

Seventh Grade

ELA: Literature (A - Fiction) & Informational Text (B - Non-Fiction)

Standards Statement

1. (A) (B) Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Explain the meaning of an cite textual evidence in a reading selection

Identify and show both inferences and textual evidence in a reading selection

Standards Statement

2. (A) Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.

Identify the events that occur in a text that help develop the main idea (theme)

Write an objective summary of the text

- (B) Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text

Pick out two or more central ideas in a text and show how they are developed in the text

Write an objective summary of the text

Standards Statement

3. (A) Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).

- (B) Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Show how elements in a story are related to each other

- (B) Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Analyze the interactions in a text between individuals, events and/or ideas

Standards Statement

4. (A) Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.

Determine the meaning of words or phrases in a text.

Explain the impact of thymes and other sounds.

- (B) Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

Determine the meaning of words or phrases in a text.

Explain the impact of word choice or meaning and tone.

Seventh Grade

ELA: Literature (A - Fiction) & Informational Text (B - Non-Fiction) Cont.

Standards Statement

5. (A) Analyze how a dramas or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.

Explain how a drama's or poem's form helps with the meaning

(B) Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.

Show that the organization of a text contributes to the development of its ideas

Standards Statement

6. (A) Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.

Show how an author develops and contrasts different points of view from different characters in the same text

(B) Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.

Explain the author's point of view

Show how an author's point of view can be different from others

Standards Statement

7. (A) Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).

Compare and contrast a written story to an audio, film or multimedia version by analyzing the effects of the techniques

(B) Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).

Compare and contrast an audio, video, or multimedia version of a text by analyzing the portrayal of the subject

Standards Statement

8. (A) (Not applicable to literature)

(B) Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

Identify the argument and the author's claims

Identify if the claims are fact or opinion

Determine if the author's claim is relevant

Seventh Grade

ELA: Literature (A - Fiction) & Informational Text (B - Non-Fiction) Cont.

Standards Statement

9. (A) Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.

Compare and contrast a fictional portrayal of a historical account

(B) Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

Compare two or more authors writing about the same topic by looking at their interpretation of facts

Contrast two or more authors writing about the same topic by looking at their interpretation of facts

Standards Statement

10. (A) By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Read and comprehend literature appropriate to the 6-8 complexity level

(B) By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Read and comprehend nonfiction appropriate to the 6-8 complexity level

Writing

Standards Statement

1. Write arguments to support claims with clear reasons and relevant evidence.

- Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.
- Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
- Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the argument presented

Write an argument using claims that are clear and supported by relevant evidence followed with a logical concluding statement

Seventh Grade

Writing – Cont.

Standards Statement

2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
 - Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.
 - Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - Establish and maintain a formal style
 - Provide a concluding statement or section that follows from and supports the information or explanation presented.

Choose an organizational style that best fits my topic

Introduce my topic, preview what follows, use supporting detail with smooth transitions and provide a conclusion

Standards Statement

3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
- Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
 - Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
 - Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
 - Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
 - Provide a conclusion that follows from and reflects on the narrated experiences or events.

Write a narrative about either a real or imaginary experience using descriptive details with a structured sequence of events and a conclusion

Standards Statement

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose and audience. (Grade-specific expectations for writing types are defined in standards 1-3.)

Explain the different writing styles (argument, informative/explanatory, narrative) with their appropriate purpose and audience and write to each style

Seventh Grade

Writing – Cont.

Standards Statement

5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

Using comments from peers and adults strengthen my writing as needed

Standards Statement

6. Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.

Use technology to write and publish my writing and when appropriate cite and link to other sources

Standards Statement

7. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

Using several resources conduct and write a short research project that answers a questions and leads to more questions

Standards Statement

8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

Assess the credibility and accuracy of sources

Quote or paraphrase the conclusions of others

Define and avoid plagiarism

Standards Statement

9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

- Apply *grade 7 Reading standards* to literature (e.g., “Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history”).
- Apply *grade 7 Reading standards* to literary nonfiction (e.g., “Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims”).

Use evidence from literary or informational texts that strengthen my analysis, reflection or research

Seventh Grade

Writing – Cont.

Standards Statement

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Write for a variety of reasons using an appropriate time frame

Speaking & Listening

Standards Statement

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 7 topics, texts, and issues*, building on others' ideas and expressing their own clearly.

- a. Come to discussions prepared having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
- b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
- c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
- d. Acknowledge new information expressed by others and, when warranted, modify their own views.

Come to discussions prepared to talk about the topic

Follow the established rules for discussions

Ask questions that require more than a “yes” or “no” response

Standards Statement

2. Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

Pick out main ideas and supporting ideas found in media that help to clarify the topic

Standards Statement

3. Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

Evaluate a speaker's argument as to its soundness and relevance

Standards Statement

4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

Select important points in my presentation that convey my message

Seventh Grade

Speaking & Listening – Cont.

- Present my material using appropriate eye contact, adequate volume, and clear pronunciation

Standards Statement

5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

- When appropriate include multi-media that helps clarify the important points in my presentation

Standards Statement

6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate

- Create a speech that is appropriate to the audience

Language

Standards Statement

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- a. Explain the function of phrases and clauses in general and their function in specific sentences.
 - b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.
 - c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.

- Explain when phrases and clauses are appropriate in sentences

- Use different sentence structures when appropriate

- Recognize and correct misplaced and dangling modifiers

Standards Statement

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*).
 - b. Spell correctly.

- Accurately follow the rules for capitalization

- Use commas to separate coordinate adjectives

- Accurately spell words

Seventh Grade

Language – Cont.

Standards Statement

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy

Use words that express my ideas precisely and concisely

Standards Statement

4. Determine or clarify the meaning of unknown and multiple meaning words and phrases based on *grade 7 reading and content*, choosing flexibly from a range of strategies.
- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *belligerent*, *bellicose*, *rebel*).
 - Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Use context clues to determine the meaning of a word

Use Greek/Latin affixes to help determine the meaning of a word

Go to the appropriate reference materials to find the pronunciation or the precise meaning of a word

Standards Statement

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meaning.
- Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.
 - Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.
 - Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined*, *respectful*, *polite*, *diplomatic*, *condescending*).

Interpret figures of speech

Use the relationship between words to better understand the meaning of each word

Understand that words that with similar definitions can have different applied meanings

Seventh Grade

Language – Cont.

Standards Statement

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Learn and use grade appropriate words and phrases

Seventh Grade

Cycles and Patterns of Earth and Moon (ESS)

Content Statement

1. The hydrologic cycle illustrates the changing states of water as it moves through the lithosphere, biosphere, hydrosphere and atmosphere.

- Describe the movement of water through all four spheres of Earth (lithosphere, hydrosphere, atmosphere, biosphere).
- Identify the changes in thermal energy as water changes state in the hydrologic cycle.
- Recognize that the sun is the source of energy that drives the hydrologic cycle.
- Describe how the porosity and permeability of rock/soil can affect the rate at which water flows through the hydrologic cycle.
- Describe the relationship between water, energy and weather through the use of the cycling through the hydrologic cycle.
- Relate water flow to geographic and topographic landforms and/or features to understand where water flows and how it moves through the different spheres.
- Use topographic and aerial maps to identify drainage patterns and watersheds that contribute to the cycling of water.
- Use investigations and/or technology to simulate different segments of the hydrologic cycle.
- Describe why ground water and surface water quality are important components of the hydrologic cycle.
- Research an area in Ohio that exhibits a unique water contamination problem including recent discoveries, case studies, clean-up technologies or field investigations that are occurring.
- Evaluate the effectiveness of different tools, models and methods to collect ground water and surface water data (e.g., rate of flow, direction of movement, types of contamination).

Content Statement

2. Thermal-energy transfers in the ocean and the atmosphere contribute to the formation of currents, which influence global climate patterns.

- Describe how the sun is a major source of energy for wind, air and ocean currents and the hydrologic cycle.
- Use a variety of maps, models and technology (e.g., remote sensing, satellite images, LANDSAT) to study current and climate patterns on a global level.
- Connect the causes of moving currents in the atmosphere and ocean to thermal energy, density, pressure, composition and topographic/geographic influences (e.g., continental mountains, ocean ridges).

Seventh Grade

Cycles and Patterns in the Solar System (ESS) – Cont.

Map and document specific current patterns in the atmosphere.

Map and document specific current patterns in the ocean.

Rocks, Minerals and Soil (ESS)

Content Statement

3. The atmosphere has different properties at different elevations and contains a mixture of gases that cycle through the lithosphere, biosphere, hydrosphere and atmosphere.

Identify the general properties of the different layers of the atmosphere.

Recognize the human-made and natural factors (including greenhouse gases and water vapor, ozone) that can change the properties of the atmosphere.

Identify the different gases that are present in Earth’s atmosphere.

Trace the different biogeochemical cycles through each of Earth’s spheres.

Understand the interactions between Earth’s spheres and how specific elements and/or molecules move between them.

Use real-time scientific data pertaining to air quality and properties of air to study atmospheric properties and air quality.

Discuss contemporary issues and technological advances concerning the atmosphere.

Describe how gravity is used to hold the atmosphere to the Earth.

Content Statement

4. The relative patterns of motion and positions of the Earth, moon and sun cause solar and lunar eclipses, tides, and phases of the moon.

Demonstrate the changing positions of the moon and Earth as they orbit the sun using models and/or simulations.

Demonstrate solar and lunar eclipses using models and/or simulations.

Demonstrate the daily tides using models and/or simulations.

Demonstrate neap and spring using models and/or simulations.

Recognize the relationship between gravity and tidal movement.

Cycles of Matter and Flow of Energy (LS)

Content Statement

5. Matter is transferred continuously between one organism to another and between organisms and their physical environments.

Identify the cellular structures primarily responsible for photosynthesis and respiration.

Seventh Grade

Cycles of Matter and Flow of Energy (LS)

- Distinguish between photosynthesis and respiration and illustrate how the two processes are connected.
- Realize that the amount of energy remains constant in an ecosystem even though the form and location undergo continual change.
- Use the formulas for photosynthesis and respiration appropriately.
- Describe how and what plants create through the process of photosynthesis.
- Understand the transfer of matter and energy between organisms.
- Describe how energy and matter are conserved in an ecosystem.
- Create and explain an energy pyramid (including where energy is stored and where energy is lost as heat produced in the chemical processes in cells, role of decomposers) for any given ecosystem.
- Realize that the amount of energy remains constant in an ecosystem even though the form and location undergo continual change.

Content Standard

6. In any particular biome, the number, growth and survival of organisms and populations depend on biotic and abiotic factors.

- Define biomes based on abiotic components of the environment – topography, soil types, precipitation, solar radiation and temperature.
- Compare biomes found on Earth (aquatic, forest, desert, grassland, taiga, tundra) based on abiotic components of their environments.
- Link biomes to climate zones on a global level by using a variety of maps, models and technology (e.g., remote sensing, satellite images, LANDSAT).
- Explain how the fluctuating interactions between biotic and abiotic factors affect ecosystems and the organisms that live in them.
- Trace and explain how matter and energy are transferred through an ecosystem.
- Describe how a natural disaster can change an ecosystem causing it to go through the stages of succession in order to recover.

Conservation of Mass and Energy (PS)

Content Statement

7. The properties of matter are determined by the arrangement of atoms.

- Explain how the arrangement of atoms determines properties specific to a certain state of matter.
- Describe the characteristics of mixtures.

Seventh Grade

Conservation of Mass and Energy (PS)

- Group elements based on their properties and position on the periodic table (metals, non-metals, gases).
- Describe the characteristics of the groups of elements on the periodic table.
- Conduct pH tests on a variety of substances.
- Compare and evaluate the properties of the compounds that are acidic, neutral, or basic.
- Connect acidity and alkalinity values to the natural world (water, soil, and air quality).
- Recognize that mass remains constant because in any closed system, the number and type of atoms stays the same, even if the atoms are rearranged.
- Recognize that when objects, substances or materials undergo change, there may be a combination of chemical and physical changes occurring.

Content Statement

8. Energy can be transformed or transferred but is never lost.

- Describe how matter behaves in a closed system (ecosystem, atmosphere, hydrosphere, solar system, human body).
- Describe how matter behaves in an open system (ecosystem, atmosphere, hydrosphere, solar system, human body).
- Observe the quantifiable energy changes in a virtual environment.
- Experiment with energy transfers and transformations within systems.
- Recognize that energy can change forms but the total amount of energy remains constant.
- Describe ways that energy can leave a system so it may appear to disappear (dissipate).

Content Statement

9. Energy can be transferred through a variety of ways.

- Recognize when electrical energy in a circuit reaches a source it can be transferred into kinetic, thermal, light, sound and/or magnetic energy.
- Recall different ways that thermal energy can be transferred between two objects (conduction, convection, radiation).
- Explain how thermal energy can transfer from one object to another by conduction.
- Use a particle model of matter to explain how energy can be transformed through convection.
- Describe mechanical energy and what happens during its transfer.

Seventh Grade

Conservation of Mass and Energy (PS) – Cont.

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|--------------------------|---|
| <input type="checkbox"/> | Recognize that mechanical energy needs a medium in which to travel. |
| <input type="checkbox"/> | Describe waves by their speed, wavelength, amplitude and frequency. |
| <input type="checkbox"/> | Use density to explain the motion of convection in liquids and gases. |
| <input type="checkbox"/> | Use the mathematical representation for a particular uniform medium, as the frequency (f) of the wave is increased, the wavelength of the wave is decreased. ($V_{\text{wave}} = \lambda f$). |
| <input type="checkbox"/> | Explain how waves affect the pitch and loudness of a sound. |
| <input type="checkbox"/> | Describe how different waves travel through different mediums or lack thereof. |
| <input type="checkbox"/> | Use technology to demonstrate the transfer of thermal energy on the surface or interior of Earth and within the solar system. |
| <input type="checkbox"/> | Experiment with electrical circuits to evaluate the energy transfers, resistance, current and changes in voltage. |
| <input type="checkbox"/> | Classify mechanical waves as transverse or longitudinal compression depending on the direction of movement of the medium. |
| <input type="checkbox"/> | Differentiate between heat and thermal energy. |
| <input type="checkbox"/> | Compare and contrast series and parallel circuits. |
| <input type="checkbox"/> | Connect energy transfer and waves to the natural world using investigation and experiments (oceanic, light and sound waves). |

Seventh Grade

History

Content Statement & Elaborations

1. Historians and archaeologists describe historical events and issues from the perspectives of people living at the time in order to avoid evaluating the past in terms of today's norms and values.

Describe historical events and issues from the perspectives of people living at the time, avoiding evaluating the past in terms of today's norms and values.

Critically evaluate diaries, letters, eye-witness accounts, archaeological artifacts and architecture of particular moments in time.

Content Statement & Elaborations

2. The civilizations that developed in Greece and Rome had an enduring impact on later civilizations. This legacy includes governance and law, engineering and technology, art and architecture, as well as literature and history. The Roman Empire also played an instrumental role in the spread of Christianity.

Cite examples and explain the enduring impact that Ancient Greece and Ancient Rome had on later civilizations. Including:

Concepts of citizenship and democracy originated in Ancient Greece ("direct democracy").

The Greeks created the astrolabe, the pulley block, the wood screw, ore smelting and casting, and built faster ships.

The influence of Ancient Greek art and building designs (e.g., rectangular temples with tall columns all around).

Greek literature

Greeks developed the study of history.

Rome created the first republic with elected officials and a system of laws (created a written constitution, a tripartite government [executive, legislative and judicial branches], a system of checks and balances, and a sense of civic duty.

Roman roads, basilicas, amphitheaters, aqueducts and layouts of cities (include domes and arches)

Roman literature, poetry, and art (frescoes and sculptures)

Christianity

Content Statement & Elaborations

3. Germanic invasions helped to break up the Roman Empire and set the stage for the development of feudal and manorial systems. Later invasions helped establish Mongol dominance in central Asia and led to the destruction of the Byzantine Empire by the Turks.

Describe how Germanic invasions helped to break up the Roman Empire and set the stage for the development of feudal and manorial systems.

Describe how the dominance of Mongols in Asia led to the destruction of the Byzantine Empire by the Turks.

Seventh Grade

History – Cont.

Content Statement & Elaborations

4. Mongol influence led to unified states in China and Korea, but the Mongol failure to conquer Japan allowed a feudal system to persist.

- Explain how the Mongol influence led to unified states in China and Korea and how their failure to conquer Japan allowed a feudal system to persist.

Content Statement & Elaborations

5. Achievements in medicine, science, mathematics and geography by the Islamic civilization dominated most of the Mediterranean after the decline of the Roman Empire. These achievements were introduced into Western Europe as a result of the Muslim conquests, Crusades and trade, influencing the European Renaissance.

- Describe achievements by the Islamic civilization and how these achievements were introduced into Western Europe. Including:
- Contributions in anatomy, physiology and pharmacology, and in medicine with the creation of a medical textbook.
 - Advances in astronomy aided their development of a calendar and improvement of the astrolabe.
 - Established chemistry as a distinct branch of science and trigonometry as a distinct branch of mathematics.
 - Produced world maps and, later, served as navigators for European explorers.

Content Statement & Elaborations

6. The Renaissance in Europe introduced revolutionary ideas, leading to cultural, scientific and social changes.

- Analyze how revolutionary ideas introduced during the Renaissance in Europe led to cultural, scientific and social changes. Including:
- Rebirth of arts, literature and education (Painters and sculptors depicted naturalistic scenes, realistic details of individuals and experimented in the use of perspective; many writers focused on ideas for reforming society).
 - Conventional scientific theories were challenged (revolutionary ideas relating to the study of the earth and its place in the universe placed those who espoused them in conflict with the Roman Catholic Church).

Content Statement & Elaborations

7. The Reformation introduced changes in religion including the emergence of Protestant faiths and a decline in the political power and social influence of the Roman Catholic Church.

- Analyze how the rise of Protestant faiths during the Reformation resulted in the decline of the political power and social influence of the Roman Catholic Church.

Seventh Grade

History – Cont.

Content Statement & Elaborations

8. Empires in Africa (Ghana, Mali and Songhay) and Asia (Byzantine, Ottoman, Mughal and China) grew as commercial and cultural centers along trade routes.

- Describe how empires in Africa (Ghana, Mali and Songhay) and Asia (Byzantine, Ottoman, Mughal and China) grew as commercial and cultural centers along trade routes.

Content Statement & Elaborations

9. The advent of the trans-Saharan slave trade had profound effects on both West and Central Africa and the receiving societies.

- Describe the trans-Saharan slave trade and explain the effects on both West and Central Africa and the receiving societies.

Content Statement & Elaborations

10. European economic and cultural influence dramatically increased through explorations, conquests and colonization.

- Describe how European economic and cultural influence increased through explorations, conquests and colonization. Including:
- Governmental structures
 - Religious views
 - Languages
 - Technology
 - Weakening of established cultures

Content Statement & Elaborations

11. The Columbian Exchange (e.g., the exchange of fauna, flora and pathogens) between previously unconnected parts of the world reshaped societies in ways still evident today.

- Explain how the Columbian Exchange reshaped previously unconnected societies in ways still evident today.

Geography

Content Statement & Elaborations

12. Maps and other geographic representations can be used to trace the development of human settlement from past to present.

- Demonstrate how maps and other geographic representations can be used to trace the development of human settlement from past to present. Including:
- Spatial relationships
 - Trade routes
 - Transportation networks
 - Political boundaries
 - Population density

Seventh Grade

Geography – Cont.

Content Statement & Elaborations

13. Geographic factors promote or impede the movement of people, products and ideas.

- Describe how geographic factors (e.g., climate, bodies of water, mountains, deserts, proximity to natural resources) can promote or impede the movement of people, products and ideas. Including:
 - Engage in trade and war
 - Explore and colonize new lands
 - Find new places for settlement
 - Spread religion
 - Spread frameworks for governing

Content Statement & Elaborations

14. Trade routes connecting Africa, Europe and Asia fostered the spread of technology and major world religions.

- Explain how trade routes connecting Africa, Europe and Asia fostered the spread of technology (e.g., glass, paper, magnetic compass, gunpowder, gold, precious metals and stones, ivory, textiles, ornamental weapons, utensils) and major world religions (e.g., Islam, Christianity, Buddhism).

Content Statement & Elaborations

15. Improvements in transportation, communication and technology have facilitated cultural diffusion among peoples around the world.

- Select examples of improvements in transportation, communication and technology and explain how they have facilitated cultural diffusion among peoples around the world. Including:
 - Roads built by the Romans allowed for the spread of Christianity.
 - The invention of the astrolabe and magnetic compass plus improvements in shipbuilding allowed Spain to explore new lands.
 - The inventions of paper and the printing press both led to mass productions of maps, pamphlets and books.
 - The printing of the Bible hastened the Protestant Reformation.

Government

Content Statement & Elaborations

16. The ability to understand individual and group perspectives is essential to analyzing historic and contemporary issues.

- Demonstrate how understanding individual and group perspectives is essential to analyzing historic and contemporary issues.
- Understand what may influence the perspective of an individual or group (e.g., cultural, ethnic, religious, geographical influences).

Seventh Grade

Government- Cont.

Content Statement & Elaborations

17. Greek democracy and the Roman Republic were radical departures from monarchy and theocracy, influencing the structure and function of modern democratic governments.

Describe how Greek democracy and the Roman Republic were radical departures from monarchy and theocracy.

Explain how they influenced the structure and function of modern democratic governments.

Content Statement & Elaborations

18. With the decline of feudalism, consolidation of power resulted in the emergence of nation states.

Explain how the decline of feudalism in Western Europe and consolidation of power resulted in the emergence of nation states.

Economics

Content Statement & Elaborations

19. Individuals, governments and businesses must analyze costs and benefits when making economic decisions. A cost-benefit analysis consists of determining the potential costs and benefits of an action and then balancing the costs against the benefits.

Explain why individuals, governments and businesses must analyze costs and benefits when making economic decisions.

Describe how a cost-benefit analysis consists of determining the potential costs and benefits of an action.

Content Statement & Elaborations

20. The variability in the distribution of productive resources in the various regions of the world contributed to specialization, trade and interdependence.

Discuss how the variability in the distribution of productive resources in the various regions of the world contributed to specialization, trade and interdependence.

Content Statement & Elaborations

21. The growth of cities and empires fostered the growth of markets. Market exchanges encouraged specialization and the transition from barter to monetary economies.

Explain how the growth of cities and empires fostered the growth of markets.

Describe how market exchanges encouraged specialization and the transition from barter to monetary economies.

Seventh Grade

Ratios & Proportional Relationships

Cluster

1. Analyze proportional relationships and use them to solve real-world and mathematical problems.

- Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.*
- Recognize and represent proportional relationships between quantities.
 - a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
 - b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
 - c. Represent proportional relationships by equations. *For example, if total cost T is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $T = pn$.*
 - d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
- Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*

The Number System

Cluster

2. Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

- Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers.
- Represent addition and subtraction on a horizontal or vertical number line diagram.
 - a. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.*
 - b. Understand $p + q$ as the number located a distance from p , in the positive or negative direction
Show that a number and its opposite have a sum of 0 (are additive inverses).
Interpret sums of rational numbers by describing real-world contexts.

Seventh Grade

The Number System – Cont.

- c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$.

Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.

- d. Apply properties of operations as strategies to add and subtract rational numbers

- Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

- a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers.

Interpret products of rational numbers by describing real-world contexts.

- b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers is a rational number.

Understand if p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$.

Interpret quotients of rational numbers by describing real-world contexts.

- c. Apply properties of operations as strategies to multiply and divide rational numbers.

- d. Convert a rational number to a decimal using long division. Know that the decimal form of a rational number terminates in 0s or eventually repeats.

- Solve real-world and mathematical problems involving the four operations with rational numbers.

Expression & Equations

Cluster

3. Use properties to generate equivalent expressions.

- Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

- Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”*

Cluster

4. Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

- Solve multi-step, real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.

- Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate.

Seventh Grade

Expression & Equations – Cont.

- Assess the reasonableness of answers using mental computation and estimation strategies.
For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.
- Use variables to represent quantities in a real-world or mathematical problem.
- Construct simple equations and inequalities to solve problems by reasoning about the quantities.
 - a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers.
Solve equations of these forms fluently.
Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*
 - b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers.
Graph the solution set of the inequality and interpret it in the context of the problem.
For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

Geometry

Cluster

5. Draw, construct, and describe geometrical figures and describe the relationships between them.

- Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
- Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
- Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Seventh Grade

Geometry – Cont.

Cluster

6. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

- Know the formulas for the area and circumference of a circle and solve problems. Give an informal derivation of the relationship between the circumference and area of a circle.
- Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and use them to solve simple equations for an unknown angle in a figure.
- Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Statistics & Probability

Cluster

7. Use random sampling to draw inferences about a population.

- Understand that statistics can be used to gain information about a population by examining a sample of the population.
- Understand that generalizations about a population from a sample are valid only if the sample is representative of that population.
- Understand that random sampling tends to produce representative samples and support valid inferences.
- Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.
- Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

Cluster

8. Draw informal comparative inferences about two populations.

- Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*

Seventh Grade

Statistics & Probability – Cont.

- Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*

Cluster

9. Investigate chance, processes and develop, use, and evaluate probability models.

- Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
- Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency.
- Predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*
- Develop a probability model and use it to find probabilities of events.
- Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
 - a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*
 - b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*
- Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
 - a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
 - b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. Identify the outcomes in the sample space which compose the event, for an event described in everyday language (e.g., “rolling double sixes”).
 - c. Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*