



DLM
Essential Elements
Supporting the
Illinois Learning
Standards

GRADES
SIXTH - EIGHTH

CONDENSED LIST OF CONTENT STANDARDS FOR ELA, MATH AND
SCIENCE

WITH ESSENTIAL ELEMENTS ATTACHED

ENGLISH LANGUAGE ARTS – 6th GRADE

READING STANDARDS FOR LITERATURE

Key Ideas and Details

- RL.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RL.6.1 Determine what a text says explicitly as well as what simple inferences must be drawn.
- RL.6.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
EE.RL.6.2 Identify details in a text that are related to the theme or central idea.
- RL.6.3 Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.
EE.RL.6.3 Can identify how a character responds to a challenge in a story.

Craft and Structure

- RL.6.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
EE.RL.6.4 Determine how word choice changes the meaning in a text.
- RL.6.5 Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
EE.RL.6.5 Determine the structure of a text (e.g., story, poem, or drama).
- RL.6.6 Explain how an author develops the point of view of the narrator or speaker in a text.
EE.RL.6.6 Identify words or phrases in the text that describe or show what the narrator or speaker is thinking or feeling.

Integration of Knowledge and Ideas

- RL.6.7 Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to what they perceive when they listen or watch.
EE.RL.6.7 Compare the experience of reading or listening to a written story, drama or poem with the experience of watching video or live performance of the same text.
- RL.6.9 Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.
EE.RL.6.9 Compare and contrast stories, myths, or texts with similar topics or themes.

Range of Reading and Level of Text Complexity

- RL.6.10 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.
EE.RL.6.10 Demonstrate understanding of text while actively reading or listening to stories, dramas, or poetry.

READING STANDARDS FOR INFORMATIONAL TEXT

Key Ideas and Details

- RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RI.6.1 Analyze a text to determine what it says explicitly as well as what inferences should be drawn.
- RI.6.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
EE.RI.6.2 Determine the main idea of a passage and details or facts related to it.
- RI.6.3 Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
EE.RI.6.3 Identify a detail that elaborates upon individuals, events, or ideas introduced in a text.

Craft and Structure

- RI.6.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
EE.RI.6.4 Determine how word choice changes the meaning of a text.
- RI.6.5 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
EE.RI.6.5 Determine how the title fits the structure of the text.
- RI.6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
EE.RI.6.6 Identify words or phrases in the text that describe or show the author's point of view.

Integration and Knowledge and Ideas

- RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
EE.RI.6.7 Find similarities in information presented in different media or formats as well as in text.
- RI.6.8 Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
EE.RI.6.8 Distinguish claims in a text supported by reason.
- RI.6.9 Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).
EE.RI.6.9 Compare and contrast how two texts describe the same event.

Range of Reading and Level of Text Complexity

RI.6.10 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.

EE.RI.6.10 Demonstrate understanding while actively reading or listening to literary nonfiction.

WRITING STANDARDS

Text Types and Purposes

W.6.1 Write arguments to support claims with clear reasons and relevant evidence.

EE.W.6.1 Write claims about topics or text.

W.6.1.a Introduce claim(s) and organize the reasons and evidence clearly.

EE.W.6.1.a Write a claim about a topic or text.

W.6.1.b Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.

EE.W.6.1.b Write one or more reasons to support a claim about a topic or text.

W.6.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content

EE.W.6.2 Write to share information supported by details.

W.6.2.a Introduce a topic; 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.

EE.W.6.2.a Introduce a topic and write to convey ideas and information about it including visual, tactual, or multimedia information as appropriate.

W.6.2.b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

EE.W.6.2.b Provide facts, details, or other information related to the topic.

W.6.3 Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

EE.W.6.3 Write about events or personal experiences.

W.6.3.a Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.

EE.W.6.3.a Write a narrative about a real or imagined experience introducing the experience and including two or more events.

W.6.3.c Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.

EE.W.6.3.c Use words that establish the time frame.

W.6.3.d Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.

EE.W.6.3.d Use words that convey specific details about the experience or event.

Production and Distribution of Writing

W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

EE.W.6.4 Produce writing that is appropriate for the task, purpose, or audience.

W.6.5 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.

EE.W.6.5 With guidance and support from adults and peers, plan before writing and revise own writing.

W.6.6 Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

EE.W.6.6 Use technology, including the Internet, to produce writing while interacting and collaborating with others.

Research to Build and Present Knowledge

W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

EE.W.6.7 Conduct short research projects to answer a question.

W.6.8 Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

EE.W.6.8 Gather information from multiple print and digital sources that relates to a given topic.

W.6.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

EE.W.6.9 Use information from literary and informational text to support writing.

W.6.9.a Apply grade 6 Reading standards to literature (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics").

EE.W.6.9.a Apply Essential Elements of Grade 6 Reading Standards to literature (e.g., "Compare a text version of a story, drama, or poem with an audio, video, or live version of the text.").

W.6.9.b Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").

EE.W.6.9.b Apply Essential Elements of Grade 6 Reading Standards to informational texts (e.g., "Can produce an argument by logically organizing the claims and the supporting reasons and evidence.").

Range of Writing

- W.6.10 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.
EE.W.6.10 Write routinely for a variety of tasks, purposes, and audiences.

SPEAKING AND LISTENING STANDARDS

Comprehension and Collaboration

- SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
EE.SL.6.1 Engage in collaborative discussions.
- SL.6.1.a Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
EE.SL.6.1.a Come to discussions prepared to share information.
- SL.6.1.b Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
EE.SL.6.1.b With guidance and support from adults and peers, follow simple, agreed-upon rules for discussions and contribute information.
- SL.6.1.c Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
EE.SL.6.1.c Ask and answer questions specific to the topic, text, or issue under discussion.
- SL.6.1.d Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
EE.SL.6.1.d Restate key ideas expressed in the discussion.
- SL.6.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
EE.SL.6.2 Identify information presented in diverse media and formats (e.g., visually, quantitatively, orally) that relates to a topic, text, or issue under study.
- SL.6.3 Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.
EE.SL.6.3 Identify the reasons and evidence supporting the claims made by the speaker.

Presentation of Knowledge and Ideas

- SL.6.4 Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
EE.SL.6.4 Present findings on a topic including descriptions, facts, or details.
- SL.6.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
EE.SL.6.5 Select an auditory, visual, or tactual display to clarify the information in presentations.
- SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
EE.SL.6.6 Use formal and informal language as appropriate to the communication partner.

LANGUAGE STANDARDS

Conventions of Standard English

- L.6.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
EE.L.6.1 Demonstrate standard English grammar and usage when communicating.
- L.6.1.a Ensure that pronouns are in the proper case (subjective, objective, possessive).
EE.L.6.1.a Use personal pronouns (e.g., he, she, they) correctly.
- L.6.1.b Use intensive pronouns (e.g., myself, ourselves).
EE.L.6.1.b Use indefinite pronouns.
- L.6.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
EE.L.6.2 Demonstrate understanding of conventions of standard English.
- L.6.2.a Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.
EE.L.6.2.a Use question marks at the end of written questions.
- L.6.2.b Spell correctly.
EE.L.6.2.b Spell untaught words phonetically, drawing on letter sound relationships and common spelling patterns.

Knowledge of Language

- L.6.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
EE.L.6.3 Use language to achieve desired outcomes when communicating.
- L.6.3.a Vary sentence patterns for meaning, reader/listener interest, and style.
EE.L.6.3.a Vary use of language when the listener or reader does not understand the initial attempt.

Vocabulary Acquisition And Use

- L.6.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
- EE.L.6.4** Demonstrate knowledge of word meanings.
- L.6.4.a 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.
- EE.L.6.4.a** Use context to determine which word is missing from a content area text.
- L.6.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).
- EE.L.6.4.b** Use frequently occurring root words (e.g., like) and the words that result when affixes are added (e.g., liked, disliked, liking).
- L.6.4.c Consult 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.
- EE.L.6.4.c** Seek clarification and meaning support when unfamiliar words are encountered while reading or communicating
- L.6.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- EE.L.6.5** Demonstrate understanding of word relationships and use.
- L.6.5.a Interpret figures of speech (e.g., personification) in context.
- EE.L.6.5.a** Identify the meaning of simple similes (e.g., The man was as big as a tree.).
- L.6.5.b Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
- EE.L.6.5.b** Demonstrate understanding of words by identifying other words with similar and different meanings.
- L.6.6 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.
- EE.L.6.6** Use general academic and domain-specific words and phrases across contexts.

ENGLISH LANGUAGE ARTS – 7th GRADE

READING STANDARDS FOR LITERATURE

Key Ideas and Details

- RL.7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RL.7.1 Analyze text to identify where information is explicitly stated and where inferences must be drawn.
- RL.7.2 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.
EE.RL.7.2 Identify events in a text that are related to the theme or central idea.
- RL.7.3 Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).
EE.RL.7.3 Determine how two or more story elements are related.

Craft and Structure

- RL.7.4 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.
EE.RL.7.4 Determine the meaning of simple idioms and figures of speech as they are used in a text.
- RL.7.5 Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.
EE.RL.7.5 Compare the structure of two or more texts (e.g., stories, poems, or dramas).
- RL.7.6 Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.
EE.RL.7.6 Compare the points of view of two or more characters or narrators in a text.

Integration of Knowledge and Ideas

- RL.7.7 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).
EE.RL.7.7 Compare a text version of a story, drama, or poem with an audio, video, or live version of the same text.
- RL.7.9 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.
EE.RL.7.9 Compare a fictional time, place, or character in one text with the same time, place, or character portrayed in a historical account.

Range of Reading and Level of Text Complexity

- RL.7.10 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.
EE.RL.7.10 Demonstrate understanding of text while actively engaged in reading or listening to stories, dramas, and poetry.

READING STANDARDS FOR INFORMATIONAL TEXT

Key Ideas and Details

- RI.7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RI.7.1 Analyze text to identify where information is explicitly stated and where inferences must be drawn.
- RI.7.2 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.
EE.RI.7.2 Determine two or more central ideas in a text.
- RI.7.3 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).
EE.RI.7.3 Determine how two individuals, events or ideas in a text are related.

Craft and Structure

- RI.7.4 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.
EE.RI.7.4 Determine how words or phrases are used to persuade or inform a text.
- RI.7.5 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.
EE.RI.7.5 Determine how a fact, step, or event fits into the overall structure of the text.
- RI.7.6 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.
EE.RI.7.6 Determine an author's purpose or point of view.

Integration and Knowledge and Ideas

- RI.7.7 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).
EE.RI.7.7 Compare a text to an audio, video or multimedia version of the same text.
- RI.7.8 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.
EE.RI.7.8 Determine how a claim or reason fits into the overall structure of an informational text.
- RI.7.9 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.
EE.RI.7.9 Compare and contrast how different texts on the same topic present the details.

Range of Reading and Level of Text Complexity

RI.7.10 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.

EE.RI.7.10 Demonstrate understanding while actively reading or listening to literary nonfiction.

WRITING STANDARDS

Text Types and Purposes

W.7.1 Write arguments to support claims with clear reasons and relevant evidence.

EE.W.7.1 Write claims about topics or texts.

W.7.1.a Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.

EE.W.7.1.a Introduce a topic or text and write one claim about it.

W.7.1.b Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.

EE.W.7.1.b Write one or more reasons to support a claim about a topic or text.

W.7.1.c Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.

EE.W.7.1.c Use temporal words (first, next, also) to create cohesion.

W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content

EE.W.7.2 Write to share information supported by details.

W.7.2.a Introduce a topic; 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.

EE.W.7.2.a Introduce a topic and write to convey ideas and information about it including visual, tactual, or multimedia information as appropriate.

W.7.2.b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

EE.W.7.2.b Provide facts, details, or other information related to the topic.

W.7.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.

EE.W.7.2.d Select domain-specific vocabulary to use in writing about the topic.

W.7.3 Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

EE.W.7.3 Write about events or personal experiences. Write about events or personal experiences.

W.7.3.a 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.

EE.W.7.3.a Write a narrative about a real or imagined experience introducing the experience, at least one character, and two or more events.

W.7.3.c Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.

EE.W.7.3.c Use temporal words (e.g., first, then, next) to signal order.

W.7.3.d Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.

EE.W.7.3.d Use words that describe feelings of people or characters in the narrative.

Production and Distribution of Writing

W.7.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

EE.W.7.4 Produce writing that is appropriate for the task, purpose, or audience.

W.7.5 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.

EE.W.7.5 With guidance and support from adults and peers, plan before writing and revise own writing.

W.7.6 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.

EE.W.7.6 Use technology, including the Internet, to produce writing to interact and collaborate with others.

Research to Build and Present Knowledge

- W.7.7 Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
EE.W.7.7 Conduct research to answer a question based on multiple sources of information.
- W.7.8 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.
EE.W.7.8 Identify quotes providing relevant information about a topic from multiple print or digital sources.
- W.7.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.
EE.W.7.9 Use information from literary and informational text to support writing.
- W.7.9.a 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").
EE.W.7.9.a Apply Essential Elements of Grade 7 Reading Standards to literature (e.g., "Recognize the difference between fictional characters and nonfictional characters.").
- W.7.9.b 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").
EE.W.7.9.b Apply Essential Elements of Grade 7 Reading Standards to informational texts (e.g., "Use relevant and sufficient evidence for supporting the claims and argument.").

Range of Writing

- W.7.10 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.
EE.W.7.10 Write routinely for a variety of tasks, purposes, and audiences.

SPEAKING AND LISTENING STANDARDS

Comprehension and Collaboration

- SL.7.1 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.
EE.SL.7.1 Engage in collaborative discussions.
- SL.7.1.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.
EE.SL.7.1.a Come to discussions prepared to share information.
- SL.7.1.b Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
EE.SL.7.1.b With guidance and support from adults and peers, follow simple, agreed-upon rules for discussions and carry out assigned roles.
- SL.7.1.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.
EE.SL.7.1.c Remain on the topic of the discussion when answering questions or making other contributions to a discussion.
- SL.7.1.d Acknowledge new information expressed by others and, when warranted, modify their own views.
EE.SL.7.1.d Acknowledge new information expressed by others in a discussion.
- SL.7.2 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.
EE.SL.7.2 Identify details related to the main idea of a text presented orally or through other media.
- SL.7.3 Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.
EE.SL.7.3 Determine whether the claims made by a speaker are fact or opinion.

Presentation of Knowledge and Ideas

- SL.7.4 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.
EE.SL.7.4 Present findings on a topic including relevant descriptions, facts, or details.
- SL.7.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.
EE.SL.7.5 Select or create audio recordings and visual/tactile displays to emphasize specific points in a presentation.
- SL.7.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
EE.SL.7.6 Communicate precisely (i.e., provide complete information) or efficiently (i.e., telegraphic communication) as required by the context, task, and communication partner.

LANGUAGE STANDARDS

Conventions of Standard English

- L.7.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
EE.L.7.1 Demonstrate standard English grammar and usage when communicating.
- L.7.1.b Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.
EE.L.7.1.b Produce complete simple sentences when writing or communicating.
- L.7.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
EE.L.7.2 Demonstrate understanding of conventions of standard English.
- L.7.2.a Use a comma to separate coordinate adjectives (e.g., It was a fascinating, enjoyable movie but not He wore an old[,] green shirt).
EE.L.7.2.a Use end punctuation when writing a sentence or question.
- L.7.2.b Spell correctly.
EE.L.7.2.b Spell words phonetically, drawing on knowledge of letter sound relationships and/or common spelling patterns.

Knowledge of Language

- L.7.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
EE.L.7.3 Use language to achieve desired outcomes when communicating.
- L.7.3.a Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.
EE.L.7.3.a Use precise language as required to achieve desired meaning.

Vocabulary Acquisition And Use

- L.7.4 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.
EE.L.7.4 Demonstrate knowledge of word meanings.
- L.7.4.a 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.
EE.L.7.4.a Use context to determine which word is missing from a text.
- L.7.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).
EE.L.7.4.b Use frequently occurring root words (e.g., like) and the words that result when affixes are added (e.g., liked, disliked, liking).
- L.7.4.c 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.
EE.L.7.4.c Seek clarification and meaning support when unfamiliar words are encountered while reading or communicating.
- L.7.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
EE.L.7.5 Demonstrate understanding of word relationships and use.
- L.7.5.a Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.
EE.L.7.5.a Identify the literal and nonliteral meanings of words in context.
- L.7.5.b Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.
EE.L.7.5.b Demonstrate understanding of synonyms and antonyms.
- L.7.6 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.
EE.L.7.6 Use general academic and domain-specific words and phrases across contexts.

ENGLISH LANGUAGE ARTS – 8th GRADE

READING STANDARDS FOR LITERATURE

Key Ideas and Details

- RL.8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RL.8.1 Cite text to support inferences from stories and poems.
- RL.8.2 Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
EE.RL.8.2 Recount an event related to the theme or central idea, including details about character and setting.
- RL.8.3 Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
EE.RL.8.3 Identify which incidents in a story or drama lead to subsequent action.

Craft and Structure

- RL.8.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
EE.RL.8.4 Determine connotative meanings of words and phrases in a text.
- RL.8.5 Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
EE.RL.8.5 Compare and contrast the structure of two or more texts.
- RL.8.6 Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.
EE.RL.8.6 Determine the difference in the points of view of a character and the audience or reader in a text with suspense or humor.

Integration of Knowledge and Ideas

- RL.8.7 Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.
EE.RL.8.7 Compare and contrast a text version of a story, drama, or poem with an audio, video, or live version of the same text.
- RL.8.9 Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.
EE.RL.8.9 Compare and contrast themes, patterns of events, or characters across two or more stories or dramas.

Range of Reading and Level of Text Complexity

- RL.8.10 By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.
EE.RL.8.10 Demonstrate understanding of text while actively engaged in reading or listening to stories, dramas, and poetry.

READING STANDARDS FOR INFORMATIONAL TEXT

Key Ideas and Details

- RI.8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
EE.RI.8.1 Cite text to support inferences from informational text.
- RI.8.2 Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
EE.RI.8.2 Provide a summary of a familiar informational text.
- RI.8.3 Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).
EE.RI.8.3 Recount events in the order they were presented in the text.

Craft and Structure

- RI.8.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
EE.RI.8.4 Determine connotative meanings of words and phrases in a text.
- RI.8.5 Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
EE.RI.8.5 Locate the topic sentence and supporting details in a paragraph.
- RI.8.6 Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
EE.RI.8.6 Determine an author's purpose or point of view and identify examples from text to that describe or support it.

Integration and Knowledge and Ideas

- RI.8.7 Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
EE.RI.8.7 Determine whether a topic is best presented as audio, video, multimedia, or text.
- RI.8.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
EE.RI.8.8 Determine the argument made by an author in an informational text.
- RI.8.9 Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.
EE.RI.8.9 Identify where two different texts on the same topic differ in their interpretation of the details.

Range of Reading and Level of Text Complexity

- RI.8.10 By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6-8 text complexity band independently and proficiently.
EE.RI.8.10 Demonstrate understanding while actively reading or listening to literary nonfiction.

WRITING STANDARDS

Text Types and Purposes

- W.8.1 Write arguments to support claims with clear reasons and relevant evidence.
EE.W.8.1 Write claims about topics or texts.
- W.8.1.a Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
EE.W.8.1.a Introduce the claim and provide reasons or pieces of evidence to support it.
- W.8.1.b Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
EE.W.8.1.b Write reasons to support a claim about a topic or text.
- W.8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content
EE.W.8.2 Write to share information supported by details.
- W.8.2.a Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
EE.W.8.2.a Introduce a topic clearly and write to convey ideas and information about it including visual, tactual, or multimedia information as appropriate.
- W.8.2.b Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
EE.W.8.2.b Write one or more facts or details related to the topic.
- W.8.2.c Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
EE.W.8.2.c Write complete thoughts as appropriate.
- W.8.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.
EE.W.8.2.d Use domain specific vocabulary related to the topic.
- W.8.2.f Provide a concluding statement or section that follows from and supports the information or explanation presented
EE.W.8.2.f Provide a closing.
- W.8.3 Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
EE.W.8.3 Write about events or personal experiences.
- W.8.3.a 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.
EE.W.8.3.a Write a narrative about a real or imagined experience introducing the experience, at least one character, and two or more events.
- W.8.3.c Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.
EE.W.8.3.c Use temporal words (e.g., first, then, next) to signal order.
- W.8.3.d Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
EE.W.8.3.d Use words that describe the feelings of characters or provide other sensory information about the setting, experiences, or events.
- W.8.3.e Provide a conclusion that follows from and reflects on the narrated experiences or events.
EE.W.8.3.e Provide a closing.

Production and Distribution of Writing

- W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
EE.W.8.4 Produce writing that is appropriate for the task, purpose, or audience.
- W.8.5 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.
EE.W.8.5 With guidance and support from adults and peers, plan before writing and revise own writing.
- W.8.6 Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.
EE.W.8.6 Use technology, including the Internet, to produce writing to interact and collaborate with others.

Research to Build and Present Knowledge

- W.8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
EE.W.8.7 Conduct short research projects to answer and pose questions based on one source of information.
- W.8.8 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.
EE.W.8.8 Select quotes providing relevant information about a topic from multiple print or digital sources.
- W.8.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.
EE.W.8.9 Use information from literary and informational text to support writing.
- W.8.9.a Apply grade 8 Reading standards to literature (e.g., "Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new").
EE.W.8.9.a Apply Essential Elements of Grade 8 Reading Standards to literature (e.g., "Compare and contrast themes, patterns of events, or characters across two or more stories or dramas.").
- W.8.9.b Apply grade 8 Reading standards to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced").
EE.W.8.9.b Apply Essential Elements of Grade 8 Reading Standards to informational texts (e.g., "Use relevant and sufficient evidence for supporting the claims and argument.").

Range of Writing

- W.8.10 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.
EE.W.8.10 Write routinely for a variety of tasks, purposes, and audiences.

SPEAKING AND LISTENING STANDARDS

Comprehension and Collaboration

- SL.8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.
EE.SL.8.1 Engage in collaborative discussions.
- SL.8.1.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.
EE.SL.8.1.a Come to discussions prepared to share information previously studied.
- SL.8.1.b Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
EE.SL.8.1.b Follow simple rules and carry out assigned roles during discussions.
- SL.8.1.c Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
EE.SL.8.1.c Remain on the topic of the discussion when asking or answering questions or making other contributions to a discussion.
- SL.8.1.d Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.
EE.SL.8.1.d Acknowledge new information expressed by others in a discussion and relate it to own ideas.
- SL.8.2 Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.
EE.SL.8.2 Determine the purpose of information presented in graphic, oral, visual, or multimodal formats.
- SL.8.3 Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
EE.SL.8.3 Determine the argument made by a speaker on a topic.

Presentation of Knowledge and Ideas

- SL.8.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
EE.SL.8.4 Present descriptions, facts, or details supporting specific points made on a topic.
- SL.8.5 Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
EE.SL.8.5 Include multimedia and visual information into presentations.
- SL.8.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
EE.SL.8.6 Adapt communication to a variety of contexts and tasks.

LANGUAGE STANDARDS

Conventions of Standard English

- L.8.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
EE.L.8.1 Demonstrate standard English grammar and usage when communicating.
- L.8.1.b Form and use verbs in the active and passive voice.
EE.L.8.1.b Form and use the simple verb tenses (e.g., I walked, I walk, I will walk).
- L.8.1.c Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.
EE.L.8.1.c Use appropriate verbs to match nouns.
- L.8.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
EE.L.8.2 Demonstrate understanding of conventions of standard English.
- L.8.2.a Use punctuation (comma, ellipsis, dash) to indicate a pause or break.
EE.L.8.2.a Use end punctuation and capitalization when writing a sentence or question.
- L.8.2.c Spell correctly.
EE.L.8.2.c Spell words phonetically, drawing on knowledge of letter sound relationships and/or common spelling patterns.

Knowledge of Language

- L.8.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
EE.L.8.3 Use language to achieve desired outcomes when communicating.
- L.8.3.a Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).
EE.L.8.3.a Use to-be verbs (am, are, is, was, were, be, become, became) accurately when writing and communicating.

Vocabulary Acquisition And Use

- L.8.4 Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.
EE.L.8.4 Demonstrate knowledge of word meanings.
- L.8.4.a 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.
EE.L.8.4.a Use context to determine which word is missing from a content area text.
- L.8.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, secede).
EE.L.8.4.b Use frequently occurring root words (e.g., like) and the words that result when affixes are added (e.g., liked, disliked, liking).
- L.8.4.c 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.
EE.L.8.4.c Seek clarification and meaning support when unfamiliar words are encountered while reading or communicating.
- L.8.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
EE.L.8.5 Demonstrate understanding of word relationships and use.
- L.8.5.a Interpret figures of speech (e.g. verbal irony, puns) in context.
EE.L.8.5.a Demonstrate understanding of the use of multiple meaning words.
- L.8.5.b Use the relationship between particular words to better understand each of the words.
EE.L.8.5.b Use knowledge of common words to understand the meaning of compound and complex words in which they appear (e.g., birdhouse, household).
- L.8.5.c Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).
EE.L.8.5.c Use descriptive words to add meaning when writing and communicating.
- L.8.6 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.
EE.L.8.6 Use general academic and domain-specific words and phrases across contexts.

STANDARDS FOR MATHEMATICAL PRACTICE

MP

- MP.1 Make sense of problems and persevere in solving them.
- MP.2 Reason abstractly and quantitatively.
- MP.3 Construct viable arguments and critique the reasoning of others.
- MP.4 Model with mathematics.
- MP.5 Use appropriate tools strategically.
- MP.6 Attend to precision.
- MP.7 Look for and make use of structure.
- MP.8 Look for and express regularity in repeated reasoning.

MATHEMATICS – 6th GRADE

GEOMETRY

G

Solve real-world and mathematical problems involving area, surface area, and volume.

- 6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
- EE.6.G.1.** Solve real-world and mathematical problems about area using unit squares.
- 6.G.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
- EE.6.G.2.** Solve real-world and mathematical problems about volume using unit cubes.

RATIOS AND PROPORTIONAL RELATIONSHIPS

RP

Understand ratio concepts and use ratio reasoning to solve problems.

- 6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
- EE.6.RP.1.** Demonstrate a simple ratio relationship.

THE NUMBER SYSTEM

NS

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

- 6.NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.
- EE.6.NS.1.** Compare the relationships between two unit fractions.
- Compute fluently with multi-digit numbers and find common factors and multiples.*
- 6.NS.2 Fluently divide multi-digit numbers using the standard algorithm.
- EE.6.NS.2.** Apply the concept of fair share and equal shares to divide.
- 6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
- EE.6.NS.3.** Solve two-factor multiplication problems with products up to 50 using concrete objects and/or a calculator.

Apply and extend previous understandings of numbers to the system of rational numbers.

- 6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
- 6.NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
- 6.NS.6.a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.
- 6.NS.6.b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
- 6.NS.6.c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
- 6.NS.7 Understand ordering and absolute value of rational numbers.
- 6.NS.7.a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
- 6.NS.7.b Write, interpret, and explain statements of order for rational numbers in real-world contexts.
- 6.NS.7.c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.
- 6.NS.7.d Distinguish comparisons of absolute value from statements about order.
- 6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
- EE.6.NS.5–8.** Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero).

EXPRESSIONS AND EQUATIONS**EE***Apply and extend previous understandings of arithmetic to algebraic expressions.*

- 6.EE.1 Write and evaluate numerical expressions involving whole-number exponents.
- 6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers.
 - 6.EE.2.a Write expressions that record operations with numbers and with letters standing for numbers.
 - 6.EE.2.b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.
 - 6.EE.2.c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

EE.6.EE.1–2. Identify equivalent number sentences.

- 6.EE.3 Apply the properties of operations to generate equivalent expressions.

EE.6.EE.3. Apply the properties of addition to identify equivalent numerical expressions.*Reason about and solve one-variable equations and inequalities.*

- 6.EE.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
- 6.EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
- 6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.

EE.6.EE.5–7. Match an equation to a real-world problem in which variables are used to represent numbers.**STATISTICS AND PROBABILITY****SP***Develop understanding of statistical variability.*

- 6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.
- 6.SP.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

EE.6.SP.1–2. Display data on a graph or table that shows variability in the data.*Summarize and describe distributions.*

- 6.SP.5 Summarize numerical data sets in relation to their context, such as by:
 - 6.SP.5.a Reporting the number of observations.
 - 6.SP.5.b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
 - 6.SP.5.c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
 - 6.SP.5.d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

EE.6.SP.5. Summarize data distributions shown in graphs or tables.

MATHEMATICS – 7th GRADE**GEOMETRY****G***Draw, construct, and describe geometrical figures and describe the relationships between them.*

7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

EE.7.G.1. Match two similar geometric shapes that are proportional in size and in the same orientation.

7.G.2 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.

EE.7.G.2. Recognize geometric shapes with given conditions.

7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

EE.7.G.3. Match a two-dimensional shape with a three-dimensional shape that shares an attribute.

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

7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

EE.7.G.4. Determine the perimeter of a rectangle by adding the measures of the sides.

7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

EE.7.G.5. Recognize angles that are acute, obtuse, and right.

7.G.6 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.

EE.7.G.6. Determine the area of a rectangle using the formula for length \times width, and confirm the result using tiling or partitioning into unit squares.

RATIOS AND PROPORTIONAL RELATIONSHIPS**RP***Analyze proportional relationships and use them to solve real-world and mathematical problems.*

7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

7.RP.2 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

7.RP.2.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.

7.RP.2.b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

7.RP.2.c 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 $t = pn$.

7.RP.2.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.

7.RP.3 Use proportional relationships to solve multistep ratio and percent problems.

EE.7.RP.1–3. Use a ratio to model or describe a relationship.

THE NUMBER SYSTEM**NS***Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.*

7.NS.1 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.

7.NS.1.a Describe situations in which opposite quantities combine to make 0.

7.NS.1.b Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. 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.

7.NS.1.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.

7.NS.1.d Apply properties of operations as strategies to add and subtract rational numbers.

EE.7.NS.1. Add fractions with like denominators (halves, thirds, fourths, and tenths) with sums less than or equal to one.

7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

SEE BELOW*

7.NS.2.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.

EE.7.NS.2.a. Solve multiplication problems with products to 100.

7.NS.2.b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.

EE.7.NS.2.b. Solve division problems with divisors up to five and also with a divisor of 10 without remainders.

- 7.NS.2.c Apply properties of operations as strategies to multiply and divide rational numbers.
- 7.NS.2.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.

EE.7.NS.2.c–d. Express a fraction with a denominator of 10 as a decimal.

- 7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.

EE.7.NS.3. Compare quantities represented as decimals in real-world examples to tenths.

EXPRESSIONS AND EQUATIONS

EE

Use properties of operations to generate equivalent expressions.

- 7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

EE.7.EE.1. Use the properties of operations as strategies to demonstrate that expressions are equivalent.

- 7.EE.2 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.

EE.7.EE.2. Identify an arithmetic sequence of whole numbers with a whole number common difference.

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

- 7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

- 7.EE.4.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.

- 7.EE.4.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.

EE.7.EE.4. Use the concept of equality with models to solve one-step addition and subtraction equations.

STATISTICS AND PROBABILITY

SP

Use random sampling to draw inferences about a population.

- 7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; 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.

- 7.SP.2 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.

EE.7.SP.1–2. Answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student.

Draw informal comparative inferences about two populations.

- 7.SP.3 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.

EE.7.SP.3. Compare two sets of data within a single data display such as a picture graph, line plot, or bar graph.

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

- 7.SP.5 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 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

- 7.SP.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

- 7.SP.7 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.

- 7.SP.7.a Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.

- 7.SP.7.b Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.

EE.7.SP.5–7. Describe the probability of events occurring as possible or impossible.

MATHEMATICS – 8th GRADE

GEOMETRY

G

Understand congruence and similarity using physical models, transparencies, or geometry software.

- 8.G.1 Verify experimentally the properties of rotations, reflections, and translations:

EE.8.G.1. Recognize translations, rotations, and reflections of shapes.

- 8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

EE.8.G.2. Identify shapes that are congruent.

- 8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
EE.8.G.4. Identify similar shapes with and without rotation.
- 8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.
EE.8.G.5. Compare any angle to a right angle, and describe the angle as greater than, less than, or congruent to a right angle.
- Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.*
- 8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.
EE.8.G.9. Use the formulas for perimeter, area, and volume to solve real-world and mathematical problems (limited to perimeter and area of rectangles and volume of rectangular prisms).

THE NUMBER SYSTEM

NS

- Know that there are numbers that are not rational, and approximate them by rational numbers.*
- 8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
EE.8.NS.1. Subtract fractions with like denominators (halves, thirds, fourths, and tenths) with minuends less than or equal to one.
- 8.NS.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).
EE.8.NS.2.a. Express a fraction with a denominator of 100 as a decimal.
EE.8.NS.2.b. Compare quantities represented as decimals in real-world examples to hundredths.

EXPRESSIONS AND EQUATIONS

EE

- Work with radicals and integer exponents.*
- 8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.
EE.8.EE.1. Identify the meaning of an exponent (limited to exponents of 2 and 3).
- 8.EE.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
EE.8.EE.2. Identify a geometric sequence of whole numbers with a whole number common ratio.
- 8.EE.3 Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
- 8.EE.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
EE.8.EE.3–4. Compose and decompose whole numbers up to 999.
- Understand the connections between proportional relationships, lines, and linear equations.*
- 8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
- 8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .
EE.8.EE.5–6. Graph a simple ratio by connecting the origin to a point representing the ratio in the form of y/x . For example, when given a ratio in standard form (2:1), convert to $2/1$, and plot the point (1,2).
- Analyze and solve linear equations and pairs of simultaneous linear equations.*
- 8.EE.7 Solve linear equations in one variable.
- 8.EE.7.a Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
- 8.EE.7.b Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
EE.8.EE.7. Solve simple algebraic equations with one variable using addition and subtraction.

STATISTICS AND PROBABILITY

SP

- Investigate patterns of association in bivariate data.*
- 8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.
EE.8.SP.4. Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

FUNCTIONS

F

Define, evaluate, and compare functions.

- 8.F.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. Function notation is not required in Grade 8.
- 8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
- 8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

EE.8.F.1–3. Given a function table containing at least 2 complete ordered pairs, identify a missing number that completes another ordered pair (limited to linear functions).

Use functions to model relationships between quantities.

- 8.F.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

EE.8.F.4. Determine the values or rule of a function using a graph or a table.

- 8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

EE.8.F.5. Describe how a graph represents a relationship between two quantities.

SCIENCE (NGSS) – 6th- 8th GRADE

PHYSICAL SCIENCE

MATTER AND ITS INTERACTIONS

STUDENTS WHO DEMONSTRATE UNDERSTANDING CAN.....

- MS-PS1-2 Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. *Clarification Statement: Examples of reactions could include burning sugar or steel wool, fat reacting with sodium hydroxide, and mixing zinc with hydrogen chloride. Assessment Boundary: Assessment is limited to analysis of the following properties: density, melting point, boiling point, solubility, flammability, and odor.*

- EE.MS-PS1-2** **Target Level:** Interpret and analyze data on the properties (e.g., color, texture, odor, and state of matter) of substances before and after chemical changes have occurred (e.g., burning sugar or burning steel wool, rust, effervescent tablets).
Precursor Level: Gather data on the properties (e.g., color, texture, odor, and state of matter) of substances before and after chemical changes have occurred (e.g., burning sugar or burning steel wool, rust, effervescent tablets).
Initial Level: Observe and identify examples of change (e.g. state of matter, color, temperature, and odor).

MOTION AND STABILITY: FORCES AND INTERACTIONS

- MS-PS2-2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. *Clarification Statement: Emphasis is on balanced (Newton's First Law) and unbalanced forces in a system, qualitative comparisons of forces, mass and changes in motion (Newton's Second Law), frame of reference, and specification of units. Assessment Boundary: Assessment is limited to forces and changes in motion in one-dimension in an inertial reference frame, and to change in one variable at a time. Assessment does not include the use of trigonometry.*

- EE.MS-PS2-2** **Target Level:** Investigate and predict the change in motion of objects based on the forces acting on those objects.
Precursor Level: Investigate and identify ways to change the motion of an object (e.g., change an incline's slope to make an object go slower, faster, farther).
Initial Level: Identify ways to change the movement of an object (e.g., faster, slower, stop).

ENERGY

- MS-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.*
Clarification Statement: Examples of devices could include an insulated box, a solar cooker, and a Styrofoam cup. Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.

- EE.MS-PS3-3** **Target Level:** Test and refine a device (e.g., foam cup, insulated box, or thermos) to either minimize or maximize thermal energy transfer (e.g., keeping liquids hot or cold, preventing liquids from freezing, keeping hands warm in cold temperatures).
Precursor Level: Investigate objects/materials, and predict their ability to maximize or minimize thermal energy transfer.
Initial Level: Identify objects/materials used to minimize or maximize thermal energy transfer (e.g., gloves, vacuum flask, insulated hot pad holder or foam cup).

WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER

- MS-PS4-2 Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. *Clarification Statement: Emphasis is on both light and mechanical waves. Examples of models could include drawings, simulations, and written descriptions. Assessment Boundary: Assessment is limited to qualitative applications pertaining to light and mechanical waves.*

- EE.MS-PS4-2** **Target Level:** Use a model to show how light waves (e.g., light through a water glass, light on colored objects) or sound waves are reflected, absorbed, or transmitted through various materials (e.g., water, air, table).
Precursor Level: Investigate changes in vibrations and sources of sound in everyday life.
Initial Level: Use a model to recognize that sound waves are transmitted by vibrations.

LIFE SCIENCE

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES

MS-LS1-3 Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. *Clarification Statement: Emphasis is on the conceptual understanding that cells form tissues and tissues form organs specialized for particular body functions. Examples could include the interaction of subsystems within a system and the normal functioning of those systems. Assessment Boundary: Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.*

EE.MS-LS1-3 **Target Level:** Make a claim about how a structure (e.g., organs and organ systems) and its related function supports survival of animals (circulatory, digestive, and respiratory systems).
Precursor Level: Use a model to demonstrate how organs are connected in major organ systems.
Initial Level: Recognize major organs of animals.

MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. *Clarification Statement: Examples of local environmental conditions could include availability of food, light, space, and water. Examples of genetic factors could include large breed cattle and species of grass affecting growth of organisms. Examples of evidence could include drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, and fish growing larger in large ponds than they do in small ponds. Assessment Boundary: Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.*

EE.MS-LS1-5 **Target Level:** Interpret data to show that environmental resources (e.g., food, light, space, water) influence growth of organisms (e.g., drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, fish growing larger in large ponds than small ponds).
Precursor Level: Identify factors that influence growth of organisms.
Initial Level: Match organisms to their habitats.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS

MS-LS2-2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. *Clarification Statement: Emphasis is on predicting consistent patterns of interactions in different ecosystems in terms of the relationships among and between organisms and abiotic components of ecosystems. Examples of types of interactions could include competitive, predatory, and mutually beneficial.*

EE.MS-LS2-2 **Target Level:** Use models of food chains/webs to identify producers and consumers in aquatic and terrestrial ecosystems.
Precursor Level: Classify animals based on what they eat (e.g., herbivore, omnivore, carnivore).
Initial Level: Identify food that animals eat.

HEREDITY: INHERITANCE AND VARIATION OF TRAITS

MS-LS3-2 Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. *Clarification Statement: Emphasis is on using models such as Punnett squares, diagrams, and simulations to describe the cause and effect relationship of gene transmission from parent(s) to offspring and resulting genetic variation.*

EE.MS-LS3-2 **Target Level:** Make a claim supported by evidence that offspring inherit traits from their parents.
Precursor Level: Identify similarities and differences between plant and animal parents and their offspring (e.g., eye color, hair/fur color, height, leaf shape, and/or markings).
Initial Level: Recognize that organisms differ within same species (e.g., dogs, chickens, oaks that differ in color and size).

EARTH AND SPACE

EARTH'S PLACE IN THE UNIVERSE

MS-ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. *Clarification Statement: Examples of models can be physical, graphical, or conceptual.*

EE.MS-ESS1-1 **Target Level:** Use an Earth-Sun-Moon model to show that Earth's orbit around the Sun corresponds to a calendar year and the orbit of the Moon around Earth corresponds to a month.
Precursor Level: Use a model to show that Earth's Moon moves around Earth, and Earth and its Moon move around the Sun.
Initial Level: Recognize models of the Earth, Moon, and Sun system.

EARTH'S SYSTEMS

MS-ESS2-1 Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. *Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth's materials. Assessment Boundary: Assessment does not include the identification and naming of minerals.*

EE.MS-ESS2-1 **Target Level:** Use a model to describe the change within the rock cycle between igneous, metamorphic, and sedimentary rock.
Precursor Level: Use a model to describe the change from igneous to sedimentary rock.
Initial Level: Identify the process that forms igneous rock (e.g., volcanoes).

MS-ESS2-2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales. *Clarification Statement: Emphasis is on how processes change Earth's surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical*

reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.

EE.MS-ESS2-2 **Target Level:** Explain how geoscience processes that occur daily (e.g., wind, rain, runoff) slowly change the surface of Earth, while catastrophic events (e.g., earthquakes, tornadoes, floods) can quickly change the surface of Earth.
Precursor Level: Identify geoscience processes (e.g., wind, rain, runoff) that have an impact on landforms (e.g., landslides, erosion such as gullies).
Initial Level: Identify differences in weather conditions from day to day.

MS-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. *Clarification Statement:* Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outlines of continents. Examples of models can be diagrams, maps and globes, or digital representations. *Assessment Boundary:* Assessment does not include the dynamics of the Coriolis effect.

EE.MS-ESS2-6 **Target Level:** Interpret basic weather information (e.g., radar, map) to make predictions about future conditions (e.g., precipitation, temperature, wind).
Precursor Level: Interpret basic weather information (e.g., radar, map) to compare weather conditions (either over several days at the same location or different locations on the same day).
Initial Level: Interpret basic weather information (e.g., radar, map) to identify weather conditions.

EARTH AND HUMAN ACTIVITY

MS-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes. *Clarification Statement:* Emphasis is on how these resources are limited and typically non-renewable, and how their distributions are significantly changing as a result of removal by humans. Examples of uneven distributions of resources as a result of past processes include but are not limited to petroleum (locations of the burial of organic marine sediments and subsequent geologic traps), metal ores (locations of past volcanic and hydrothermal activity associated with subduction zones), and soil (locations of active weathering and/or deposition of rock).

EE.MS-ESS3-1 **Target Level:** Interpret, based on evidence, how the geoscience processes (e.g., weathering, erosion) create resources.
Precursor Level: Identify the geoscience process that produces a natural resource (e.g., solar energy creating wind energy, rock cycle with ores and minerals).
Initial Level: Identify a natural resource (e.g., water, sand, wind).

MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.* *Clarification Statement:* Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).

EE.MS-ESS3-3 **Target Level:** Develop a plan to monitor and minimize a human impact on the local environment (e.g., water, land, pollution).
Precursor Level: Recognize ways in which humans impact the environment (e.g., agriculture, pollution, recycling, city growth).
Initial Level: Recognize resources (e.g., food, water, shelter, air) in the local environment that are important for human life.

Resources

Dynamic Learning Maps: Illinois Page

This provides districts specific information with regards to the Dynamic Learning Maps-Alternate Assessment for Illinois

<http://dynamiclearningmaps.org/illinois>

Professional Development

This provides districts professional development for how to implement the Essential Elements within the classroom.

<http://dlmpd.com/>

Illinois Learning Standards Teacher Resources

Illinois Classrooms in Action – Your first stop for K-12 resources! All of these books can be downloaded from this website under the “Standards Books” page. (www.ilclassroomsinaction.org/standardsbooks.html)

www.ilclassroomsinaction.org