

8th Grade Curriculum Map Science

Unit	Standards	Resources	Duration
Unit 1 Energy: Mass and Speed Relationships	08-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.		2 Weeks
Genetics Unit 2	<p>08-LS4-5 Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.</p> <p>08-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.</p>		4 Weeks
Natural Selection Unit 3	<p>08-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.</p> <p>08-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.</p> <p>08-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.</p>		5 Weeks
Geologic History and Biologic History Unit 4	<p>08-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.</p> <p>08-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 of Earth under</p>		6 Weeks

	<p>assumption that natural laws operate today as in the past.</p> <p>08-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.</p> <p>08-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.</p> <p>How do fossil and rock evidence give clues to major events in Earth's history?</p>		
Ecosystems Unit 5	<p>08-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.</p> <p>08-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.</p>		4 Weeks
Natural Hazards Unit 6	<p>08-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distribution of Earth's mineral energy, and groundwater resources are the result of past and current geoscience processes.</p> <p>08-ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.</p> <p>08-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p>		6 Weeks
Global Changes Unit 7	<p>08-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.</p> <p>08-ESS3-4 Construct an argument supported by evidence for how increases in human population</p>		4 Weeks

	<p>and per-capita consumption of natural resources impact Earth's systems.</p> <p>08-ESS3-5 Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.</p>		
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