

Biology Scope and Sequence

Days	Unit	Standard(s)/ Outcome(s)	Essential/Guiding Questions
18	Chesapeake Bay ● Sustainability ● Biodiversity ● Ecological Organization ● Biomes ● Ecosystems ● Biotic Relationships ● Population Dynamics - Carrying Capacity ● Food Chains, Food Webs, Energy Pyramids ● Succession ● Solutions to Human Activity	HS-LS2-1 HS-LS2-2 HS-LS2-3 HS-LS2-4 HS-LS2-6 HS-LS2-7 HS-LS4-6 HS-ESS2-2 HS-ESS3-1 HS-ESS3-3 HS-ESS3-4 Maryland E-lit Standards: 1, 2, 3, 4, 5	<i>What are factors that impact the health of the Chesapeake Bay as an ecosystem and are there human actions that are hurting or can help the health of the bay?</i>
14	Ocean Acidification ● Photosynthesis ● Carbon Cycling ● Human Activity ● Climate Change	HS-LS1-5 HS-LS2-5 HS-ESS2-2 HS-ESS2-6 HS-ESS3-5 HS-ESS3-6 Maryland E-lit Standards: 1, 2, 3, 4, 5	<i>What impact does carbon dioxide have on our ecosystem?</i>
9	Axolotl Regeneration ● Organization of Body Systems ● Interacting Body Systems ● Cell Division ● Homeostasis	HS-LS1-2 HS-LS1-3 HS-LS1-4	<i>How do organisms build their bodies and how can some organisms regenerate whole body parts?</i>

9	Diabetes ● Digestion ● Cellular Respiration ● Homeostasis ● Diffusion and Osmosis ● Formation of Complex Carbon-Based Molecules	HS-LS1-2 HS-LS1-3 HS-LS1-6 HS-LS1-7	<i>How does diabetes impact the body?</i>
15	Dogs ● Meiosis ● Genotype/Phenotype ● Genes ● Alleles ● Punnett Squares ● Mutations ● Chromosomes ● DNA ● Protein Synthesis ● Genetic Conditions and Disorders ● Pedigrees	HS-LS1-1 HS-LS3-1 HS-LS3-2 HS-LS3-3	<i>Why are there so many different dog breeds?</i>
15	Tuskless Elephants ● Continental Drift ● Fossils ● Geologic Timeline ● Mass Extinctions ● Earth's Changing Climate Over Time ● Phylogeny ● Evolution ● Index Fossils ● Adaptations ● Homologous/Analogous Structures ● Adaptive Radiation ● Natural Selection ● Evidence for Evolution	HS-ESS2-7 HS-LS2-6 HS-LS2-8 HS-LS4-1 HS-LS4-2 HS-LS4-3 HS-LS4-4 HS-LS4-5	<i>Why are African Elephants no longer displaying the gene for tusks?</i>