

Typing

CCSS.ELA-LITERACY.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.

Vocabulary Acquisition and Use

CCSS.ELA-LITERACY.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.

CCSS.ELA-LITERACY.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.

CCSS.ELA-LITERACY.L.7.4.B

Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel).

CCSS.ELA-LITERACY.L.7.5

Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-LITERACY.L.7.5.B

Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.

CCSS.ELA-LITERACY.L.7.5.C

Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., refined, respectful, polite, diplomatic, condescending).

Vocabulary Acquisition and Use

CCSS.ELA-LITERACY.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.

Conventions of Standard English

CCSS.ELA-LITERACY.L.7.1

Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-LITERACY.L.7.1.A

Explain the function of phrases and clauses in general and their function in specific sentences.

CCSS.ELA-LITERACY.L.7.1.B

Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.

CCSS.ELA-LITERACY.L.7.1.C

Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.

CCSS.ELA-LITERACY.L.7.2

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-LITERACY.L.7.2.A

Use a comma to separate coordinate adjectives.

Key Ideas and Details

CCSS.ELA-LITERACY.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.

CCSS.ELA-LITERACY.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.

Statistics & Probability

CCSS.MATH.CONTENT.7.SP.A.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.

CCSS.MATH.CONTENT.7.SP.A.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.

CCSS.MATH.CONTENT.7.SP.B.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.

Statistics & Probability

CCSS.MATH.CONTENT.7.SP.B.4

Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.

Expressions & Equations

CCSS.MATH.CONTENT.7.EE.A.1

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

CCSS.MATH.CONTENT.7.EE.A.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.

CCSS.MATH.CONTENT.7.EE.B.3

Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

CCSS.MATH.CONTENT.7.EE.B.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.

The Number System

CCSS.MATH.CONTENT.7.NS.A.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.

CCSS.MATH.CONTENT.7.NS.A.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.

CCSS.MATH.CONTENT.7.NS.A.2.C

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

Empowered Learner

ISTE 1.1

Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

ISTE 1.1.d

Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Digital Citizen

ISTE 1.2

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

STE 1.2.a

Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

ISTE 1.2.b

Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

ISTE 1.2.c

Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

ISTE 1.2.d

Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

Engineering Design

NGSS MS-ETS1-1

Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

Engineering Design

NGSS MS-ETS1-2

Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

NGSS MS-ETS1-3

Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

NGSS MS-ETS1-4

Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

From Molecules to Organisms: Structures & Processes

NGSS MS-LS1-1

Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.

NGSS MS-LS1-2

Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.

NGSS MS-LS1-3

Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

From Molecules to Organisms: Structures & Processes

NGSS MS-LS1-4

Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

NGSS MS-LS1-5

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

NGSS MS-LS1-6

Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

NGSS MS-LS1-7

Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

NGSS MS-LS1-8

Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

Ecosystems: Interactions, Energy, and Dynamics

MS-LS2-1

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Ecosystems: Interactions, Energy, and Dynamics

MS-LS2-2

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-3

Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

MS-LS2-4

Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS2-5

Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

Heredity: Inheritance & Variation of Traits

NGSS MS-LS3-1

Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

NGSS 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.

Biological Evolution: Unity & Diversity

NGSS MS-LS4-1

Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

NGSS MS-LS4-2

Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

NGSS MS-LS4-3

Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.

NGSS MS-LS4-4

Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

NGSS MS-LS4-5

Gather and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms.

NGSS MS-LS4-6

Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

Earth's Place in the Universe

NGSS 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.

NGSS MS-ESS1-2

Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

NGSS MS-ESS1-3

Analyze and interpret data to determine scale properties of objects in the solar system.

NGSS MS-ESS1-4

Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

Earth's Systems

NGSS MS-ESS2-1

Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

NGSS MS-ESS2-2

Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

NGSS MS-ESS2-3

Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.

Earth's Systems

NGSS MS-ESS2-4

Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

NGSS MS-ESS2-5

Collect data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions.

NGSS 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.

Earth and Human Activity

NGSS 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.

NGSS MS-ESS3-2

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

NGSS MS-ESS3-3

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

NGSS MS-ESS3-4

Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Earth and Human Activity **NGSS MS-ESS3-5**

Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

Matter & its Interactions

NGSS MS-PS1-1

Develop models to describe the atomic composition of simple molecules and extended structures.

NGSS 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.

NGSS MS-PS1-3

Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

NGSS MS-PS1-4

Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

NGSS MS-PS1-5

Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.

NGSS MS-PS1-6

Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.

Motion and Stability: Forces & Interactions

NGSS MS-PS2-1

Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.

NGSS 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.

NGSS MS-PS2-3

Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.

NGSS MS-PS2-4

Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.

NGSS MS-PS2-5

Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

Energy

NGSS MS-PS3-1

Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

Energy

NGSS MS-PS3-2

Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.

NGSS MS-PS3-3

Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

NGSS MS-PS3-4

Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.

NGSS MS-PS3-5

Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Waves and their Applications in Technologies for Information Transfer

NGSS MS-PS4-1

Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

NGSS MS-PS4-2

Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Waves and their Applications in Technologies for Information Transfer

NGSS MS-PS4-3

Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Geography

Florida SS.6.G.1

Understand how to use maps and other geographic representations, tools and technology to report information.

Florida SS.7.G.2

Understand physical and cultural characteristics of places.

Florida SS.7.G.3

Understand the relationships between the Earth's ecosystems and the populations that dwell within them.

Economics

Ohio E.DM.19

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

Ohio E.S.20

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

Economics

Ohio E.M.21

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

Government

Florida SS.7.CG.1

Demonstrate an understanding of the origins and purposes of government, law and the American political system.

Florida SS.7.CG.1.1

Analyze the influences of ancient Greece and ancient Rome on America's constitutional republic.

Florida SS.7.CG.2

Evaluate the roles, rights and responsibilities of U.S. citizens, and determine methods of active participation in society, government and the political system.

Florida SS.7.CG.3

Demonstrate an understanding of the principles, functions and organization of government.

World History

California 7.1

Students analyze the causes and effects of the vast expansion and ultimate disintegration of the Roman Empire.

World History

California 7.2

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Islam in the Middle Ages.

California 7.3

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of China in the Middle Ages.

California 7.4

Students analyze the geographic, political, economic, religious, and social structures of the sub-Saharan civilizations of Ghana and Mali in Medieval Africa.

California 7.5

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Medieval Japan.

California 7.6

Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Medieval Europe.

California 7.7

Students compare and contrast the geographic, political, economic, religious, and social structures of the Meso-American and Andean civilizations.

California 7.8

Students analyze the origins, accomplishments, and geographic diffusion of the Renaissance.