

Standard ID	Standard Text	Edgenuity Lesson Name
WA.HS-LS.	LIFE SCIENCE	
HS-LS1.	From Molecules to Organisms: Structures and Processes	
	Students who demonstrate understanding can:	
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.	Genetic Code DNA and RNA Structure Protein Synthesis Lab: Building Proteins from RNA
HS-LS1-2.	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	Prokaryotic and Eukaryotic Cells The Function of Organelles Animal and Plant Cells Cell Homeostasis Lab: Diffusion Across a Semi-permeable Membrane Body Organization The Endocrine and Exocrine Systems
HS-LS1-3.	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	The Endocrine and Exocrine Systems
HS-LS1-4.	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	Mitosis Cell Differentiation and Specialization
HS-LS1-5.	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	Light Dependent Reactions in Photosynthesis Light Independent Reactions in Photosynthesis
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.	Elements of Living Organisms Macromolecules Catalysts
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.	Cellular Respiration

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HS-LS2.	Ecosystems: Interactions, Energy, and Dynamics	
	Students who demonstrate understanding can:	
HS-LS2-1.	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	Population Size and Structure
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.	Population Size and Structure
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.	Light Dependent Reactions in Photosynthesis Light Independent Reactions in Photosynthesis Cellular Respiration The Cycles of Matter
HS-LS2-4.	Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.	Relationships Among Organisms Energy Flow in Ecosystems
HS-LS2-5.	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	Light Dependent Reactions in Photosynthesis Light Independent Reactions in Photosynthesis Cellular Respiration The Cycles of Matter
HS-LS2-6.	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.	Populations and the Environment Relationships Among Organisms Lab: Interdependence of Organisms Population Size and Structure Population Growth Succession and Extinction
HS-LS2-7.	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	Relationships Among Organisms Human Impact on the Environment

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HS-LS2-8.	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	Social Behavior
HS-LS3.	Heredity: Inheritance and Variation of Traits	
	Students who demonstrate understanding can:	
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.	Meiosis
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.	Meiosis DNA Mutations Laws of Inheritance Probability of Inheritance Non-Mendelian Inheritance Sex-linked Inheritance
HS-LS3-3.	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	Introduction to Genetics Probability of Inheritance Lab: Mouse Genetics (One Trait) Darwin's Theory Lab: Natural Selection
HS-LS4.	Biological Evolution: Unity and Diversity	
	Students who demonstrate understanding can:	
HS-LS4-1.	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	Biological Evidence and the Fossil Record Evolutionary Relationships
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.	Darwin's Theory Lab: Natural Selection Factors Affecting Genetic Variation Factors Affecting Biological Diversity Biogeographic Isolation

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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.	Darwin's Theory
HS-LS4-4.	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	Darwin's Theory Biogeographic Isolation
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.	Biogeographic Isolation Succession and Extinction
HS-LS4-6.	Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.	Human Impact on the Environment Biodiversity
<b>WA.HS-ESS. EARTH AND SPACE SCIENCE</b>		
HS-ESS1.	<b>Earth's Place in the Universe</b>	
Students who demonstrate understanding can:		
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.	Relative Dating Continental Drift
HS-ESS1-6.	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	The Expanding Universe Planets Fossils Relative Dating Geologic Time Continental Drift
HS-ESS2.	<b>Earth's Systems</b>	
Students who demonstrate understanding can:		
HS-ESS2-7.	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	Fossils Geologic Time Spheres of Earth Biological Evidence and the Fossil Record

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HS-ESS3.	Earth and Human Activity	
	Students who demonstrate understanding can:	
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.	Earth's Climate History Natural Environmental Change Human Impact on the Environment Energy on Earth
HS-ESS3-3.	Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	Population Growth Succession and Extinction Human Impact on the Environment Biodiversity Human Impact on Resources
HS-ESS3-4.	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	Human Impact on the Environment Biodiversity
WA.HS-ETS.	ENGINEERING DESIGN	
HS-ETS1.	Engineering Design	
	Students who demonstrate understanding can:	
HS-ETS1-1.	Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.	Human Impact on the Environment
HS-ETS1-2.	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.	Human Impact on the Environment
HS-ETS1-3.	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.	Human Impact on the Environment
HS-ETS1-4.	Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.	Human Impact on the Environment

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WA.RST.9-10.	Reading Standards for Literacy in Science and Technical Subjects	
	Key Ideas and Details	
RST.9-10.1.	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	Cell Homeostasis Meiosis
RST.9-10.2.	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	Energy Flow in Ecosystems
RST.9-10.3.	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks attending to special cases or exceptions defined in the text.	Lab: Diffusion Across a Semi-permeable Membrane Lab: Building Proteins from RNA
	Craft and Structure	
RST.9-10.4.	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.	The Function of Organelles
RST.9-10.5.	Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).	The Function of Organelles
RST.9-10.6.	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address	Factors Affecting Biological Diversity
	Integration of Knowledge and Ideas	
RST.9-10.7.	Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.	Probability of Inheritance
RST.9-10.8.	Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.	Biological Evidence and the Fossil Record

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RST.9-10.9.	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	Darwin's Theory Lab: Natural Selection
Range of Reading and Level of Text Complexity		
RST.9-10.10.	By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.	Biogeographic Isolation
WA.WHST.9-10. Writing Standards for Literacy in Science and Technical Subjects		
10. Text Types and Purposes		
WHST.9-10.1.	Write arguments focused on discipline-specific content.	
WHST.9-10.1(a)	Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.	Biological Evidence and the Fossil Record
WHST.9-10.1(b)	Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.	Biological Evidence and the Fossil Record
WHST.9-10.1(c)	Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	Biological Evidence and the Fossil Record
WHST.9-10.1(d)	Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	Biological Evidence and the Fossil Record
WHST.9-10.1(e)	Provide a concluding statement or section that follows from or supports the argument presented.	Biological Evidence and the Fossil Record

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WHST.9-10.2.	Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	
WHST.9-10.2(a)	Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.	Factors Affecting Biological Diversity
WHST.9-10.2(b)	Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.	Factors Affecting Biological Diversity
WHST.9-10.2(c)	Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.	Factors Affecting Biological Diversity
WHST.9-10.2(d)	Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.	Factors Affecting Biological Diversity
WHST.9-10.2(e)	Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.	Factors Affecting Biological Diversity
WHST.9-10.2(f)	Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	Factors Affecting Biological Diversity
WHST.9-10.3.	(See note; not applicable as a separate requirement)	
WHST.9-10.3(a)	Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.	
Production and Distribution of Writing		
WHST.9-10.4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	Genetic Code



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WHST.9-10.5.	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	Biological Evidence and the Fossil Record
WHST.9-10.6.	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	Genetic Code
Research to Build and Present Knowledge		
WHST.9-10.7.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	Darwin's Theory
WHST.9-10.8.	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	Cell Homeostasis
WHST.9-10.9.	Draw evidence from informational texts to support analysis, reflection, and research.	Prokaryotic and Eukaryotic Cells
Range of Writing		
WHST.9-10.10.	Write routinely over extended time frames (time for 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.	Genetic Code