations for the level of precision needed.
- Explain and give examples of situations that require more and less precision.

Procedures, precision, and estimations

1.2.5 Understand and apply formulas including the Pythagorean Theorem to right prisms, right cylinders, and triangles.

- Explain how to use a formula for finding the surface area and volume of a solid.
- Find missing sides or area of right triangles (e.g., use the Pythagorean Theorem to find any of the missing values).
- Calculate measures of objects for which no direct information is given (e.g., apply ratio, proportion, and scale to determine the area, surface area, and/or volume of a similar figure or solid).
- Compare surface areas of shapes with given volumes (e.g., compare cost of material to make various right cylinder and right prism containers with a given volume).

1.2.6 Apply strategies to obtain reasonable estimates of volume and surface area measurements for right cylinders, right prisms, and of the lengths of sides of right triangles.

- Estimate volume and surface area for right cylinders and right prisms.
- Estimate the length of the remaining side of a right triangle given the lengths of two sides.
- Approximate distance or height in a problem situation using similar triangles or Pythagorean relationships (e.g., height of a flagpole using proportional reasoning, distance across a lake using Pythagorean relationship).
- Use or describe a process for finding area of a right triangle.

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Component 1.3: Understand and apply concepts and procedures from geometric sense.

Properties and relationships

1.3.1 Apply understanding of characteristics and relationships among one-dimensional, two-dimensional, and three-dimensional figures to solve problems.

- Identify and label rays, lines, end points, line segments, vertices, and angles.
- Match or draw three-dimensional objects from different perspectives using the same properties and relationships (e.g., match to the correct net, draw the top view).
- Draw and label with names and symbols, nets of prisms, and cylinders.
- Describe everyday objects in terms of their geometric characteristics.
- Identify the two-dimensional components of three-dimensional figures.

1.3.2 Apply understanding of similarity to two-dimensional figures.

- Use properties of similarity to draw, describe, and compare two-dimensional figures.
- Find the length of a missing side or the measure of a missing angle of one of the figures, given two similar figures.
- Create symmetrical, congruent, or similar figures using a variety of tools (e.g., ruler, pattern blocks, geoboards).
- Draw a similar shape to a given shape.
- Use properties of circles, cylinders, and figures with rotational symmetry to compare figures.
- Create a scale drawing and label the scale and the dimensions.

Locations and transformations

1.3.3 Understand and apply procedures to find distance between points in two-dimensional representations.

- Locate a missing vertex given the coordinates of the vertices of a regular polygon.
- Apply the Pythagorean Theorem to find the length of a side of a right triangle or distance between two points.
- Explain a method for finding the missing side of a triangle in a real-world setting (e.g., the height of a totem pole or building).
- Describe the relationship of any two or more points on a coordinate grid.
- Find the distance between two points on a coordinate grid including lines that are non-parallel with either axis (oblique).

1.3.4 Understand and apply transformations to figures.

- Identify and explain how a shape has been translated, reflected, or rotated with or without a grid (e.g., location of the North Star, rotate the Big Dipper).
- Use transformations (rotations, reflections, and translations) to draw or locate congruent two-dimensional figures.
- Find the image of a given shape after a combination of transformations.
- Tessellate a plane by using transformations.
- Create a design using a combination of two or more transformations with one or two two-dimensional figures.

Component 1.4: Understand and apply concepts and procedures from probability and statistics.

Probability

1.4.1 Understand the concept of compound events.

- Determine and explain when events are compound.
- Explain the difference between compound events involving ‘and’ and ‘or’ (e.g., rolling a six and rolling an odd number vs. rolling a six or rolling an odd number).

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1.4.2 Understand and apply the procedures for comparing theoretical probability and empirical results for independent or compound events.

- Calculate the probability of two independent events occurring simultaneously using various methods (e.g., organized list, tree diagram, counting procedures, and area model).
- Explain the relationship between theoretical and empirical probability of compound events.
- Predict the probability of outcomes of experiments and compare the predictions to empirical results.
- Design or create a situation that would produce a given probability (e.g., how many of each colored marble would it take to have a given probability of selecting one particular color).
- Design a game using compound probabilities with equal chances of winning for all players.

Statistics

1.4.3 Analyze how different samples of a population affect the data.

- Identify sources of sampling bias given a situation (e.g., interviewing only girls, only a certain age group, or too few people).
- Describe a procedure for selecting an unbiased sample.
- Compare the results of a survey given two different sample groups.
- Identify the appropriate population for a given research question.
- Describe how sampling may have affected the resulting data.

1.4.4 Analyze variations in data to determine the effect on the measures of central tendency.

- Identify clusters and outliers and determine how clusters or outliers may affect measures of central tendency.
- Alter a set of data so that the median is a more reasonable measure than the mean.
- Use and interpret the most appropriate measure of central tendency and the range to describe a given set of data (e.g., the model hourly wage earned by eighth graders is \$5.75 per hour and the range is \$5.00 to \$6.50; therefore, there are very small differences in hourly wages for eighth graders).

1.4.5 Understand and apply data techniques to interpret bivariate data.

- Interpret graphic and tabular representations of bivariate data.
- Use a line of best fit to predict a future value of a variable.
- Use a line of best fit to interpolate between existing data values.
- Draw trend lines with or without technology and make predictions about real-world situations (e.g., population trends, socio-economic trends).
- Examine data in a two-column table to interpolate or extrapolate additional values.
- Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken (e.g., age groups, regions of the U.S., genders, racial/ethnic distributions).

1.4.6 Evaluate how statistics and graphic displays can be used to support different points of view.

- Critique the use of data and data displays for bivariate data.
- Judge the reasonableness of conclusions drawn from a set of data and support that position with evidence (e.g., from newspapers, web sites, opinion polls).
- Determine whether a prediction is reasonable based on a trend line and explain the rationale.
- Determine whether claims made about results are based on biased representations of data (e.g., whether a scale has been intentionally used to support a point of view).

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Component 1.5: Understand and apply concepts and procedures from algebraic sense.

Patterns, functions, and other relations

1.5.1 Apply understanding of linear and non-linear relationships to analyze patterns, sequences, and situations.

- Extend, represent, or create linear and non-linear patterns and sequences using tables and graphs.
- Explain the difference between linear and non-linear relationships.
- Predict an outcome given a linear relationship (e.g., from a graph of profit projections, predict the profit).
- Use technology to generate linear and non-linear relationship.

1.5.2 Analyze a pattern, table, graph, or situation to develop a rule.

- Use technology to help develop a table or graph from an iterative definition (e.g., the number of cells doubles every hour starting with one cell at noon).
- Explain the nature of changes in quantities in linear relationships using graphs, tables, or expressions.
- Develop recursive equations that describe linear relations in terms of current and previous values (e.g., start = 7; Current = Previous + 5 would give a set of values (1,7),(2,12),(3,17) ...).
- Use words or algebraic symbols to describe a rule for a linear relationship between two sets of numbers (e.g., given a table, describe a rule).

Symbols and representations

1.5.3 Understand relationships between quantities including whole number exponents, square roots, and absolute value.

- Represent relationships between quantities using exponents (squares) and radicals (roots).
- Explain the placement of numbers including square roots and exponents on a number line.
- Model or describe a real-life situation using absolute value (e.g., the taxi-cab distance from one point to another can be represented by the sum of two absolute values).
- Use relational symbols to express relationships between rational numbers including percents, square roots, absolute value, and exponents.

1.5.4 Apply understanding of concepts of algebra to represent situations involving single-variable relationships.

- Represent variable quantities, through expressions, linear equations, inequalities, tables, and graphs of situations.
- Write an expression, equation, or inequality with a single variable representing a situation or real-world problem.
- Identify and use variables to read and write relationships involving rational numbers.
- Model a given description or situation involving relationships with a graph or table.
- Describe a situation involving relationships that matches a given graph.
- Create a table or graph given a description of, or an expression for, a situation involving a linear or non-linear relationship.

Evaluating and solving

1.5.5 Understand and apply the procedures for simplifying single-variable expressions.

- Simplify expressions and evaluate formulas involving integers.
- Match expressions to equivalent simplified expressions.
- Explain a simplification of an expression involving integers.
- Simplify expressions by combining like terms.
- Simplify expressions using mathematical properties (distributive, commutative, associative, etc.).
- Determine the expression that represents a given situation.
- Describe a situation that fits with a given expression.

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1.5.6 Understand and apply a variety of strategies to solve multi-step equations and one-step inequalities with one variable.

- Solve multi-step equations and one-step inequalities with one variable.
- Solve single variable equations involving parentheses, like terms, or variables on both sides of the equal sign.
- Solve one-step inequalities (e.g., $2x < 6$, $x + 4 > 10$).
- Solve real-world situations involving single variable equations and proportional relationships and verify that the solution is reasonable for the problem.

Math EALR 2: The student uses mathematics to define and solve problems.

Component 2.1: Understand problems.

Example: The following information was provided to a group of students. They were asked to interpret this information for someone that has a speed of 19 feet per second and also for someone who takes 5 steps per second. How would you answer these questions?

<i>Speed (ft/s)</i>	<i>Steps per second</i>
15.86	3.05
16.88	3.12
17.50	3.17
18.62	3.25
19.97	3.36
21.06	3.46
22.11	3.55

2.1.1 Analyze a situation to define a problem.

- Use strategies to become informed about the situation (e.g., listing information, asking questions).
- Summarize the problem (e.g., we have information about the relationship between the number of steps per second and the speed in feet per second; we wish to find approximate speed or stride rates).
- Determine whether enough information is given to find a solution (e.g., list what is needed to find the relationship between stride rate and speed; list known and unknown information).
- Determine whether information is missing or extraneous (e.g., compare the list of known things to the list of needed things to see if there are things that are not needed — names, location).
- Define the problem (e.g., find the relationship between the steps per second and speed).

Component 2.2: Apply strategies to construct solutions.

2.2.1 Apply strategies, concepts, and procedures to devise a plan to solve the problem.

- Organize relevant information from multiple sources.
- Select and apply appropriate mathematical tools for a situation (e.g., plot steps per second vs. speed; check to see if model is linear; calculate successive differences or quotients to see if a pattern emerges; find an equation for a line that approximates the relationship or extend the pattern to approximate the speed at 5 steps per second).

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2.2.2 Apply mathematical tools to solve the problem.

- Implement the plan devised to solve the problem or answer the question posed (e.g., in a table of values of lengths, widths, and areas find the one that shows the largest area; check smaller increments to see if this is the largest that works).
- Identify when an approach is unproductive and modify or try a new approach (e.g., if an additive model didn't work, try a multiplicative model).
- Check the solution to see if it works (e.g., if the solution for a speed of 19 feet per second is 5 steps per second, perhaps the assumption of linearity was incorrect).

Math EALR 3: The student uses mathematical reasoning.

Component 3.1: Analyze information.
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3.1.1 Analyze information from a variety of sources to interpret and compare information.

- Predict the probability of outcomes of experiments and compare the predication to empirical results.
- Predict an outcome given a linear relationship and a particular input (e.g., from a graph of profit projections, predict the profit in 2005).

Component 3.2: Make predictions, inferences, conjectures, and draw conclusions.
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3.2.1 Apply prediction and inference skills to make or evaluate conjectures.

- Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken (e.g., age groups, regions of the U.S., genders, racial/ethnic distribution).

3.2.2 Apply the skill of drawing conclusions and support those conclusions using evidence.

- Draw conclusions from displays, texts, or oral discussions and justify those conclusions with logical reasoning or other evidence (e.g., read an editorial or ad, draw a conclusion and support that conclusion with evidence in the article or elsewhere).

3.2.3 Analyze procedures and results in various situations.

- Critique conclusions drawn from a set of data and support with evidence (e.g., from magazines, newspapers, web sites, opinion polls).

Component 3.3: Verify results.

3.3.1 Analyze procedures and information used to justify results using evidence.

- Use estimation to predict or to verify the reasonableness of calculated results.

3.3.2 Analyze thinking and mathematical ideas using models, known facts, patterns, relationships, or counter examples.

- Explain why a given rational number is greater than or less than another rational number.

Math EALR 4: The student communicates knowledge and understanding in both everyday and mathematical language.

Component 4.1: Gather information.

4.1.1 Apply a planning process to collect information for a given purpose.

- Describe a procedure for selecting an unbiased sample.

4.1.2 Synthesize information from multiple sources using reading, listening, and observation.

- Compare the results of a survey given two different sample groups.
- Model the relationship with a table or graph given a description of, or an equation for, a situation involving an inequality or linear relationship.

Component 4.2: Organize, represent, and share information.

4.2.1 Apply organizational skills for a given purpose.

- Design and conduct a simulation, with and without technology, to determine the probability of an event occurring. [

4.2.2 Apply communication skills to clearly and effectively express or present ideas and situations using mathematical language or notation.

- Articulate various strategies used during estimation involving integers.
- Clearly explain, describe, or represent mathematical information in a pictorial, tabular, graphical, two- or three-dimensional drawing, or other form as appropriate for the mathematical information (e.g., time, distance, categories), audience, and/or purpose, such as to perform or persuade, with notation and labels as needed.
- Explain situations involving real numbers where estimates are sufficient and others for which exact value is required.

Math EALR 5: The student understands how mathematical ideas connect within mathematics, to other subject areas, and to real-life situations.

Component 5.1: Relate concepts and procedures within mathematics.

5.1.1 Apply concepts and procedures from a variety of mathematical areas in a given problem or situation.

- Solve problems involving ratio and proportion (e.g., similar figures, scale drawings, rates, find unit pricing, increase or decrease a recipe, find the portions for a group converting between different units of measure, or finding medicinal dosages).
- Find the area of a circle given the coordinates of the center and a point on the circle.

5.1.2 Apply different mathematical models and representations to the same situation.

- Create a problem situation to match a given rational number equation.
- Match a situation with a data set or graph.

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Component 5.2: Relate mathematical concepts and procedures to other disciplines.

5.2.1 Analyze mathematical patterns and ideas to extend mathematical thinking and modeling to other disciplines.

- Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken (e.g., age groups, regions of the U.S., genders, racial/ethnic distribution).
- Check to see if a corner is square using the Pythagorean Theorem. [
- Calculate the one repetition maximum for strength training of one muscle group.
- Monitor/track a diet and evaluate the relationship to physical performance (e.g., does it meet daily nutritional requirements/energy for various populations and energy requirements based on lifestyle, safe-work practices, and leisure activities).

5.2.2 Know the contributions of individuals and cultures to the development of mathematics.

- Recognize the contributions of a variety of people to the development of mathematics (e.g., research the history of the Pythagorean Theorem).

Component 5.3: Relate mathematical concepts and procedures to real-world situations.

5.3.1 Understand that mathematics is used in daily life and extensively outside the classroom.

- Use estimation to predict or to verify the reasonableness of calculated results.
- Evaluate conclusions drawn from a set of data and support with evidence (e.g., from newspapers, web sites, opinion polls).
- Analyze data from a newspaper article to see if the conclusions are reasonable.
- Research how coding and decoding has played a part in history.

5.3.2 Understand that mathematics is used within many occupations or careers.

- Explain how mathematics is used in careers or occupations of interest (e.g., complete a mathematically-based project).

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WRITING

In eighth grade, students competently write reports and explanations on a range of complex topics, maintaining focus on the theme or issue. The well-researched information is structured effectively in appropriate forms and style for a range of audiences and purposes. Students produce pieces that go beyond formulaic writing. They retrieve, select, organize, synthesize, and evaluate material from a variety of print and electronic resources. They craft a variety of literary texts with confidence. Students are able to manage time to complete a writing task on demand or over several weeks. Students reflect on their own writing and identify strategies to improve the quality of their written work.

Writing EALR 1. The student understands and uses a writing process.

Component 1.1: Prewrites to generate ideas and plan writing.

1.1.1 Analyzes and selects effective strategies for generating ideas and planning writing

- Generates ideas prior to organizing them and adjusts prewriting strategies accordingly (e.g., free write, outline, list, T-chart for comparing)
- Maintains a log or journal (electronic or handwritten) to collect and explore ideas; records observations, dialogue, and/or description for later use as a basis for informational, persuasive, or literary writing
- Gathers information (e.g., takes notes) from a variety of sources (e.g., Internet, interviews, multimedia, books, periodicals) and chooses an organizer to analyze, synthesize, and evaluate information to plan writing
- Uses prewriting stage to determine purpose, analyze audience, select form, research background information, formulate theme (for narrative writing) or a thesis, and/or organize text

Component 1.2: Produces draft(s).
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1.2.1 Analyzes task and composes multiple drafts when appropriate

- Refers to prewriting plan
- Drafts according to audience, purpose, and time
- Drafts by hand and/or on the computer
- Assesses draft and/or feedback, decides if multiple drafts are necessary, and explains decision

Component 1.3: Revises to improve text.
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1.3.1 Revises text, including changes in words, sentences, paragraphs, and ideas

- Selects and uses effective revision tools or strategies based on project (e.g., referring to prewriting, checking sentence beginnings, combining sentences, using “cut and paste” word processing functions)
- Rereads work several times and has a different focus for each reading (e.g., first reading – looking for variety of sentence structure and length, second reading – checking for clarity and specific word choice, third reading — checking for layers of elaboration and persuasive language)
- Decides if revision is warranted
- Seeks and considers feedback from a variety of sources (e.g., adults, peers, community members, response groups)
- Records feedback using writing group procedure (e.g., partner reads writer’s work aloud and writer notes possible revision)
- Evaluates and justifies the choice to use feedback in revisions (e.g., “I don’t want to change this because ...”)
- Revises typographic devices (e.g., bullets, numbered lists) to clarify text and to meet requirements of technical writing forms (e.g., lab reports, graphs)
- Uses multiple resources to improve text (e.g., writing guides, assignment criteria, peers, adults, electronic thesaurus)

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Component 1.4: Edits text.

1.4.1 Edits for conventions (see 3.3)

- Identifies and corrects errors in conventions
- Uses appropriate references and resources (e.g., dictionary, writing/style guides, electronic spelling and grammar check, adults, peers)
- Edits with a critical eye, often using a self-initiated checklist or editing guide (e.g., conventions, format guidelines)
- Proofreads final draft for errors

Component 1.5: Publishes text to share with an audience.

1.5.1 Publishes in formats that are appropriate for specific audiences and purposes

- Selects from a variety of publishing options keeping in mind audience and purpose (e.g., e-portfolio, newsletters, contests, school announcements, yearbook)
- Publishes using a range of graphics and illustrative material (e.g., photos, charts, graphs, tables, time lines, diagrams, cartoons)
- Publishes material in appropriate form (e.g., multi-media presentation) and format (e.g., photos, graphs, text features) • Publishes using visual and dramatic presentations (e.g., skits, interviews)
- Uses available technological resources to produce, design, and publish a professional-looking final product (e.g., charts, overheads, word processor, photo software, presentation software, publishing software)

Component 1.6: Adjusts writing process as necessary.

1.6.1 Applies understanding of the recursive nature of writing process

- Revises at any stage of process
- Edits as needed at any stage

1.6.2 Uses collaborative skills to adapt writing process

- Delegates parts of process to team members (e.g., one team member publishes, one edits, another presents)
- Collaborates on drafting, revising, and editing • Collaborates on final layout and publishing/presenting (e.g., presentation with slideshow)

1.6.3 Uses knowledge of time constraints to adjust writing process

- Adapts time allotted for data gathering and number of drafts for shorter projects
- Writes to meet a deadline
- Creates a management time line/flow chart for multi-week written projects (e.g., portfolios, research papers, I-Search papers)
- Decreases time for prewriting, drafted, revising, and editing when writing on-demand, in-class pieces
- Increases time for prewriting, drafting, revising, and editing when working on longer written projects (e.g., research papers, I-Search papers)

Writing EALR 2: The student writes in a variety of forms for different audiences and purposes.

Component 2.1: Adapts writing for a variety of audiences.

2.1.1 Applies understanding of multiple and varied audiences to write effectively

- Identifies an intended audience
- Analyzes the audience to meet its needs (e.g., uses tone appropriate to culture, age, and gender of audience)
- Respects the cultural backgrounds of potential audiences
- Describes how a particular audience may interpret a text (e.g., by defining terms, using formal language)
- Anticipates readers' questions and writes accordingly

Component 2.2: Writes for different purposes.

2.2.1 Demonstrates understanding of different purposes for writing

- Writes to pursue a personal interest, to explain, to persuade, to inform, and to entertain to a specified audience (e.g., writes to persuade community to build a skate park, includes narratives/poetry in portfolio)
- Writes for self expression
- Writes to analyze informational and literary texts
- Writes to learn (e.g., KWL Plus; summary; double-entry journal in math, science, social studies)
- Writes for more than one purpose using a form (e.g., a newspaper article used to persuade, to entertain, or to inform)
- Includes more than one mode within a piece to address purpose (e.g., narrative anecdote to support a position in expository research paper)
- Writes to examine opposing perspectives (e.g., an argumentative paper examining how white settlement in the Pacific Northwest has had both positive and negative effects)

Component 2.3: Writes in a variety of forms/genres.

2.3.1 Uses a variety of forms/genres

- Integrates more than one form/genre in a single piece (e.g., a narrative told using an explanation, a character sketch, a free verse poem, a dialogue, a newspaper article, a document, and a diary entry)
- Maintains a log or portfolio to track variety of forms/genres used
- Produces a variety of new forms/genres. Examples:
 - reflective journals
 - fictional stories (e.g., science fiction)
 - scripts (e.g., television, movie, radio)
 - essays/speeches (e.g., cause/effect, problem/solution)
 - application forms
 - minutes
 - debates
 - scientific reports
 - zines
 - narrative poems

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Component 2.4: Writes for career applications.

2.4.1 Produces documents used in a career setting

- Collaborates with peers on long-term team writing projects (e.g., scientific investigation)
- Produces technical and non-technical documents for career audiences (e.g., letters, applications, lab reports) taking into consideration technical formats (e.g., fonts, layout, style guides)
- Selects and synthesizes information from technical and career documents for inclusion in writing (e.g., lab report that includes data recorded on graphs)

Writing EALR 3: The student writes clearly and effectively.

Component 3.1: Develops ideas and organize writing.

3.1.1 Analyzes ideas, selects a manageable topic, and elaborates using specific, relevant details and/or examples

- Presents a central idea, theme, manageable thesis while maintaining a consistent focus (e.g., “Commercials influence the spending habits of teenagers.”)
- Selects specific details relevant to the topic to extend ideas or develop elaboration (e.g., quotations, data, reasons, multiple examples that build upon each other) •Uses personal experiences, observations, and/or research to support opinions and ideas (e.g., relevant data to support conclusions in math, science, social studies; appropriate anecdotes to explain or persuade; information synthesized from a variety of sources to support an argument)
- Develops convincing characters (e.g., using details of thoughts, actions, appearance, and speech) and convincing settings (e.g., through the character's point of view or described during action) within a range of plots (e.g., suspense, flashback) in narratives

Component 3.2: Uses appropriate style.

3.2.1 Applies understanding that different audiences and purposes affect writer’s voice

- Writes with a clearly defined voice appropriate to audience
- Writes in an individual, informed voice in expository, technical, and persuasive writing
- Writes from more than one point of view or perspective (e.g., cultural perspective for a character’s viewpoint in history or literature, first person for I-Search papers, third person for mathematical communication, first or third person for persuasive writing)

3.2.2 Analyzes and selects language appropriate for specific audiences and purposes

- Uses precise language to persuade or inform
- Uses precise language in poetic and narrative writing
- Uses the vernacular appropriately
- Uses specialized vocabulary relevant to a specific content area (e.g., meteorologist, climatology)
- Uses persuasive techniques (e.g., powerful and emotional imagery)
- Uses literary devices (e.g., metaphor, symbols, analogies)
- Uses sound devices in prose and poetry (e.g., two-syllable rhyme, repetition, rhythm, rhyme schemes)
- Considers connotation and denotation when selecting words (plump vs. fat, shack vs. house)

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3.2.3 Uses a variety of sentences consistent with audience, purpose, and form

- Writes a variety of sentence structures and lengths to create a cadence appropriate for audience, purpose, and form
- Writes a variety of sentence structures (e.g., inverts sentence to draw attention to the point being made in an essay: “Down the stream swam the salmon fingerlings.”)
- Uses a variety of line lengths and rhythms for effect in narrative poems

Component 3.3: Knows and applies writing conventions appropriate for the grade-level.
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3.3.1 Uses legible handwriting

- Produces readable printing or cursive handwriting (e.g., size, spacing, formation, upper case and lower case)

Note: In components 3.3.1 through 3.3.8, skills are generally not repeated and build each year upon preceding years’ skills. Because these skills are learned and practiced as writing becomes more sophisticated, attention should be paid to skills in more than one year

3.3.2 Spells accurately in final draft

- Uses spelling rules and patterns from previous grades
- Uses a multiple strategies to spell. Examples:
 - homophones (e.g., capital and capitol)
 - affixes (e.g., dis-, ir-, -ist -ism)
 - Greek and Latin roots (e.g., circus, spiral, vision)
 - words from other languages (e.g., arena, buffet, souffle, lariat)
 - frequently misspelled words (e.g., accommodation, cemetery, receive)
- Uses resources to correct own spelling

3.3.3 Applies capitalization rules

- Uses capitalization rules from previous grades
- Capitalizes the title of a specific course (e.g., History 9A as opposed to history)
- Uses resources to check capitalization

3.3.4 Applies punctuation rules

- Uses punctuation rules from previous grades
- Uses commas to enclose titles (e.g., Mohammed Abdul, M.D., is a pediatrician.)
- Uses commas for emphasis or clarity (e.g., What the cook does, does affect the meal.)
- Places commas and periods inside quotation marks
- Uses apostrophes to form plurals of letters or numbers (e.g., Know your ABC’s.)
- Uses apostrophes in possessive compound nouns (e.g., the mother-in-law’s birthday)
- Uses a colon between title and subtitle (e.g., Write Source 2000: A Guide to Thinking, Writing and Learning)
- Uses diagonal slash (/) correctly: ~ in a fraction ~ to show choice
- Uses resources to check punctuation

3.3.5 Applies usage rules

- Applies usage rules from previous grades
- Identifies and corrects past grammar and usage issues
- Uses “fewer” vs. “less” correctly
- Uses parallel construction when listing infinitive phrases
 - parallel: Jamillah likes to hike, to swim, and to ride a bicycle.
 - not parallel: Jamillah likes to hike, to swim, and rides a bicycle.
- Uses resources to check usage

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3.3.6 Uses complete sentences in writing

- Uses fragments intentionally for effect

3.3.7 Applies paragraph conventions

- Uses paragraph conventions from previous grades
- Uses textual markers (e.g., rows, columns, tables)

3.3.8 Applies conventional forms for citations

- Cites sources according to prescribed format (e.g., MLA, APA)

Writing EALR 4: The student analyzes and evaluates the effectiveness of written work.

Component 4.1: Analyzes and evaluates others' and own writing.

4.1.1 Analyzes and evaluates writing using established criteria

- Critiques work, independently and in groups, according to detailed scoring guide, sometimes developed collaboratively (e.g., checklist, rubric, continuum)
- Identifies persuasive elements in a peers' writing and critiques the effectiveness (e.g., preponderance of evidence, rhetorical questions)
- Explains accuracy of content and vocabulary for specific curricular areas (e.g., math-specific words when justifying a strategy used during estimation involving integers)

4.1.2 Analyzes and evaluates own writing using established criteria

- Explains strengths and weaknesses of own writing using criteria (e.g., rubrics specific to purpose or form of assignment, WASL or 6-Trait rubrics)
- Rereads own work for the craft of writing (e.g., logic, transitional phrases) as well as the content (e.g., selected, relevant supporting detail)
- Uses criteria to choose and defend choices for a writing portfolio
- Provides evidence that goals have been met (e.g., selects piece that shows complex organizational structure)

Component 4.2: Sets goals for improvement.

4.2.1 Evaluates and adjusts writing goals using criteria

- Monitors progress towards goals over time (e.g., "After every piece of writing I need to check to make sure I am supporting my claims with evidence.")
- Analyzes progress (e.g., "I have been supporting my claims with evidence.")
- Evaluates goals (e.g., "I should find more relevant evidence to support my claim.")
- Adjusts goals (e.g., "I will change my goal from supporting claims with more evidence to supporting claims with better evidence.")
- Maintains a written log of long-range goals (e.g., "I will write to multiple audiences, improve and vary my introductions and conclusions, and try a new persuasive technique.") and a portfolio of work

SCIENCE

In eighth grade, students begin to use concrete evidence to develop a new, more abstract, level of understanding about matter, energy, and systems. Students will begin to develop models to describe complex systems and learn how investigation can provide evidence to test models. Students will begin to differentiate between questions that can be scientifically investigated and those that cannot.

Science EALR 1: The student understands and uses scientific concepts and principles.

Component 1.1 Properties: Understand how properties are used to identify, describe, and categorize substances, materials, and objects and how characteristics are used to categorize living things.

1.1.1 Understand how to use physical and chemical properties to sort and identify substances.

- Identify an unknown substance using the properties of a known substance.
- Recognize that the mass of an object is the same when measured anywhere in the universe at any normal speed.
- Describe why substances with the same volume or same mass may have different densities.
- Describe the volumetric properties of solids, liquids, and gases (e.g., a gas has the same volume as its container).

1.1.3 Understand sound waves, water waves, and light waves using wave properties, including amplitude, wavelength, and speed. Understand wave behaviors, including reflection, refraction, transmission, and absorption.

- Describe how the observed properties of light, sound, and water are related to amplitude, frequency, wavelength, and speed of waves (e.g., color and brightness of light, pitch and volume of sound, height of water waves, light waves are faster than sound waves).
- Describe the behavior of light waves when light interacts with transparent, translucent, and opaque substances (e.g., blue objects appear blue in color because the object reflects mostly blue light and absorbs the other colors of light, transparent objects transmit most light through them, lenses refract light).
- Describe the changes in speed and direction as a wave goes from one substance into another.

1.1.4 Understand that energy is a property of matter, objects, and systems and comes in many forms (i.e., heat [thermal] energy, sound energy, light energy, electrical energy, kinetic energy, potential energy, and chemical energy).

- Compare the potential and kinetic energy within a system at various locations or times (i.e., kinetic energy is an object's energy of motion; potential energy is an object's energy of position).

1.1.6 Understand how to classify organisms by their external and internal structures.

- Explain an inference about whether organisms have a biological relationship or common ancestry based on given characteristics.

Component 1.2 Structures: Understand how components, structures, organizations, and interconnections describe systems.

1.2.1 Analyze how the parts of a system interconnect and influence each other.

- Describe the interactions and influences between two or more simple systems

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1.2.2 Understand how various factors affect energy transfers and that energy can be transformed from one form of energy to another.

- Explain the transfer and transformations of energy within a system (e.g., conduction and convection of heat [thermal] energy).

1.2.3 Understand that all matter is made of particles called atoms and that atoms may combine to form molecules and that atoms and molecules can form mixtures.

- Describe how atoms may be combined in various ways and ratios to form molecules.
- Describe the different atoms and molecules in mixtures (e.g., dissolving carbon dioxide in water produces a **type of mixture [solution] of CO₂ and H₂O molecules.**)

1.2.5 Understand the structure of the Solar System.

- Compare the relationships among the components of the solar system (e.g., composition, size, atmosphere, gravity, distance from the Sun, number of moons).

1.2.6 Understand that specialized cells within multicellular organisms form different kinds of tissues, organs, and organ systems to carry out life functions.

- Describe the life function of specialized cells or tissues (e.g., red blood cells carry oxygen to body tissues; cells in plant leaves capture light energy).
- Describe the life function of organs or organ systems (e.g., the stomach breaks down food and the **intestines absorb food in the digestive system.**)

1.2.7 Understand that organisms pass on genetic information in their life cycle and that an organism's characteristics are determined by both genetic and environmental influences.

- Explain how physical characteristics of living things can be affected by genetic information and/or by interactions with the environment (e.g., nutrition, disease, sanitation).
- Describe and compare sexual (two parents) and asexual (one parent) life cycles of plants and animals.

1.2.8 Understand human life functions and the interconnecting organ systems necessary to maintain human life.

- Describe relationships among the organ systems of the human body (e.g., the role of the senses and the nervous system for human survival, the relationships between the digestive and excretory systems).
- Compare human body systems to another organism's body system (e.g., human lungs to plant leaves, human skeletal or circulatory systems to plant stems).

<p>Component 1.3 Changes: Understand how interactions within and among systems cause changes in matter and energy.</p>

1.3.7 Understand the effects of the regular and predictable motions of planets and moons in the Solar System.

- Describe how the spin of Earth and other planets accounts for the length of a day on those planets.
- Describe how Earth's and other planets' orbits around the Sun account for the length of a year on those planets.

Science EALR 2: The student knows and applies the skills and processes of science and technology.

Component 2.1 Investigating Systems: Develop the knowledge and skills necessary to do scientific inquiry.
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2.1.1 Understand how to generate a question that can be answered through scientific investigation.

- Generate multiple questions based on observations.
- Generate a question that can be investigated scientifically.
- Generate a new question that can be investigated with the same materials and/or data as a given investigation.

2.1.2 Understand how to plan and conduct scientific investigations.

- Make predictions (hypothesize) and give reasons.
- Generate a logical plan for, and conduct, a scientific controlled investigation with the following attributes:
 - prediction (hypothesis)
 - appropriate materials, tools, and available computer technology
 - controlled variables (kept the same)
 - one manipulated (changed) variable
 - responding (dependent) variable
 - gather, record, and organize data using appropriate units, charts, and/or graphs
 - multiple trials
- Generate a logical plan for a simple field investigation with the following attributes:
 - Identify multiple variables
 - Select observable or measurable variables related to the investigative question
- Identify and explain safety requirements that would be needed in the investigation.

2.1.3 Apply understanding of how to construct a scientific explanation using evidence and inferential logic.

- Generate a scientific conclusion including supporting data from an investigation using inferential logic (e.g., chewing gum loses more mass than bubble gum after being chewed for 5 minutes; chewing gum lost 2.00 grams while bubble gum only lost 1.47 grams).
- Describe a reason for a given conclusion using evidence from an investigation.
- Generate a scientific explanation of an observed phenomenon using given data.
- Describe the difference between evidence (data) and conclusions.

2.1.4 Analyze how models are used to investigate objects, events, systems, and processes.

- Create a model or computer simulation to investigate and predict the behavior of objects, events, systems, or processes (e.g., phases of the Moon using a solar system model).

2.1.5 Apply understanding of how to report investigations and explanations of objects, events, systems, and processes.

- Report observations of scientific investigations without making inferences.
- Summarize an investigation by describing:
 - reasons for selecting the investigative plan
 - materials used in the investigation
 - observations, data, results
 - explanations and conclusions in written, mathematical, oral, and information technology presentation formats
 - ramifications of investigations
 - safety procedures used
- Describe the difference between an objective summary of data and an inference made from data.

Grade Eight
Grade Level Expectations and/or Benchmarks

Component 2.2 Nature of Science: Understand the nature of scientific inquiry

2.2.1 Apply curiosity, honesty, skepticism, and openness when considering explanations and conducting investigations.

- Explain why an honest response to questionable results, conclusions, or explanations is important to the scientific enterprise.
- Describe a flaw in a claim or a conclusion (i.e., limited data, flawed procedure, or overgeneralization).
- Describe how scientists accurately and honestly record, report, and share observations and measurements without bias.
- Explain why honest acknowledgement of the contributions of others and information sources are necessary.

2.2.2 Understand that scientific theories explain facts using inferential logic.

- Describe how a principle or theory logically explains a given set of facts.
- Describe how new facts or evidence may result in the modification or rejection of a theory (e.g., caloric theory of heat, theory of acquired characteristics).

2.2.3 Analyze inconsistent results from scientific investigations to determine how the results can be explained.

- Compare two or more similar investigations and explain why different results were produced (e.g., insufficient data could be interpreted as inconsistent results).
- Explain whether sufficient information has been obtained to make a conclusion.
- Explain why the results from a single investigation or demonstration are not sufficient to describe a phenomenon.

2.2.4 Understand how to make the results of scientific investigations reliable and how to make the methods of investigation valid.

- Describe how to increase the reliability of the results of an investigation (e.g., repeating an investigation exactly the same way increases the reliability of the results).
- Describe how the method of an investigation is valid (i.e., validity means that the investigation answered the investigative question with confidence; the manipulated variable caused the change in the responding or dependent variable).
- Describe the purpose of the steps and materials of an investigation's procedure in terms of the validity of the investigation.
- Modify an investigation to improve the validity of the investigation and explain how the modifications improved the validity (e.g., more controlled variables, more accurate measuring techniques, greater sample size).

2.2.5 Understand that increased comprehension of systems leads to new inquiry.

- Describe how scientific inquiry results in new facts, evidence, unexpected findings, ideas, and explanations.
- Describe how results of scientific inquiry may change our understanding of the systems of the natural and constructed world.
- Describe how increased understanding of systems leads to new questions to be investigated.
- Describe how new ideas need repeated inquiries before acceptance.
- Describe how new investigative questions arise at the completion of scientific inquiry.

Science EALR 3: The student understands the nature and contexts of science and technology.

Component 3.1 Designing Solutions: Apply knowledge and skills of science and technology to design solutions to human problems or meet challenges.

3.1.1 Analyze common problems or challenges in which scientific design can be or has been used to design solutions.

- Describe how science and technology could be used to solve all or part of a human problem and vice versa (e.g., understanding erosion can be used to solve some flooding problems).
- Describe the scientific concept, principle, or process used in a solution to a human problem (e.g., understanding of the relationship between electricity and magnetism has been used to make electric motors and generators).
- Explain how to scientifically gather information to develop a solution (e.g., collect data by measuring all the factors and establish which are the most important to solve the problem).
- Describe an appropriate question that could lead to a possible solution to a problem.

3.1.2 Apply the scientific design process to develop and implement solutions to problems or challenges.

- Propose, implement, and document the scientific design process used to solve a problem or challenge:
 - define the problem
 - scientifically gather information and collect measurable data
 - explore ideas
 - make a plan
 - list steps to do the plan
 - scientifically test solutions
 - document the scientific design process
- Explain possible solutions to the problem (e.g., use pulleys instead of levers to lift a heavy object).
- Explain the reason(s) for the effectiveness of a solution to a problem or challenge.

3.1.3 Analyze multiple solutions to a problem or challenge.

- Describe the criteria to evaluate an acceptable solution to the problem or challenge.
- Describe the reason(s) for the effectiveness of a solution to a problem or challenge using scientific concepts and principles.
- Describe the consequences of the solution to the problem or challenge (e.g., using rocks on the edge of a stream to prevent erosion may destroy habitat).
- Describe how to change a system to solve a problem or improve a solution to a problem.
- Compare the effectiveness of different solutions to a problem or challenge based on criteria, using scientific concepts and principles.

Component 3.2 Science, Technology and Society: Analyze how science and technology are human endeavors, interrelated to each other, society, the workplace, and the environment.

3.2.1 Analyze how science and technology have been developed, used, and affected by many diverse individuals, cultures, and societies throughout human history.

- Explain how the contributions of diverse individuals have led to the development of science and technology.
- Explain how science and technology have affected individuals, cultures, and societies throughout human history.

Grade Eight
Grade Level Expectations and/or Benchmarks

3.2.2 Analyze scientific inquiry and scientific design and understand how science supports technological development and vice versa.

- Describe how scientific investigations and scientific research support technology (e.g., investigation into materials led to Gortex and Kevlar).
- Describe how technology supports scientific investigations and research (e.g., microscopes led to the discovery of unicellular organisms).
- Describe how a scientifically designed solution to a human problem can lead to new tools that generate further inquiry (e.g., microscopes, telescopes, and computers).
- Compare the processes of scientific inquiry and scientific design in terms of activities, results, and/or influence on individuals and/or society.

3.2.3 Analyze the use of science, mathematics, and technology within occupational/career areas of interest.

- Examine scientific, mathematical, and technological knowledge and skills used in an occupation/career.
- Research occupations/careers that require knowledge of science, mathematics, and technology.

3.2.4 Analyze how human societies' use of natural resources affects the quality of life and the health of ecosystems.

- Discriminate between renewable and nonrenewable resources in an ecosystem.
- Explain the effects that the conservation of natural resources has on the quality of life and the health of ecosystems.
- Explain the effects of various human activities on the health of an ecosystem and/or the ability of organisms to survive in that ecosystem (e.g., consumption of natural resources; waste management; urban growth; land use decisions; pesticide, herbicide, or fertilizer use).

COMMUNICATIONS

Communications EALR 1: The student uses listening and observation skills to gain understanding.

Component 1.1: Uses listening and observation strategies and skills to focus attention and interpret information.

1.1.1 Applies a variety of listening strategies to accommodate the listening situation.

- Uses listening strategies for: enjoyment, active listening (GLE 1.1.2), empathetic listening, and critical listening (GLE 1.2.1), appropriate to the situation (e.g., teacher instruction, one-on-one discussion with teacher or peer, small group communication with peers, class discussion, listening to an oral presentation, listening to/viewing mediated communication, group work, interviews).

1.1.2 Applies a variety of listening and observation skills/ strategies to interpret information.

- Monitors and adjusts strategies to interpret information (e.g., asking clarifying/probing questions, responding with elaboration or paraphrasing information, making connections both within and beyond presentation).

Component 1.2: Interprets, analyzes, synthesizes, or evaluates information from a variety of sources.

1.2.1 Synthesizes a response to and evaluates effectiveness of, visual and auditory information.

- Compares literal and implicit meaning to respond to a statement (e.g.,).
- Constructs personal meaning from visual and auditory information (e.g., Dance – uses metaphor/ analogy, Theater - uses pantomime, monologue, simile and discourse/debate; Social Studies – what students learn about the effects of industrialization, immigration, and urbanization on the U.S. in the 19th Century from the photos of Jacob Riis).
- Critiques effectiveness of rhetorical information (e.g., peer presentations, ASB speeches).

1.2.2 Analyzes and evaluate bias and the use of persuasive techniques in mass media.

- Judges the effectiveness of the persuasive technique(s) on the target audience (e.g., ethos, pathos, logos appeals, fallacies, language tools).
- Examines the purpose and intended effects of visual and auditory information (e.g., news reports, commercials, Internet sites, debates).
- Compares and contrasts points of view represented in media (e.g., Social Studies CBA – Compare and contrast the image of the U.S. in various political cartoons created during the Mexican-American War in both U.S. and Mexican newspapers).
- Examines portrayal of cultures, gender, religion, sexuality, class, and race in mass media and assesses its impact/effect on society and its subcultures.

Communications EALR 2: The student uses communication strategies and skills to interact/work effectively with others.

Component 2.1: Uses language to interact effectively and responsibly.

2.1.1 Uses language and other communication strategies that adapt to the needs of the situation and setting.

- Selects language that is respectful of others' feelings and rights (e.g., free from stereotyping, bias, slander, or harassment).
- Identifies and implements a common code for communication when a common code doesn't exist, using role play (e.g., gestures, sign language, language different from one's own, dialects, pictures).

Grade Eight
Grade Level Expectations and/or Benchmarks

Component 2.2: Uses interpersonal skills and strategies to work collaboratively, solve problems and perform a task.

2.2.1 Uses communication skills that demonstrate respect.

- Monitors and adjusts one’s own participation according to the situation and the needs of others (e.g., focuses on speaker, avoids inappropriate interruptions, does not dominate conversation, uses turn taking techniques, attends to cultural differences in communication styles such as variations in pause time, pace, volume/intensity, body language).
- Responds to the clarification needs of others as necessary (e.g., provides examples, illustrates or expands on a response).
- Provides feedback to the speaker in role play scenarios or classroom activities based on appropriate form of listening (e.g., enjoyment, active, critical, and/or empathetic listening).
- Refutes others in non-hurtful ways by disagreeing with ideas and not people according to established classroom norms (e.g., “Keoki, I think you have a good idea, but I think there is one more point to consider”).

2.2.2 Applies skills to contribute responsibly in a group setting.

- Contributes relevant ideas with support/evidence by clarifying, illustrating or expanding as needed (e.g., contributes topics related to ideas with support and talks in turn with consideration for others in the conversation).
- Expands upon and clarifies others’ ideas.
- Critiques group members’ and own interactions/work and adjusts to ensure group success.

Component 2.3: Use skills and strategies to constructively communicate interculturally.

2.3.1 Analyzes the influence of specific cultural principles, beliefs, and world views on intercultural communication.

- Explains one’s own cultural principles, beliefs, and world views in contrast to others (e.g., native cultures tend to have a deep connection with the earth which contrasts with the over-development of land).
- Examines the influence of cultural principles, beliefs, and world views on intercultural communication (e.g., individual societies where the focus is on the achievement of the individual versus collective societies where the focus is on the achievement of the group).
- Examines own cultural biases.

2.3.2 Applies intercultural communication strategies.

- Examines one’s own communication style (assertive, dramatic, relaxed, friendly, etc.) and determines how it affects intercultural communication (e.g., speaking time, interruptions, eye contact, silence, directness of message, humor).
- Uses understanding of one’s communication style to enhance or improve intercultural communication

Communications EALR 3: The student uses communication skills and strategies to effectively present ideas and one’s self in a variety of situations.

Component 3.1: Uses knowledge of topic/theme, audience, and purpose in planning presentations.

Grade Eight
Grade Level Expectations and/or Benchmarks

3.1.1 Applies skills to plan for effective oral communication and presentation.

- Determines the occasion and the audience, selects a purpose (e.g., variety show, news broadcast, science experiment, data presentation, speech, interview).
- Matches verbal and nonverbal messages (e.g., voice modulation, expression, tone, body language, gestures, attire).
- Identifies logical argument and unintended use of fallacies to determine necessary revisions presentation (e.g., generalization/principle, pro/con, definition, false causality, overgeneralization).
- Uses techniques to enhance the message (e.g., rhetorical questions, parallelism, concrete images, figurative language, and characterization).

Component 3.2: Uses media and other resources to support presentations.

Completed by Grade Level Eight

Component 3.3: Uses effective delivery.

3.3.1 Applies skills and strategies for the delivery of effective oral communication and presentations.

- Speaks with expression using purposeful volume, articulation, pace/rate, and tone.
- Uses posture, body language, eye contact facial expression and gestures to heighten and emphasize message.
- Matches verbal and nonverbal messages.
- Uses standard grammar, appropriate to grade level, to enhance message.
- Speaks in an extemporaneous style of delivery (e.g., uses notes and outlines rather than a script)

Communications EALR 4: The student analyzes and evaluates the effectiveness of communication.

Component 4.1: Assesses effectiveness of one's own and others' communication.

4.1.1 Applies own or established criteria to analyze strengths and weaknesses of one's own communication.

- Articulates the qualities that make communication (group work or a presentation types) effective (e.g., body language, pace, volume, tone, expression).
- Seeks, considers, and uses feedback from a variety of sources to improve communication (e.g., teachers, peers, community members).
- Critiques style and content of own communication using established criteria in order to build on strengths and develop areas of weakness.
- Critiques one's own role in the preparation and delivery of small group presentation and/or interviews.
- Determines impact of presentation on audience (e.g., use verbal and non-verbal audience response and feedback to determine impact).

4.1.2 Analyzes and evaluates strengths and weaknesses of others' formal and informal communication using own or established criteria.

- Examines accuracy of content and terminology for specific content areas in others' communication (e.g., use of correct mathematical terminology when justifying a strategy to estimate integers).
- Critiques others' communication and/or delivery independently and in groups according to detailed scoring criteria.
- Offers feedback to peers in support of improving both formal and informal communication.

Grade Eight
Grade Level Expectations and/or Benchmarks

Component 4.2: Sets goals for improvement .
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4.2.1 Applies strategies for setting grade level appropriate goals and evaluates improvement in communication.

- Sets goals for all forms of oral communication using feedback and creates a plan to meet the goals (e.g., group work, formal presentations, conversation, interviews).
- Monitors progress through the use of a variety of tools (e.g., portfolios, reflection journal, rubrics, or logs) and makes adjustments as needed.

SOCIAL STUDIES

GRADES 6-8 SOCIAL STUDIES FRAMEWORKS OUTLINE

GRADE 8

Grade 8: United States History and Civics

- Founding a Government
- Structure of Government
- Rights and Responsibilities
- Differing Political Systems and Foreign Policy
 - Revolution, Constitution, and New Nation
- Expansion and Reform
- Civil War and Reconstruction
- Industrialization, Immigration, and Urbanization

History

Social Studies EALR H1: The student examines and understands major ideas, eras, themes, developments, turning points, chronology, and cause-effect relationships in the United States, world, and Washington State history.

Component H1.1: Understand and analyze historical time and chronology.

Benchmarks

- Group events and individuals by broadly defined historical eras and develop related timelines; compare and contrast different cultural measures of time
- Using evidence for support; identify, analyze, and explain possible causal factors contributing to given historical events.

Component H1.2: Understand events, trends, individuals, and movements shaping the United States, world, and Washington State history.

Benchmarks

- US - Identify and analyze major issues, people, and events in U.S. history from the Revolution to 1900 including:
 - Revolution, Constitution, and New Nation (1763-1820)
 - Expansion and Reform (1801-1861)
 - Civil War and Reconstruction (1850-1877)
 - Industrialization, Immigration, Urbanization (1870-1900).
- WA - Identify and analyze the contributions of the following eras in the development of Washington State:
 - The emergence of Washington State (statehood-1930).
 - The Great Depression and World War II (1930-1945).
 - Post World War II domestic political, social, and economic issues (1945-1980).
 - Contemporary Washington (1980-present).

Component H1.3: Examine the influence of culture on the United States, world, and Washington State history.

Benchmarks

- Examine the development of different cultures in Washington State

Social Studies EALR H2: The student understands the origin and impact of ideas and technological developments on history.

Component H2.1: Compare and contrast ideas in different places, time periods, and cultures, and examine the interrelationships between ideas, change, and conflict.

Benchmarks

- Explain the origin and historical context of major ideas and their impact on societies.

Component H2.2: Understand how ideas and technological developments influence people, culture, and environment.

Benchmarks

- Interpret how changing technologies have shaped ideas and attitudes, and analyze the impact of ideas and technological developments on society and culture.

Geography

Social Studies EALR G1: The student uses maps, charts, and other geographic tools to understand the spatial arrangement of people, places, resources, and environments on Earth's surface.

Component G1.1: Use and construct maps, charts, and other resources to gather and interpret geographic information.

Not emphasized at grade level eight.

Component G1.2: Recognize spatial patterns on Earth's surface and understand the processes that create these patterns.

Benchmarks

- Analyze how human spatial patterns emerge from natural processes and human activities. (e.g. tectonic forces, climate, fires, farming, air pollution, transportation, population and urban development (Place, Human/environment Interaction, Movement))

Social Studies EALR G2: The student understands the complex physical and human characteristics of places and regions.

Component G2.1: Describe the natural characteristics of places and regions and explain the causes of their characteristics.

Not emphasized at grade level eight.

Component G2.2: Describe the patterns humans make on places and regions.

Not emphasized at grade level eight.

Grade Eight
Grade Level Expectations and/or Benchmarks

Component G2.3: Identify the characteristics that define the Pacific Northwest and the Pacific Rim as regions.

Not emphasized at grade level eight.

Social Studies EALR G3: The student observes and analyzes the interaction between people, the environment, and culture.

Component G3.1: Identify and examine people’s interaction with and impact on the environment.

Benchmarks

- Analyze the different ways people use the environment, identify the consequences of use, and consider possible alternatives (Human/Environment Interaction, Region)
- Explain how the actions and interactions of human societies affect and are affected by the environment with regard to air, water, and land issues (Human/Environment Interaction, Region).

Component G3.2: Analyze how the environment and environmental changes affect people.

Benchmarks

- Examine how technology can affect people’s interaction with the environment (Human/ Environment Interaction, Region, Movement).

Component G3.3: Examine cultural characteristics, transmission, diffusion and interaction.

Benchmarks

- Identify the many groups and subcultures that exist within large societies and the ways they interact (Location, Place).

Civics

Social Studies EALR C1: The student understands and can explain the core values and democratic principles of the United States as set forth in foundational documents, including the Declaration of Independence and the Constitution.

Component C1.1: Understand and interpret the major ideas set forth in the Declaration of Independence, the Constitution, and other foundational documents.

Benchmarks

- Describe the origins and creation of foundational documents such as the Declaration of Independence.
- Explain specific rights guaranteed by the Constitution and how these rights are related to responsibilities.

Component C1.2: Examine key ideals of United States democracy such as individual human dignity, liberty, justice, equality, and the rule of law.

Benchmarks

- Explain key democratic ideals of the U.S. government and discuss their application in specific situations.
- Describe efforts to reduce differences between democratic ideals and realities.

Grade Eight
Grade Level Expectations and/or Benchmarks

Component C1.3: Examine representative government and citizen participation.

Benchmarks

- Explain how U.S. citizens govern through representative government and empower representatives to make, interpret, and enforce laws to carry out public policy.
- Explain how the U.S. government includes concepts of both a democracy and a republic.

Social Studies EALR C2: The student analyzes the purposes and organization of government and laws.

Component C2.1: Understand and explain the organization of government at the federal, state, and local level including the executive, legislative, and judicial branches.

Benchmarks

- Describe how the state and federal government derives its power from the consent of the governed through voting, constituent meetings.
- Describe the structure of state and federal government including the legislative, executive, and judicial branches; federal, state, and local levels and political parties.

Component C2.2: Understand the function and effect of law.

Benchmarks

- Distinguish among making, enforcing, and interpreting laws.

Component C2.3: Compare and contrast democracies with other forms of government.

Benchmarks

- Describe the purposes of government and how its powers are acquired, used, and justified.
- Describe a variety of forms of government.
- Explain how various forms of government have different effects on the lives of people.

EALR C3: The student understands the purposes and organization of international relationships and how United States foreign policy is made.

Component C3.1: Understand how the world is organized politically and how nations interact.

Benchmarks

- Describe and explain how national interests affect international relations.
- Describe U.S. roles and interests in major international organizations and international political alliances.
- Evaluate how national interests are maintained through international agreements, treaties, and alliances

Component C3.2: Recognize factors and roles that affect the development of foreign policy by the United States, other nations, and multinational organizations.

Benchmarks

- Define and identify foreign policy and the factors that influence it
- Describe and explain historical and contemporary examples of U.S. foreign policy
- Identify and describe the roles of international and multinational organizations in foreign policy

Social Studies EALR C4: The student understands the rights and responsibilities of citizenship and the principles of democratic civic involvement.

Component C4.1: Understand individual rights and their accompanying responsibilities including problem-solving and decision-making at the local, state, national, and international level.

Benchmarks

- Explain how responsibility to the common good might conflict with the exercise of individual rights.
- Examine why democracy requires government to protect the rights of citizens and to promote the common good.

Component C4.2: Identify and demonstrate rights of United States citizenship related to school, local, state, national, and international issues.

Benchmarks

- Participate in civic discussions with the aim of solving current problems.
- Discuss how voting in a representative democracy is a privilege and a responsibility

Component C4.3: Explain how various stakeholders influence public policy.

Benchmarks

- Analyze the influence of various interest groups and individuals on the development of public policy and decision-making.
- Describe the relationship between civic responsibility and public service.

Economics

Social Studies EALR E1: Students understand the impact of scarcity on their personal lives and on the households, businesses, governments, and societies in which they are participants.

Component E1.1: Understand that the condition of scarcity requires people to choose among alternatives and bear the consequences of that choice.

Benchmarks

- Provide examples of how groups and individuals face choices and consider price and personal values, etc., in making choices in present and in historical situations.
- Analyze how resources are utilized and distributed under different economic systems

Component E1.2: Understand that the availability and use of resources influences the production of goods and services in the economy.

Benchmarks

- Give examples of natural resources, labor, capital, and entrepreneurship
- Give an example of specialization in the production process

Grade Eight
Grade Level Expectations and/or Benchmarks

Social Studies EALR E2: Students understand the essential characteristics of past and present economic systems.

Component E2.1: Recognize that both buyers and sellers participate in voluntary trade because both expect to gain from the exchange.

Benchmarks

- Describe circular flow where households sell labor and buy goods and businesses sell goods and services and buy labor.

Component E2.2: Explain how different economic systems produce, distribute, and exchange goods and services.

Benchmarks

- Understand how private ownership and property rights vary in different economies
- Understand why private ownership and property rights are important to market economies
- Identify laws and values that limit or change what is produced

Component E2.3: Understand that prices in competitive markets create incentives that influence the choices of buyers and sellers.

Benchmarks

- Explain how prices, costs, substitutes, advertising, tastes, and values interact with supply and demand.
- Understand that markets are inter-related; changes in the price of one good or service can lead to changes in prices of many other goods and services
- Demonstrate how the number of buyers and sellers in a market influence competition

Component E2.4: Understand that investment in people, tools, and technology affects employment levels and standards of living.

Not emphasized at grade level eight.

Social Studies EALR E3: Students understand the role of government and institutions in past and present economic systems.

Component E3.1: Analyze the role of government as participant in an economy through taxation, spending, and policy setting.

Benchmarks

- Explain the need to establish a legal framework to protect and foster voluntary trade.

Component E3.2: Understand the role of money, banking, and financial institutions and how individuals and businesses use them.

Not emphasized at grade level eight.

THE ARTS

Arts EALR 1: The student understands and applies arts knowledge and skills.

Benchmark Component 1.1: Understand arts concepts and vocabulary.
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BENCHMARK LEVEL 2: *Explains and applies the concepts of visual art, dance, theatre, and music using arts vocabulary*

Dance

1.1.1 Elements:space; time; energy/force

- Maintains a steady beat and holds the tempo in half time and double time (time)
- Demonstrates a range of efforts actions, such as glide, float, flick, dab, punch, slash, wring, and press (energy)

1.1.2 Principles of Organization: repetition; form/design; theme

- Demonstrates theme and variation in choreography (form)
- Creates transitions to develop fluency in dance

Music

1.1.1 Elements:Pitch; Rhythm; Expression (dynamics, style, tempo, phrasing); Timbre

- Reads, writes, and creates using dotted rhythms (*rhythm*)
- Understands and uses tempo markings (i.e., largo, andante, allegro, presto, ritardando, accelerando) (*expression*)

1.1.2 Principles of Organization: notation; form; melody; harmony

- Recognizes and interprets musical symbols and notation appropriate to music rehearsed and performed (*notation*)
- Visually and aurally recognizes and explains the form of music rehearsed and performed (*form*)
- Understands that melodies can be accompanied by chordal progressions (*harmony*)

Theatre

1.1.1 Elements:character; setting; dialogue; conflict

- Explains the concept of character development throughout a scene/play
- Explains the relationship of setting to character development
- Explains use of dialogue in a scene/ play
- Explains the cause and effect of actions within a scene/play

1.1.2 Principles of Organization: plot; design; theme

- Explains and describes use of elements of plot in a scene/play
- Explains and applies elements of design to a scene/play
- Explains how theme is revealed in a scene/play

Visual Arts

1.1.1 Elements:line; shape/form; texture; color; space; value

- Combines art elements for expressive purposes
- Creates sculptural forms
- Identifies and demonstrates how line and value define form and space
- Identifies color attributes: hue, value, and intensity

Grade Eight
Grade Level Expectations and/or Benchmarks

1.1.2 Principles of Organization: balance; emphasis/dominance; proportion; movement/ rhythm; repetition/ pattern; variety; harmony; unity

- Uses proportion to analyze size relationships in an artwork
- Uses emphasis in an artwork (e.g., to create a focal point)
- Creates realistic, non-objective, and abstract works of art
- Balances form

Benchmark Component 1.2: Develop arts skills and techniques.

BENCHMARK LEVEL 2: Develops arts skills and techniques

Dance

- Demonstrates the ability to reverse a simple movement combination
- Demonstrates the ability to move with others through a variety of geometric formations
- Understands correct alignment principles

Music

- Plays and/or sings using characteristic tonal production (i.e., resonance, vowel placement)
- Understands and applies expressive elements in music rehearsed and performed
- Demonstrates reading and listening skills by correcting personal errors in pitch, rhythm
- Performs music of varying styles and genres
- Performs individually or in a small ensemble

Theatre

- Develops vocal work to reveal character
- Develops movement work to reveal character
- Develops emotional and sensory recall to create character in scene/play work
- Develops appropriate ensemble skills in scene/play work
- Develops focus techniques while participating in scene/play work

Visual Arts

- Uses spatial devices (e.g., one point perspective)
- Demonstrates the use of value and texture in drawing
- Uses exaggeration and simplification
- Presents work for display (e.g., centers, mounts/mats)

Benchmark Component 1.3: Understand and apply arts styles from various artist, cultures, and times.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Applies techniques from various artists, cultures, and/or times

Benchmark Component 1.4: Apply audience skills in a variety of arts settings and performances

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Understands and demonstrates the relationship and interactive responsibilities of the artist/performer and audience

Grade Eight
Grade Level Expectations and/or Benchmarks

Arts EALR 2: The student demonstrates thinking skills using artistic processes.

Benchmark Component 2.1: Apply a creative process in the arts:
Conceptualize the context or purpose
Gather information from diverse sources
Develop ideas and techniques
Organize arts elements, forms, and/or principles into a creative work
Reflect for the purpose of elaboration and self-evaluation
Refine work based on feedback
Present work to others

BENCHMARK LEVEL 2: Develops work using a creative process with instructor assistance

Dance, Music, Theatre, Visual Arts

- Applies previously learned arts concepts, vocabulary, skills and techniques through a creative process

Benchmark Component 2.2: Apply a performance process in the arts:
Identify audience and purpose
Select artistic work (repertoire) to perform
Analyze structure and background of work
Interpret by developing a personal interpretation of the work
Rehearse, adjust, and refine through evaluation and problem-solving
Present work for others
Reflect and evaluate

BENCHMARK LEVEL 2: Develops work using a performance process with instructor assistance

Dance, Music, Theatre, Visual Arts

- Applies previously learned arts concepts, vocabulary, skills and techniques through a performance process

Benchmark Component 2.3: Apply a responding process to an arts presentation.
Engage actively and purposefully
Describe what is seen and/or heard
Analyze how the elements are arranged and organized
Interpret based on descriptive properties
Evaluate using supportive evidence and criteria

BENCHMARK LEVEL 2: Applies a responding process to an arts presentation with instructor assistance

Dance, Music, Theatre, Visual Arts

- Applies previously learned arts concepts, vocabulary, skills and techniques through a responding process

Arts EALR 3: The student communicates through the arts.

Benchmark Component 3.1: Use the arts to express and present ideas and feelings.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Expresses ideas and feelings through the arts in a variety of styles
- Describes use and misuse of pre-existing artistic works to communicate

Grade Eight
Grade Level Expectations and/or Benchmarks

Benchmark Component 3.2: Use the arts to communicate for a specific purpose.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Creates and/or performs an artwork to communicate for a selected purpose with instructor assistance

Benchmark Component 3.3: Develop personal aesthetic criteria to communicate artistic choices.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Explains how personal aesthetic choices are influenced by culture and history

Arts EALR 4: The student makes connections within and across the arts to other disciplines, life, cultures, and work.

Benchmark Component 4.1: Demonstrate and analyze the connections among the arts disciplines.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Compares and contrasts attributes of personal artwork with other arts disciplines

Benchmark Component 4.2: Demonstrate and analyze the connections among the arts and other content areas.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Explains relationships between the arts and other content areas

Benchmark Component 4.3: Understand how the arts impact lifelong choices.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Analyzes how the arts impact choices in natural and constructed environments

Benchmark Component 4.4: Understand that the arts shape and reflect culture and history.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Compares and contrasts specific attributes of artworks that reflect culture and history

Benchmark Component 4.5: Demonstrate the knowledge of arts careers and the knowledge of arts skills in the world of work.

BENCHMARK LEVEL 2

Dance, Music, Theatre, Visual Arts

- Describes work habits and skills needed for careers in the arts
- Explains how art skills and knowledge are used in the world of work

HEALTH & FITNESS

Note: EALR subcomponents are listed; draft GLEs (11/2003) are shown following in italics.

Health & Fitness EALR 1.0: The student acquires the knowledge and skills necessary to maintain an active life: Movement, physical fitness, and nutrition.

Component 1.1: Develop fundamental and complex movement skills, as developmentally appropriate.

Benchmark Indicator 1.1.2 – Perform fundamental skills in a variety of movement activities.

Demonstrate developmentally appropriate fundamental and complex movement skills.

- Perform movement combinations in rhythmic activities (step aerobics, funk, social dance)
- Perform movement combinations in fundamental and complex skills (Basketball-set shot, overhead pass; Soccer-shoot on goal, trap and dribble, throwing/catching-throw with follow through to target, proper hand placement in relation to height of ball) involved in team sports and group activities (small sided soccer, 3 on 3 basketball)
- Perform fundamental movement combinations in fundamental and complex skills (Racquet sports, forehand) involved in individual sports (pickleball, climbing wall, tennis)
- Demonstrate mechanics of movement as applied to specific skills (underhand volleyball serve over net)
- Perform skills to improve core strength (modified or regular pushups, lunges, squats)
- Describe purpose and benefits of sports, games, recreation and dance in modern society.

Component 1.2: Safely participates in a variety of developmentally appropriate physical activities.

Benchmark Indicator 1.2.2 – Demonstrates knowledge of rules and safety procedures, while participating cooperatively in individual, dual/team, and lifetime activities.

Understands safety procedures and rules in a variety of developmentally appropriate physical activities.

- Demonstrate sportsmanship. Cooperation and a healthy attitude about competition during a variety of activities.
- Describe/demonstrate proper handling of equipment.
- Safely participate in a variety of physical activities.
- Organize own games and apply rules.

Component 1.3: Understands the concepts of health-related physical fitness and develop and monitor progress on personal fitness goals.

Benchmark Indicator 1.3.2 Measure physical fitness, set fitness and activity goals, and explore a variety of activities to maintain healthy levels of cardio-respiratory fitness, muscular strength-endurance-flexibility, and body composition.

Understand and begin to apply the components of physical fitness: cardio-respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition.

- Perform measurements in the components of fitness.
- Identify conditioning and training principles (FIT principles)
- Interpret fitness results and analyze factors that have influenced them.
- Apply anatomical and physiological functions (cardio and respiratory) to activities in a fitness plan.
- Explain personal benefits of making positive health and fitness improvements

Grade Eight
Grade Level Expectations and/or Benchmarks

Component 1.4: Understand the relationship of nutrition and food nutrients to physical performance and body composition.

Benchmark Indicator 1.4.2.a Design nutrition goals, based on national dietary guidelines and individual activity needs.

Compose nutrition goals based on national dietary guidelines and individual activity needs.

- Examine the affects of nutrients (fats, carbohydrates, proteins, vitamins, minerals, and hydration) on the body.
- Understand the relationship between body fat and lean body mass.
- Understand relationship between food choice and balance, portion size moderations and hydration.
- Includes diet, activity and sleep requirements in a balanced health and fitness plan.

Benchmark Indicator 1.4.2.b Design nutrition goals, based on national dietary guidelines and individual activity needs.

Analyze the effects of activity, fitness, and nutrition practices.

- Construct a personal/individual caloric needs assessment based on activity levels, age, and specific health needs.

Health & Fitness EALR 2.0: The student acquires the knowledge and skills necessary to maintain a healthy life: Recognize patterns of growth and development, reduce health risks and live safely.

Component 2.1: Recognize patterns of growth and development.

Benchmark Indicator 2.1.2.a Demonstrate understanding of the physical, emotional, intellectual, and social changes that occur during puberty.

Understand body systems and their functions

- Describe the inter-relationships between key body systems (i.e., skeletal-muscular –nervous; respiratory-cardiovascular; digestive; lymphatic-immune; and endocrine- reproductive).

Understands the changes that occur during puberty

- Compare and contrast childhood versus adolescence in regard to hormonal and physical changes that occur during puberty.

Benchmark Indicator 2.1.2.b Identify hereditary factors that affect growth, development, and health.

Know hereditary factors that affect growth development and health.

- Identify hereditary factors that influence, growth, development, and health risks.

Benchmark Indicator 2.1.2.c Describe how nutrition, exercise, and rest influence physical growth and lifelong health.

Analyze the benefits of maintaining healthy habits including exercise, nutrition, and rest habits for lifelong health.

- Describe the relationship between sleep patterns, eating habits, exercise, and self-esteem.

Grade Eight
Grade Level Expectations and/or Benchmarks

Component 2.2: Understanding the concept of control and prevention of disease.

Benchmark Indicator 2.2.2.a Describe personal and health care practices that result in prevention, early detection, treatment, and monitoring of communicable diseases.

Understand the concepts and factors related to communicable diseases.

- Research and design a presentation (poster, report, pamphlet, power point, etc.) describing transmission, prevention and treatment of a variety of sexually transmitted diseases.
- Identify community agencies and resources available for prevention and treatment of communicable diseases.

Benchmark Indicator 2.2.2.b Describe personal and health care practices that result in prevention, early detection, and treatment of non-communicable diseases.

Understand the concepts and factors related to non-communicable diseases.

- Describe signs, symptoms, prevention, treatment, of non-communicable diseases (heart disease, diabetes, cancer).
- Identify community agencies and resources available for prevention and treatment of non-communicable diseases.

Component 2.3: Acquire skills to live safely and reduce health risks.

Benchmark Indicator 2.2.2.a Describe personal and health care practices that result in prevention, early detection, treatment, and monitoring of communicable diseases.

Understand the concepts and factors related to communicable diseases.

- Research and design a presentation (poster, report, pamphlet, power point, etc.) describing transmission, prevention and treatment of a variety of sexually transmitted diseases.
- Identify community agencies and resources available for prevention and treatment of communicable diseases.

Benchmark Indicator 2.2.2.b Describe personal and health care practices that result in prevention, early detection, and treatment of non-communicable diseases.

Understand the concepts and factors related to non-communicable diseases.

- Describe signs, symptoms, prevention, treatment, of non-communicable diseases (heart disease, diabetes, cancer).
- Identify community agencies and resources available for prevention and treatment of non-communicable diseases.

Component 2.3: Acquire skills to live safely and reduce health risks.

Benchmark Indicator 2.3.2.a. Explain the adverse physical, emotional, and economic consequences of being sexually active.

Understand the potential consequences of being sexually active.

- Explain adverse effects of being sexually active (economic, emotional, and physical) as a teenager.
- Understand what date rape and sexual assault are and how to recognize/avoid risky situations.
- Describe behaviors and methods for pregnancy prevention, including abstinence.

Grade Eight
Grade Level Expectations and/or Benchmarks

Benchmark Indicator 2.3.2.b. Anticipate abuse and risky situations and demonstrate safe behavior to minimize risk and prevent injury to self and others at home, school, and in the community.

Recognize types of abuse and risky situations.

- Define three types of abuse (emotional, physical, sexual) recognize risky situations, and identify sources of help in school, the community and the legal ramifications.
- Recognize and understand the Levels of intimacy/Dating progression (safe zone/danger zone).
- Describe the potential impacts of harassment, bullying and intimidation (sexual, gender, religion, disability, ethnic, race, age) on individuals.
- Create a tool to teach new students about forms of harassment and bullying including school policies, expectations, appropriate responses and reporting incidences to adults.

Benchmark Indicator 2.3.2.c. Recognize emergency situations and demonstrate skills to respond appropriately and safely.

Know emergency situations and appropriate responses; Describe methods to prevent injury.

- Demonstrate basic First aid/CPR procedures (chest compressions, rescue, breathing, choking, and artificial electronic defibrillator). Including blood-borne pathogen protections.
- Locate local crisis/emergency resources services.
- Create a tool to describe prevention of injury from weather related problems, natural disasters and other unforeseen emergencies.

Benchmark Indicator 2.3.2.d Identify ways to use stress positively and develop short-term strategies to reduce harmful stress.

Understands stress management.

- Describe three positive and three negative effects of stress.
- Identify two personal stressors and provide two or more appropriate coping skills for stress management.

Benchmark Indicator 2.3.2.e Anticipate situations that involve pressure to abuse legal or use illegal drugs, and plan how to reduce drug risks.

Understand issues related to legal and illegal drug use and abuse.

- Explain short and long term implications (emotional and physical health, academic success, and social impacts) of alcohol, tobacco and drug use.
- Identify proactive measures to avoid alcohol, tobacco and drug misuse/abuse.

Health & Fitness EALR 3.0: The student analyzes and evaluates the impact of real-life influences on health.

Component 3.1: Understand how environmental factors affect one's health.

Benchmark Indicator 3.1.2 – Describe the influence of environmental factors that positively and negatively affect health.

Understand how environmental factors impact personal health.

- Describe negative and positive impact of the environment on the body.
- Document/Report community behaviors/actions that impact air, water, noise and chemical pollution

Component 3.2: Gather and analyze health information.

Benchmark Indicator 3.2.2.a Distinguish between safe and unsafe use of health-care products.

Analyze health and fitness product information.

- Describe the risks of inappropriate use of health care products.

Grade Eight
Grade Level Expectations and/or Benchmarks

Benchmark Indicator 3.2.2.b Identify ways people encourage healthy and unhealthy decisions, plan how to resist unhealthy messages, and create healthy messages.

Analyze health information messages.

- Develop a positive media campaign to promote healthy decisions.

Benchmark Indicator 3.2.2.c Analyze health care needs and identify sources of health care.

Identify health care needs and sources for services and products.

- Locate health information resources to support personal health needs (physical and mental).

Component 3.3: Use social skills to promote health and safety in a variety of situations.

Benchmark Indicator 3.3.2.a Express opinions and resolve conflicts constructively while maintaining safe and respectful relationships.

Integrate self-awareness/positive attitude and respect for others.

- Describe the value of individual differences (unique to race, ethnicity, gender, disabilities, sexual orientation, age, religious beliefs)

Benchmark Indicator 3.3.2.b Identify effective social skills to avoid risky situations. (Refer to 2.3.2b).

Apply effective social skills to avoid risky situations.

- Demonstrate positive communication skills in specific situations (family, peers, adults)
- Examine how changes in self and others impacts relationships. (family, peers, adults)
- Dramatize a risky situation and provide an appropriate response.

Component 3.4: Understand how emotions influence decision making.

Benchmark Indicator 3.4.2 – Describe how emotions may influence decision making and develop strategies about how to act in emotional situations

Analyze the effect of emotions on decision making.

- Predict outcomes of decision making in different emotional situations.
- Develop strategies to cope with different emotional situations.

Health & Fitness EALR 4.0: The student effectively analyzes health and safety information to develop health and fitness plans based on life goals.

Component 4.1: Analyze health and safety information.

Benchmark Indicator 4.1.2 Identify health and safety issues associated with daily living.

Analyze daily health and safety habits and create a plan for improvement that supports a healthy lifestyle.

- Monitor and evaluate individual health behaviors (diet, sleep, activity, safety) and create a fitness and health plan for improvement.

Component 4.2: Develop a health and fitness plan and a monitoring system.

Benchmark Indicator 4.2.2 Develop a personal health and fitness plan which includes a support and record keeping system to achieve health and fitness goals.

Analyze and assess personal health and fitness data.

- Establish a health and fitness plan using minimum health related standards, collected fitness and health data, and goals based on personal activity, fitness and health needs.