COURSE AT A GLANCE - Biology

There are 7 components of our Biology curriculum. They are numbered below (and in no particular order).

Semester 1		Semester 2	
Unit 1: Systems and Organization	**Standards**	**Unit 4: Natural Selection**	**Standards**
Students will learn the characteristics of living things, as well as the levels of organization.	HS-LS1-2 HS-LS1-3 HS-LS1-4	Students will be able to describe how and why genetic variation increases the chances for species survival. Students will describe how organisms better suited to their environment have increased survival rates and are able to pass down successful traits through reproduction.	HS-LS4-2 HS-LS4-3 HS-LS4-4
Unit 2: Energy for Life	**Standards**	**Unit 5: Evolution**	**Standards**
Students will be able to identify the reactants and products of photosynthesis and cell respiration. Students will model and explain the four macromolecules and how they are broken down.	HS-LS1-5 HS-LS1-6 HS-LS1-7 HS-LS2-5	Students will be able to use DNA sequences to support the theory of common ancestry, where DNA sequences have many similarities, but also vary among species. Students will be able to utilize the fossil record to show relatedness to modern-day organisms citing common patterns as evidence.	HS-LS4-1 HS-LS4-7
Unit 3: Genetics	**Standards**	**Unit 6: Biodiversity**	**Standards**
Students will be able to explain how the structure of DNA determines the structure of proteins, each with specific functions. Students will construct a model such as Punnett squares, pedigrees, and karyotypes to make and defend a claim that the instructions for expressing a species' characteristic traits are carried in DNA.	HS-LS1-1 HS-LS3-1 HS-LS3-2 HS-LS3-3	Students will identify and explain how changes in environmental conditions may result in an increase in the number of individuals of some species, the emergence of new species over time, and the extinction of other species.	HS-LS4-5 HS-LS2-3 HS-LS2-4 HS-LS2-1 HS-LS2-8 HS-LS2-2 HS-LS2-6 HS-LS2-7 HS-LS4-6
		Unit 7: Ecosystem Resources	**Standards**
		Students will describe how resource availability has shaped human societies. Students will be able to describe how natural hazard occurrences can affect human activity and have significantly altered the sizes and distributions of populations.	HS-ESS3-1 HS-ESS3-3 HS-ESS3-4 HS-ESS3-5 HS-ESS3-6

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