

Biology with Earth and Space Science Year at a Glance 2019-2020

Instructional Segment (Unit)	1 - Teen Brain-Homeostasis Investigation and Stress Response	2 - Human Impact Effect on Biodiversity- Plastic vs Animals	3 - Photosynthesis and Respiration- Dead Zones	4 - Natural Selection and Evolution	5- Inheritance of traits	6 - Structure, Function, and Growth (from cells to organisms)	Flex: Human Impact
Guiding Questions	Is stress good or bad?	How can humans affect biodiversity within an ecosystem?	How can humans affect photosynthesis and respiration in the ocean?	Why are we still here?	Do our genes determine who we are?	How does one cell become a whole person?	How do humans affect the health of our planet?
Critical Concepts	From Molecules to Organisms 1	Ecosystems 1 Ecosystems 2 Ecosystems 3	Earth's Systems 2 Ecosystems 2 From Molecules to Organisms 3	Biological Evolution 1 Biological Evolution 3 Earth and Human Activity 1 Earth's Systems 1 Evaluating and Testing Solutions	Heredity 1 Heredity 2	From Molecules to Organisms 1 From Molecules to Organisms 2	Earth and Human Activity Earth and Human Activity 2 Ecosystems, Biological Evolution Defining Problems Designing Solutions Evaluating and Testing Solutions
Performance Expectations (CA NGSS Standards)	HS-LS1-1 HS-LS1-2	HS-LS1-1 HS-ETS1-1 HS-LS2-1 HS-ETS1-2 HS-LS2-2 HS-ETS1-3 HS-LS2-6 HS-ETS1-4 HS-LS2-8	HS-LS1-5 HS-ETS1-2 HS-LS1-6 HS-ESS1-6 HS-LS1-7 HS-ESS2-7 HS-ETS1-1 HS-LS2-3	HS-LS4-1 HS-ESS1-5 HS-LS4-2 HS-ESS2-5 HS-LS4-4 HS-ESS3-1 HS-LS4-5 HS-ESS3-4 HS-ETS1-3	HS-LS3-1 HS-LS3-2 HS-LS3-3	HS-LS1-1 HS-LS1-2 HS-LS1-3 HS-LS1-4	HS-LS2-6 HS-LS2-7 HS-ESS3-1 HS-ESS3-4 HS-ESS3-6
Suggested Length of Time	3 weeks (Plus a culture building week)	4 weeks	2 weeks	2 weeks	2 weeks	3 -4 weeks	2 weeks
Highlights	Students will dive deep into SEPs and CCCs through this unit. It is an introductory unit which will help with the rest of the year progression.	Students will explore ecosystems interactions through the lens of competition.	Students will learn about photosynthesis and respiration using the anchor phenomena of dead zones. Students will expand on traditional photosynthesis lessons by applying their knowledge to an aquatic ecosystem.	Students will learn what makes our species of hominid unique in an evolutionary perspective. Students will apply this learning to various species and their fitness.	Students will begin to get foundational knowledge for inheritance and genetics looking specifically at gene expression surrounding skin color. Students will challenge their social perspective while learning core content.	Students will explore how DNA creates the blueprint for complex organisms. Students will engage in conversations surrounding ethics and genetics in a modern era.	Students will learn about the impacts of plastics and climate change on earth. Students will explore alternatives and their own role in climate change.