

Standard ID	Standard Text	Edgenuity Lesson Name
WA.1. 9-12.SYS.	Systems (SYS) Predictability and Feedback: In prior grades students learned how to simplify and analyze complex situations by thinking about them as systems. In grades 9-12 students learn to construct more sophisticated system models, including the concept of feedback. Students are expected to determine whether or not systems analysis will be helpful in a given situation and if so, to describe the system, including subsystems, boundaries, flows, and feedbacks. The next step is to use the system as a dynamic model to predict changes. Students are also expected to recognize that even the most sophisticated models may not accurately predict how the real world functions. This deep understanding of systems and ability to use systems analysis is an essential tool both for scientific inquiry and for technological design.	
9-12.SYSA.	Students know that feedback is a process in which the output of a system provides information used to regulate the operation of the system. Positive feedback increases the disturbance to a system. Negative feedback reduces the disturbance to a system.	
9-12.SYSA.1.	Students are expected to give examples of a positive feedback system and explain its regulatory mechanism (e.g., global warming causes Earth's ice caps to melt, reflecting less energy to space, increasing temperatures).	Systems of the Biosphere Global Connection: Why Invasive Species Thrive
9-12.SYSA.2.	Students are expected to give examples of a negative feedback system and explain its regulatory mechanism (e.g., when a human body overheats, it produces sweat that cools the body by evaporation).	Systems of the Biosphere
9-12.SYSB.	Students know that systems thinking can be especially useful in analyzing complex situations. To be useful, a system needs to be specified as clearly as possible.	
9-12.SYSB.1.	Students are expected to determine if a systems approach will be helpful in answering a question or solving a problem.	Skills Lesson: Proposing Logical Alternatives
9-12.SYSB.2.	Students are expected to represent the system with a diagram specifying components, boundaries, flows, and feedbacks.	Effects of Cycles on Ecosystems Global Connection: Recycling on Earth The Cycles of Matter The Water Cycle
9-12.SYSB.3.	Students are expected to describe relevant subsystems and the larger system that contains the system being analyzed.	Life and Earth's Crust Systems of the Biosphere The Cycles of Matter

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.SYSB.4.	Students are expected to determine how the system functions with respect to other systems.	Life and Earth's Crust Systems of the Biosphere The Cycles of Matter
9-12.SYSC.	Students know that in complex systems, entirely new and unpredictable properties may emerge. Consequently, modeling a complex system in sufficient detail to make reliable predictions may not be possible.	
9-12.SYSC.1.	Students are expected to create a simplified model of a complex system. Trace the possible consequences of a change in one part of the system and explain how the simplified model may not be adequate to reliably predict consequences.	Plate Tectonics Scientific Models Skills Lesson: Modeling Systems and Cycles Soil Formation Trophic Levels and Food Webs
9-12.SYSD.	Students know that systems can be changing or in equilibrium.	
9-12.SYSD.1.	Students are expected to analyze whether or not a system (e.g., population) is changing or in equilibrium.	Climate and Change in Ecosystems Ecology 102 Effects of Cycles on Ecosystems Fire and Nature Global Connection: Human Impact on Population Size Global Connection: Why Invasive Species Thrive Measuring Populations Natural Events and the Environment Nonnative Species In Aquatic Ecosystems Patterns in Systems Population Genetics Population Size Succession The Study of Environmental Science The Water Cycle
9-12.SYSD.2.	Students are expected to determine whether a state of equilibrium is static or dynamic (e.g., inflows equal outflows).	Effects of Cycles on Ecosystems

Standard ID	Standard Text	Edgenuity Lesson Name
WA.2. 9-12.INQ.	<p>Inquiry (INQ)</p> <p>Conducting Analyses and Thinking Logically: In prior grades students learned to revise questions so they can be answered scientifically. In grades 9-12 students extend and refine their understanding of the nature of inquiry and their ability to formulate questions, propose hypotheses, and design, conduct, and report on investigations. Refinement includes an increased understanding of the kinds of questions that scientists ask and how the results reflect the research methods and the criteria that scientific arguments are judged by. Increased abilities include competence in using mathematics, a closer connection between student-planned investigations and existing knowledge, improvements in communication and collaboration, and participation in a community of learners.</p>	
9-12.INQA.	<p>Question: Students know that scientists generate and evaluate questions to investigate the natural world.</p>	
9-12.INQA.1.	<p>Students are expected to generate and evaluate a question that can be answered through a scientific investigation. Critique questions generated by others and explain whether or not the questions are scientific.</p>	<p>Scientific Inquiry Skills Lesson: Evaluating Explanations Skills Lesson: Forming a Valid Hypothesis Skills Lesson: Proposing Logical Alternatives Skills Lesson: Proposing Solutions</p>
9-12.INQB.	<p>Investigate: Students know that scientific progress requires the use of various methods appropriate for answering different kinds of research questions, a thoughtful plan for gathering data needed to answer the question, and care in collecting, analyzing, and displaying the data.</p>	
9-12.INQB.1.	<p>Students are expected to plan and conduct a scientific investigation, choosing a method appropriate to the question being asked.</p>	
9-12.INQB.2.	<p>Students are expected to collect, analyze, and display data using calculators, computers, or other technical devices when available.</p>	<p>Scientific Inquiry</p> <p>A History of Global Climate Change Adaptation Determining Population Size Ecology 102 Energy Transformation Laboratory Tools and Safety Land Habitats Milestones and Turning Points Nuclear Power Photosynthesis in Plants Plate Tectonics Population Genetics</p>

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.INQB.2.	Students are expected to collect, analyze, and display data using calculators, computers, or other technical devices when available. <i>Cont.</i>	Population Size Scientific Measurement Societal Consequences Soil Formation The Cycles of Matter The Study of Environmental Science The Water Cycle Trophic Levels and Food Webs Urban Growth Water Policy
9-12.INQC.	Explain: Students know that conclusions must be logical, based on evidence, and consistent with prior established knowledge.	
9-12.INQC.1.	Students are expected to draw conclusions supported by evidence from the investigation and consistent with established scientific knowledge.	A History of Global Climate Change Adaptation Critical Thinking in Science Determining Population Size Ecology 102 Energy Transformation Laboratory Tools and Safety Land Habitats Photosynthesis in Plants Plate Tectonics Population Genetics Population Size Scientific Inquiry Skills Lesson: Constructing Valid Criticisms Skills Lesson: Evaluating Explanations Skills Lesson: Plotting Trends and Patterns Skills Lesson: Proposing Logical Alternatives Soil Formation The Cycles of Matter

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.INQC.1.	Students are expected to draw conclusions supported by evidence from the investigation and consistent with established scientific knowledge. <i>Cont.</i>	The Study of Environmental Science The Water Cycle Trophic Levels and Food Webs Urban Growth Water Policy
9-12.INQC.2.	Students are expected to analyze alternative explanations and decide which best fits the data and evidence.	Skills Lesson: Constructing Valid Criticisms Skills Lesson: Evaluating Explanations Skills Lesson: Plotting Trends and Patterns Skills Lesson: Proposing Logical Alternatives
9-12.INQD.	Communicate Clearly: Students know that the methods and procedures that scientists use to obtain evidence must be clearly reported to enhance opportunities for further investigation.	
9-12.INQD.1.	Students are expected to write a detailed laboratory report that includes: the question that motivated the study, a justification for the kind of investigation chosen, hypotheses (if any), a description of what was done, a summary of data in tables and graphs, and a conclusion, based on the evidence, that responds to the question.	
9-12.INQE.	Model: Students know that the essence of scientific investigation involves the development of a theory or conceptual model that can generate testable predictions.	
9-12.INQE.1.	Students are expected to formulate one or more hypotheses based on a model or theory of a causal relationship. Demonstrate creativity and critical thinking to formulate and evaluate the hypotheses.	Laboratory Tools and Safety Scientific Measurement The Study of Environmental Science Careers in Environmental Science Ecology 102 Trophic Levels and Food Webs Adaptation Land Habitats Population Size Population Genetics The Cycles of Matter The Water Cycle

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.INQE.1.	Students are expected to formulate one or more hypotheses based on a model or theory of a causal relationship. Demonstrate creativity and critical thinking to formulate and evaluate the hypotheses. <i>Cont.</i>	Determining Population Size
9-12.INQF.	Communicate: Students know that science is a human endeavor that involves logical reasoning and creativity and entails the testing, revision, and occasional discarding of theories as new evidence comes to light.	A History of Global Climate Change Plate Tectonics Urban Growth Soil Formation Water Pollution Energy Transformation Photosynthesis in Plants
9-12.INQF.1.	Students are expected to evaluate an investigation to determine if it was a valid means of answering the question, and whether or not the results were reliable.	Critical Thinking in Science Skills Lesson: Constructing Valid Criticisms Skills Lesson: Evaluating Explanations Skills Lesson: Interpreting Observations
9-12.INQF.2.	Students are expected to describe the development of a scientific theory that illustrates logical reasoning, creativity, testing, revision, and replacement of prior ideas in light of new evidence.	Adaptation Scientific Inquiry
9-12.INQG.	Intellectual Honesty: Students know that public communication among scientists is an essential aspect of research. Scientists evaluate the validity of one another's investigations, check the reliability of results, and explain inconsistencies in findings.	
9-12.INQG.1.	Students are expected to participate in a scientific discussion about one's own investigations and those performed by others.	

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.INQG.2.	Students are expected to respond to questions and criticisms, and if appropriate, revise explanations based on these discussions.	
9-12.INQH.	Intellectual Honesty: Students know that scientists carefully evaluate sources of information for reliability before using that information. When referring to the ideas or findings of others, they cite their sources of information.	
9-12.INQH.1.	Students are expected to provide appropriate citations for all ideas, findings, and information used in any and all written reports.	
9-12.INQH.2.	Students are expected to explain the consequences for failure to provide appropriate citations.	Skills Lesson: Conducting Valid Internet Research
9-12.APP.	Science, Technology, and Society: In prior grades students learn to work with other members of a team to apply the full process of technological design and relevant science concepts to solve problems. In grades 9-12 students apply what they have learned to address societal issues and cultural differences. Students learn that science and technology are interdependent, that science and technology influence society, and that society influences science and technology. Students continue to increase their abilities to work with other students and to use mathematics and information technologies (when available) to solve problems. They transfer insights from those increased abilities when considering local, regional, and global issues. These insights and capabilities will help prepare students to solve societal and personal problems in future years.	
9-12.APPA.	Students know that science affects society and cultures by influencing the way many people think about themselves, others, and the environment. Society also affects science by its prevailing views about what is important to study and by deciding what research will be funded.	
9-12.APPA.1.	Students are expected to describe ways that scientific ideas have influenced society or the development of differing cultures.	<ul style="list-style-type: none"> A History of Global Climate Change Effects of Technology Global Connection: Newfoundland Cod Fishery Collapse Groundwater Humans and the Energy Cycle Land Management and Planning Milestones and Turning Points Modern Forestry Ocean Exploration Other Influences on Personal Health Resource Conservation Societal Consequences Soil and Agriculture The Social Costs of Resource Use The Study of Environmental Science Urban Growth What Are Natural Resources?

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.APPA.2.	Students are expected to list questions that scientists investigate that are stimulated by the needs of society (e.g., medical research, global climate change).	
9-12.APPB.	Students know that the technological design process begins by defining a problem in terms of criteria and constraints, conducting research, and generating several different solutions.	
9-12.APPB.1.	Students are expected to work collaboratively with other students to generate ideas for solving a problem. Identify criteria and constraints, research the problem, and generate several possible solutions.	
9-12.APPC.	Students know that choosing the best solution involves comparing alternatives with respect to criteria and constraints, then building and testing a model or other representation of the final design.	
9-12.APPC.1.	Students are expected to choose the best solution for a problem, create a model or drawing of the final design, and devise a way to test it. Redesign the solution, if necessary, then present it to peers.	
9-12.APPD.	Students know that the ability to solve problems is greatly enhanced by use of mathematics and information technologies.	
9-12.APPD.1.	Students are expected to use proportional reasoning, functions, graphing, and estimation to solve problems.	Determining Population Size Scientific Measurement
9-12.APPD.2.	Students are expected to use computers, probes, and software when available to collect, display, and analyze data.	A History of Global Climate Change Adaptation Determining Population Size Ecology 102 Energy Transformation Laboratory Tools and Safety Land Habitats Milestones and Turning Points Nuclear Power Photosynthesis in Plants Plate Tectonics Population Genetics Population Size Scientific Measurement Societal Consequences Soil Formation The Cycles of Matter The Study of Environmental Science The Water Cycle Trophic Levels and Food Webs Urban Growth Water Policy

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.APPE.	Students know that perfect solutions do not exist. All technological solutions involve trade-offs in which decisions to include more of one quality means less of another. All solutions involve consequences, some intended, others not.	
9-12.APPE.1.	Students are expected to analyze a societal issue that may be addressed through science and/or technology. Compare alternative solutions by considering trade-offs and unintended consequences (e.g., removing dams to increase salmon spawning).	<ul style="list-style-type: none"> A History of Global Climate Change Air Quality Atmospheric Pollution Changing Waterways Effects of Technology Global Change Global Connection: Newfoundland Cod Fishery Collapse Global Connection: Nuclear Fuel Global Connection: Water Management and Katrina Governments and Business Human Events and the Environment Humans and the Energy Cycle Impact of Policy Informed Policy Issues Affecting Marine Ecosystems Land Management and Planning Milestones and Turning Points Minerals and Mining Natural Events and the Environment Nonnative Species In Aquatic Ecosystems Nuclear Power Other Influences on Personal Health Ozone Patterns in Systems Resource Conservation Societal Consequences Soil and Agriculture Streams and Rivers Success Stories The Social Costs of Resource Use

Standard ID	Standard Text	Edgenuity Lesson Name
9-12.APPE.1.	Students are expected to analyze a societal issue that may be addressed through science and/or technology. Compare alternative solutions by considering trade-offs and unintended consequences (e.g., removing dams to increase salmon spawning). <i>Cont.</i>	The Study of Environmental Science The Water Cycle Urban Growth Water Policy What Are Natural Resources?
9-12.APPF.	Students know that it is important for all citizens to apply science and technology to critical issues that influence society.	
9-12.APPF.1.	Students are expected to critically analyze scientific information in current events to make personal choices or to understand public-policy decisions.	
WA.4. LS2.	Life Science Ecosystems (LS2)	
9-11.LS2.	Maintenance and Stability of Populations: In prior grades students learned to apply key concepts about ecosystems to understand the interactions among organisms and the nonliving environment. In grades 9-11 students learn about the factors that foster or limit growth of populations within ecosystems and that help to maintain the health of the ecosystem overall. Organisms participate in the cycles of matter and flow of energy to survive and reproduce. Given abundant resources, populations can increase at rapid rates. But living and nonliving factors limit growth, resulting in ecosystems that can remain stable for long periods of time. Understanding the factors that affect populations is important for many societal issues, from decisions about protecting endangered species to questions about how to meet the resource needs of civilization while maintaining the health and sustainability of Earth's ecosystems.	
9-11.LS2A.	Students know that matter cycles and energy flows through living and nonliving components in ecosystems. The transfer of matter and energy is important for maintaining the health and sustainability of an ecosystem.	
9-11.LS2A.1.	Students are expected to explain how plants and animals cycle carbon and nitrogen within an ecosystem.	Effects of Cycles on Ecosystems Modern Forestry Ocean Exploration Patterns in Systems Photosynthesis in Plants The Cycles of Matter The Study of Environmental Science

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS2A.2.	Students are expected to explain how matter cycles and energy flows in ecosystems, resulting in the formation of differing chemical compounds and heat.	Aquatic Habitats Effects of Cycles on Ecosystems Energy Transfer Energy Transformation Global Connection: Deep Sea Ecologies Global Connection: Microflora and Microfauna Global Connection: Recycling on Earth Humans and the Energy Cycle Modern Forestry Ocean Exploration Patterns in Systems Photosynthesis in Plants Pools, Ponds, and Lakes Soil Formation Systems of the Biosphere The Cycles of Matter The Study of Environmental Science The Water Cycle Trophic Levels and Food Webs Wetlands
9-11.LS2B.	Students know that living organisms have the capacity to produce very large populations. Population density is the number of individuals of a particular population living in a given amount of space.	
9-11.LS2B.1.	Students are expected to evaluate the conditions necessary for rapid population growth (e.g., given adequate living and nonliving resources and no disease or predators, populations of an organism increase at rapid rates).	Biodiversity Determining Population Size Global Connection: Human Impact on Population Size Measuring Populations Nonnative Species In Aquatic Ecosystems Population Genetics Population Size Skills Lesson: Modeling Systems and Cycles Trophic Levels and Food Webs

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS2B.1.	Students are expected to evaluate the conditions necessary for rapid population growth (e.g., given adequate living and nonliving resources and no disease or predators, populations of an organism increase at rapid rates). <i>Cont.</i>	Urban Growth
9-11.LS2B.2.	Students are expected, to given ecosystem data, calculate the population density of an organism.	Determining Population Size Natural Events and the Environment Population Size
9-11.LS2C.	Students know that population growth is limited by the availability of matter and energy found in resources, the size of the environment, and the presence of competing and/or predatory organisms.	
9-11.LS2C.1.	Students are expected to explain factors, including matter and energy, in the environment that limit the growth of plant and animal populations in natural ecosystems.	Ecology 102 Limiting Factors and Humans Population Size Streams and Rivers Trophic Levels and Food Webs
9-11.LS2D.	Students know that scientists represent ecosystems in the natural world using mathematical models.	
9-11.LS2D.1.	Students are expected to draw a systems diagram to illustrate and explain why introduced (nonnative) species often do poorly and have a tendency to die out, as well as why they sometimes do very well and force out native species.	Biodiversity Climate and Change in Ecosystems Global Connection: Human Impact on Population Size Global Connection: Why Invasive Species Thrive Impact of Policy Informed Policy Nonnative Species In Aquatic Ecosystems Organismal Relationships Population Genetics Societal Consequences
9-11.LS2E.	Students know that interrelationships of organisms may generate ecosystems that are stable for hundreds or thousands of years. Biodiversity refers to the different kinds of organisms in specific ecosystems or on the planet as a whole.	
9-11.LS2E.1.	Students are expected to compare the biodiversity of organisms in different types of ecosystems (e.g., rain forest, grassland, desert) noting the interdependencies and interrelationships among the organisms in these different ecosystems.	Alpine and Taiga Biomes Aquatic Habitats

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS2E.1.	Students are expected to compare the biodiversity of organisms in different types of ecosystems (e.g., rain forest, grassland, desert) noting the interdependencies and interrelationships among the organisms in these different ecosystems. <i>Cont.</i>	Biodiversity Characteristics of Biomes Climate and Change in Ecosystems Coral Reefs Deciduous Forests Desert and Desert-Scrub Biomes Ecology 101 Ecology 102 Environmental Scientists and Ecologists Freshwater and Marine Biomes Global Connection: Deforestation in Haiti Global Connection: Deep Sea Ecologies Global Connection: Water Management and Katrina Issues Affecting Marine Ecosystems Land Habitats Modern Forestry Nonnative Species In Aquatic Ecosystems Ocean Exploration Pools, Ponds, and Lakes Population Genetics Rainforest Loss Salt Marshes and Mangroves Savanna and Grassland Biomes Skills Lesson: Constructing Valid Criticisms Skills Lesson: Making Comparisons Streams and Rivers Succession The Chaparral The Rainforest The Study of Environmental Science The Tundra

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS2E.1.	Students are expected to compare the biodiversity of organisms in different types of ecosystems (e.g., rain forest, grassland, desert) noting the interdependencies and interrelationships among the organisms in these different ecosystems. <i>Cont.</i>	Trophic Levels and Food Webs Wetlands
9-11.LS2F.	Students know that the concept of sustainable development supports adoption of policies that enable people to obtain the resources they need today without limiting the ability of future generations to meet their own needs. Sustainable processes include substituting renewable for nonrenewable resources, recycling, and using fewer resources.	
9-11.LS2F.1.	Students are expected to explain how scientific concepts and findings relate to a resource issue currently under discussion in the state of Washington (e.g., removal of dams to facilitate salmon spawning in rivers; construction of wind farms).	A History of Global Climate Change Air Quality Effects of Cycles on Ecosystems Effects of Technology Fire and Nature Global Change Global Connection: Changing Migratory Patterns Global Connection: Human Impact on Population Size Global Connection: Nuclear Fuel Global Connection: Why Invasive Species Thrive Governments and Business Human Events and the Environment Human Use of Land Humans and the Energy Cycle Impact of Policy Informed Policy Issues Affecting Marine Ecosystems Land Management and Planning Limiting Factors and Humans Milestones and Turning Points Minerals and Mining Modern Forestry Natural Events and the Environment

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS2F.1.	Students are expected to explain how scientific concepts and findings relate to a resource issue currently under discussion in the state of Washington (e.g., removal of dams to facilitate salmon spawning in rivers; construction of wind farms). <i>Cont.</i>	Nonnative Species In Aquatic Ecosystems Ozone Pools, Ponds, and Lakes Resource Conservation
9-11.LS2F.2.	Students are expected to explain how the concept of sustainable development may be applied to a current resource issue in the state of Washington.	Soil and Agriculture Sustainability The Environment and the Individual The Social Costs of Resource Use Urban Growth Water Pollution Wetlands Effects of Cycles on Ecosystems Effects of Technology Issues Affecting Marine Ecosystems Land Management and Planning Minerals and Mining Modern Forestry Nonnative Species In Aquatic Ecosystems Resource Conservation Soil and Agriculture Streams and Rivers Sustainability The Social Costs of Resource Use Urban Growth Water Pollution Wetlands What Are Natural Resources?

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS3.	Mechanisms of Evolution: In prior grades students learned how the traits of organisms are passed on through the transfer of genetic information during reproduction. In grades 9-11 students learn about the factors that underlie biological evolution: variability of offspring, population growth, a finite supply of resources, and natural selection. Both the fossil record and analyses of DNA have made it possible to better understand the causes of variability and to determine how the many species alive today are related. Evolution is the major framework that explains the amazing diversity of life on our planet and guides the work of the life sciences.	
9-11.LS3A.	Students know that biological evolution is due to: (1) genetic variability of offspring due to mutations and genetic recombination, (2) the potential for a species to increase its numbers, (3) a finite supply of resources, and (4) natural selection by the environment for those offspring better able to survive and produce offspring.	
9-11.LS3A.1.	Students are expected to explain biological evolution as the consequence of the interactions of four factors: population growth, inherited variability of offspring, a finite supply of resources, and natural selection by the environment of offspring better able to survive and reproduce.	Adaptation Biodiversity Measuring Populations Population Genetics
9-11.LS3A.2.	Students are expected to predict the effect on a species if one of these factors should change.	Adaptation Biodiversity Characteristics of Biomes Measuring Populations Organismal Relationships Population Genetics
9-11.LS3B.	Students know that random changes in the genetic makeup of cells and organisms (mutations) can cause changes in their physical characteristics or behaviors. If the genetic mutations occur in eggs or sperm cells, the changes will be inherited by offspring. While many of these changes will be harmful, a small minority may allow the offspring to better survive and reproduce.	
9-11.LS3B.1.	Students are expected to describe the molecular process by which organisms pass on physical and behavioral traits to offspring, as well as the environmental and genetic factors that cause minor differences (variations) in offspring or occasional 'mistakes' in the copying of genetic material that can be inherited by future generations (mutations).	Adaptation Characteristics of Biomes Measuring Populations Organismal Relationships Population Genetics

Standard ID	Standard Text	Edgenuity Lesson Name
9-11.LS3B.2.	Students are expected to explain how a genetic mutation may or may not allow a species to survive and reproduce in a given environment.	Adaptation Other Influences on Personal Health
9-11.LS3C.	Students know that the great diversity of organisms is the result of more than 3.5 billion years of evolution that has filled available ecosystem niches on Earth with life forms.	
9-11.LS3C.1.	Students are expected to explain how the millions of different species alive today are related by descent from a common ancestor.	Adaptation Biodiversity Measuring Populations Population Genetics
9-11.LS3C.2.	Students are expected to explain that genes in organisms that are very different (e.g., yeast, flies, and mammals) can be very similar because these organisms all share a common ancestor.	Adaptation Biodiversity Measuring Populations Population Genetics
9-11.LS3D.	Students know that the fossil record and anatomical and molecular similarities observed among diverse species of living organisms provide evidence of biological evolution.	
9-11.LS3D.1.	Students are expected to using the fossil record and anatomical and/or molecular (DNA) similarities as evidence, formulate a logical argument for biological evolution as an explanation for the development of a representative species (e.g., birds, horses, elephants, whales).	
9-11.LS3E.	Students know that biological classifications are based on how organisms are related, reflecting their evolutionary history. Scientists infer relationships from physiological traits, genetic information, and the ability of two organisms to produce fertile offspring.	Adaptation
9-11.LS3E.1.	Students are expected to classify organisms, using similarities and differences in physical and functional characteristics.	Measuring Populations
9-11.LS3E.2.	Students are expected to explain similarities and differences among closely related organisms in terms of biological evolution (e.g., "Darwin's finches" had different beaks due to food sources on the islands where they evolved).	Measuring Populations