ExamView® Learning Series v11 is a collection of unique, high-quality assessment questions organized by English language arts, reading, math, science, and social studies. The Learning Series works with the ExamView® Assessment Suite to produce study guides, worksheets, and formative assessments which help educators review, re-teach, reinforce, and supplement standards-based instruction.

FEATURES

The features of Learning Series v11 include . . .

- 15,646 questions in Language Arts, Math, Reading, Science, and Social Studies
- Dynamic questions in Math, Science, and Social Studies with approximately 400,000 unique question iterations
- One-to-one alignments at the most granular level or topics to 40 states' standards, the national Common Core State Standards for English Language Arts and Mathematics, and Next Generation Science Standards
- Alignments to Core Curriculum Topics
- Alignments to Webb's Depth-of-Knowledge and Bloom's Taxonomy cognitive levels
- A mix of question types (multiple choice, bimodal, short answer, numeric response, completion, and essay). (Bimodal questions can be displayed as either multiple choice (default) or short answer.)
- A mix of computational (drill and kill) items and contextual-based items for math
- 170 reading passages associated with the reading assessment questions
- Versatile delivery options include Insight 360™, Classroom Performance System™ (CPS™) student response system, local area network, paper-pencil, Workspace™, and Mobi™
- Standards pick lists to allow an educator to align authored questions to a standard (Windows)

QUESTION BREAKDOWN CHARTS

A question breakdown chart is included in this document for each of the 40 state-aligned products, the national Common Core content, the Next Generation Science Standards content, and the Topic-Aligned product. Each question breakdown chart identifies the standards set to which the items are aligned and by subject and grade level, the number of items, the number of unique iterations, and the number of items per question type.

For Complete Information About a Learning Series v11 Product, Refer to the Specified Question Breakdown Charts in This Document . . .				
Learning Series v11	**State**	**Topic-Aligned**	**National Common Core**	**Next Generation Science Standards**
State*	✓		✓	✓
Topic-Aligned**		✓	✓	✓

* AL, AZ, AR, CA, CO, CT, FL, GA, ID, IL, IN, IA, KS, KY, LA, MD, MA, MI, MN, MS, MO, MT, NE, NV, NJ, NM, NY, NC, OH, OK, OR, PA, SC, TN, VA, WA, WV, WI, and WY

** AK, DE, HI, ME, NH, ND, RI, SD, UT, and VT

BOOKMARKS

This document includes bookmarks (or internal links) which help you navigate efficiently from one page to the next within the document. To use the bookmarks, open the Navigation Pane | Bookmarks panel. Click the desired link in the Bookmarks panel to display, review, and print pages.

NEXT GENERATION SCIENCE STANDARDS

Distribution of Bloom's Taxonomy Levels by Subject/Grade

	No. Items per Bloom's Taxonomy Level						
Grade Level/Subject Area	**Remembering**	**Understanding**	**Applying**	**Analyzing**	**Evaluating**	**Creating**	**Total per Grade/Subject**
Science							
Grade 3 Science	0	6	62	43	7	0	118
Grades 3-5 Science	0	0	27	20	16	6	69
Grade 4 Science	1	8	45	65	2	1	122
Grade 5 Science	5	27	106	89	6	1	234
Grades 6-8 Science	31	147	410	221	27	13	849
Grades 9-12 Science	0	90	299	139	21	20	569
Total per Bloom's Level	**37**	**278**	**949**	**577**	**79**	**41**	**1,961**
Percentage per Bloom's Level	**1.89%**	**14.18%**	**48.39%**	**29.42%**	**4.03%**	**2.09%**	**100.00%**
Total of All Items per Bloom's Level	***37***	***278***	***949***	***577***	***79***	***41***	***1,961***
Percentage of All Items per Bloom's Level	***1.89%***	***14.18%***	***48.39%***	***29.42%***	***4.03%***	***2.09%***	***100.00%***

NEXT GENERATION SCIENCE STANDARDS

Distribution of Webb's Depth-of-Knowledge Levels by Subject/Grade

	No. Items per Webb's Depth-of-Knowledge Levels				
Grade Level/Subject Area	**Level 1: Recall and Reproduction**	**Level 2: Skills and Concepts**	**Level 3: Strategic Thinking**	**Level 4: Extended Thinking**	**Total per Grade/Subject**
Science					
Grade 3 Science	6	99	13	0	118
Grades 3-5 Science	3	35	28	3	69
Grade 4 Science	6	96	20	0	122
Grade 5 Science	29	186	18	1	234
Grades 6-8 Science	120	593	134	2	849
Grades 9-12 Science	78	429	62	0	569
Total per Webb's Level	**242**	**1,438**	**275**	**6**	**1,961**
Percentage per Webb's Level	**12.34%**	**73.33%**	**14.02%**	**0.31%**	**100.00%**
Total of All Items per Webb's Level	***242***	***1,438***	***275***	***6***	***1,961***
Percentage of All Items per Webb's Level	***12.34%***	***73.33%***	***14.02%***	***0.31%***	***100.00%***

6/2015

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 3 Science_v11	3: 3-ESS2-1	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	18
NGSS 3 Science_v11	3: 3-ESS2-2	Obtain and combine information to describe climates in different regions of the world.	2
NGSS 3 Science_v11	3: 3-LS1-1	Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	1
NGSS 3 Science_v11	3: 3-LS3-1	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	6
NGSS 3 Science_v11	3: 3-LS3-2	Use evidence to support the explanation that traits can be influenced by the environment.	2
NGSS 3 Science_v11	3: 3-LS4-2	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	1
NGSS 3 Science_v11	3: 3-LS4-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	5
NGSS 3 Science_v11	3: 3-LS4-4	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	4
NGSS 3 Science_v11	3: 3-PS2-1	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	59
NGSS 3 Science_v11	3: 3-PS2-2	Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	16
NGSS 3 Science_v11	3: 3-PS2-3	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.	4
NGSS 3 Science_v11		**Total Grades 3 Science Questions**	**118**
NGSS 3-5 Science_v11	3-5: 3-5-ETS1	Engineering Design	66
NGSS 3-5 Science_v11	3-5: 3-5-ETS1-2	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	3
NGSS 3-5 Science_v11		**Total Grades 3-5 Science Questions**	**69**
NGSS 4 Science_v11	4: 4-ESS1-1	Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	2

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 4 Science_v11	4: 4-ESS2-1	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	3
NGSS 4 Science_v11	4: 4-ESS2-2	Analyze and interpret data from maps to describe patterns of Earth's features.	6
NGSS 4 Science_v11	4: 4-ESS3-1	Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	11
NGSS 4 Science_v11	4: 4-ESS3-2	Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	2
NGSS 4 Science_v11	4: 4-LS1-1	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	29
NGSS 4 Science_v11	4: 4-PS3-1	Use evidence to construct an explanation relating the speed of an object to the energy of that object.	8
NGSS 4 Science_v11	4: 4-PS3-2	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	59
NGSS 4 Science_v11	4: 4-PS3-4	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	1
NGSS 4 Science_v11	4: 4-PS4-3	Generate and compare multiple solutions that use patterns to transfer information.	1
NGSS 4 Science_v11		**Total Grades 4 Science Questions**	**122**
NGSS 5 Science_v11	5: 5-ESS1-1	Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	8
NGSS 5 Science_v11	5: 5-ESS1-2	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	42
NGSS 5 Science_v11	5: 5-ESS2-1	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	8
NGSS 5 Science_v11	5: 5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	11
NGSS 5 Science_v11	5: 5-LS2-1	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	40
NGSS 5 Science_v11	5: 5-PS1-1	Develop a model to describe that matter is made of particles too small to be seen.	6
NGSS 5 Science_v11	5: 5-PS1-2	Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	28

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 5 Science_v11	5: 5-PS1-3	Make observations and measurements to identify materials based on their properties.	25
NGSS 5 Science_v11	5: 5-PS1-4	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	31
NGSS 5 Science_v11	5: 5-PS2	Motion and Stability: Forces and Interaction	1
NGSS 5 Science_v11	5: 5-PS2-1	Support an argument that the gravitational force exerted by Earth on objects is directed down.	2
NGSS 5 Science_v11	5: 5-PS3-1	Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	32
NGSS 5 Science_v11		**Total Grades 5 Science Questions**	**234**
NGSS 6-8 Science_v11	6-8: 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.	17
NGSS 6-8 Science_v11	6-8: MS-ESS1-2	Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.	67
NGSS 6-8 Science_v11	6-8: 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.	2
NGSS 6-8 Science_v11	6-8: MS-ESS2	Earth's Systems	6
NGSS 6-8 Science_v11	6-8: MS-ESS2-1	Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	24
NGSS 6-8 Science_v11	6-8: MS-ESS2-2	Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	27
NGSS 6-8 Science_v11	6-8: 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.	3
NGSS 6-8 Science_v11	6-8: 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.	3
NGSS 6-8 Science_v11	6-8: MS-ESS2-5	Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.	11
NGSS 6-8 Science_v11	6-8: 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.	10

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 6-8 Science_v11	6-8: 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.	10
NGSS 6-8 Science_v11	6-8: 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.	1
NGSS 6-8 Science_v11	6-8: MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	5
NGSS 6-8 Science_v11	6-8: MS-ESS3-5	Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.	8
NGSS 6-8 Science_v11	6-8: MS-ETS1	Engineering Design	12
NGSS 6-8 Science_v11	6-8: 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.	1
NGSS 6-8 Science_v11	6-8: 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.	17
NGSS 6-8 Science_v11	6-8: MS-LS1	From Molecules to Organisms: Structures and Processes	14
NGSS 6-8 Science_v11	6-8: MS-LS1-2	Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function.	6
NGSS 6-8 Science_v11	6-8: MS-LS1-3	Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.	19
NGSS 6-8 Science_v11	6-8: 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.	8
NGSS 6-8 Science_v11	6-8: MS-LS1-5	Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.	5
NGSS 6-8 Science_v11	6-8: 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.	9
NGSS 6-8 Science_v11	6-8: 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.	5

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 6-8 Science_v11	6-8: 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.	3
NGSS 6-8 Science_v11	6-8: 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.	25
NGSS 6-8 Science_v11	6-8: MS-LS2-2	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	3
NGSS 6-8 Science_v11	6-8: MS-LS2-3	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	6
NGSS 6-8 Science_v11	6-8: MS-LS2-4	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.	10
NGSS 6-8 Science_v11	6-8: 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.	1
NGSS 6-8 Science_v11	6-8: 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.	35
NGSS 6-8 Science_v11	6-8: 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.	3
NGSS 6-8 Science_v11	6-8: 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.	7
NGSS 6-8 Science_v11	6-8: 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.	3
NGSS 6-8 Science_v11	6-8: 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.	4
NGSS 6-8 Science_v11	6-8: MS-PS1	Matter and Its Interactions	28
NGSS 6-8 Science_v11	6-8: MS-PS1-1	Develop models to describe the atomic composition of simple molecules and extended structures.	5

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 6-8 Science_v11	6-8: 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.	69
NGSS 6-8 Science_v11	6-8: 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.	69
NGSS 6-8 Science_v11	6-8: MS-PS1-6	Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes.	16
NGSS 6-8 Science_v11	6-8: MS-PS2	Motion and Stability: Forces and Interactions	11
NGSS 6-8 Science_v11	6-8: MS-PS2-1	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	2
NGSS 6-8 Science_v11	6-8: 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.	66
NGSS 6-8 Science_v11	6-8: MS-PS2-3	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	13
NGSS 6-8 Science_v11	6-8: 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.	28
NGSS 6-8 Science_v11	6-8: 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.	8
NGSS 6-8 Science_v11	6-8: MS-PS3	Energy	3
NGSS 6-8 Science_v11	6-8: 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.	7
NGSS 6-8 Science_v11	6-8: 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.	6
NGSS 6-8 Science_v11	6-8: MS-PS3-3	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.	67
NGSS 6-8 Science_v11	6-8: 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.	9

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 6-8 Science_v11	6-8: 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.	21
NGSS 6-8 Science_v11	6-8: MS-PS4-2	Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	31
NGSS 6-8 Science_v11		**Total Grades 6-8 Science Questions**	**849**
NGSS 9-12 Science_v11	9-12: HS-ESS1	Earth's Place in the Universe	14
NGSS 9-12 Science_v11	9-12: HS-ESS1-1	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.	4
NGSS 9-12 Science_v11	9-12: HS-ESS1-2	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	14
NGSS 9-12 Science_v11	9-12: HS-ESS1-4	Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	2
NGSS 9-12 Science_v11	9-12: HS-ESS1-5	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	4
NGSS 9-12 Science_v11	9-12: HS-ESS2	Earth's Systems	4
NGSS 9-12 Science_v11	9-12: HS-ESS2-1	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	6
NGSS 9-12 Science_v11	9-12: HS-ESS2-3	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	3
NGSS 9-12 Science_v11	9-12: HS-ESS2-5	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	1
NGSS 9-12 Science_v11	9-12: HS-ESS2-6	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	1
NGSS 9-12 Science_v11	9-12: HS-ESS3-1	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	15
NGSS 9-12 Science_v11	9-12: HS-ESS3-2	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.	4

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 9-12 Science_v11	9-12: HS-ESS3-6	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	4
NGSS 9-12 Science_v11	9-12: HS-ETS1	Engineering Design	114
NGSS 9-12 Science_v11	9-12: HS-LS1	From Molecules to Organisms: Structures and Processes	4
NGSS 9-12 Science_v11	9-12: HS-LS1-1	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	11
NGSS 9-12 Science_v11	9-12: HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	6
NGSS 9-12 Science_v11	9-12: HS-LS1-4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	1
NGSS 9-12 Science_v11	9-12: HS-LS1-5	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	2
NGSS 9-12 Science_v11	9-12: HS-LS1-6	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	4
NGSS 9-12 Science_v11	9-12: HS-LS1-7	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.	9
NGSS 9-12 Science_v11	9-12: HS-LS2	Ecosystems: Interactions, Energy, and Dynamics	9
NGSS 9-12 Science_v11	9-12: HS-LS2-1	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	8
NGSS 9-12 Science_v11	9-12: HS-LS2-2	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	29
NGSS 9-12 Science_v11	9-12: HS-LS2-3	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.	6
NGSS 9-12 Science_v11	9-12: HS-LS2-4	Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.	35
NGSS 9-12 Science_v11	9-12: HS-LS2-7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	16

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 9-12 Science_v11	9-12: HS-LS2-8	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	2
NGSS 9-12 Science_v11	9-12: HS-LS3-1	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	3
NGSS 9-12 Science_v11	9-12: HS-LS3-2	Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	3
NGSS 9-12 Science_v11	9-12: HS-LS4-2	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	4
NGSS 9-12 Science_v11	9-12: HS-LS4-3	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	5
NGSS 9-12 Science_v11	9-12: HS-LS4-5	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	1
NGSS 9-12 Science_v11	9-12: HS-PS1	Matter and Its Interactions	7
NGSS 9-12 Science_v11	9-12: HS-PS1-1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	98
NGSS 9-12 Science_v11	9-12: HS-PS1-3	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	14
NGSS 9-12 Science_v11	9-12: HS-PS1-4	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	4
NGSS 9-12 Science_v11	9-12: HS-PS1-8	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	5
NGSS 9-12 Science_v11	9-12: HS-PS2	Motion and Stability: Forces and Interactions	18

Number of Questions per Next Generation Science Standard—Science 2013 Arranged by Disciplinary Core Idea (DCI)

Product	Content Standard	Description	Total Questions
NGSS 9-12 Science_v11	9-12: HS-PS2-1	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	6
NGSS 9-12 Science_v11	9-12: HS-PS2-3	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	6
NGSS 9-12 Science_v11	9-12: HS-PS2-4	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.	14
NGSS 9-12 Science_v11	9-12: HS-PS2-5	Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	6
NGSS 9-12 Science_v11	9-12: HS-PS3	Energy	11
NGSS 9-12 Science_v11	9-12: HS-PS3-1	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	6
NGSS 9-12 Science_v11	9-12: HS-PS3-3	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	12
NGSS 9-12 Science_v11	9-12: HS-PS3-4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	2
NGSS 9-12 Science_v11	9-12: HS-PS4-1	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	6
NGSS 9-12 Science_v11	9-12: HS-PS4-3	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	6
NGSS 9-12 Science_v11		**Total Grades 9-12 Science Questions**	**569**
		TOTAL LANGUAGE SKILLS QUESTIONS	**1,961**