

Biology Grade Level: 10	NJSLS Standards (NGSS)	NJ Model Curriculum Unit	Essential Questions	Content	Skills	Essential Vocabulary
September @ 15 days *First few days of school included	HS-LS1-5; HS-LS2-3; HS-LS2-4; HS-LS2-5	Unit 1: 15 Days	How can the process of photosynthesis and respiration in a cell impact all of Earth's systems?	Control Experiment Chemical Reaction Photosynthesis Respiration	Metric System Graphing	Independent Variable DEpendent Variable Reactants Products CO ₂ , H ₂ O, O ₂
October @ 21 Days	HS-LS2-1; HS-LS2-2; HS-LS2-6	Unit 1: 5 days Unit 2: 15 days	How do organisms interact with the living and the nonliving environment?	Ecology Energy Flow Cycles of Matter	Analyze data	Biotic factor Abiotic Factor Producers, Consumers, Autotrophs, Heterotrophs, Food Chain, Food Web
November @18 days **4 of these are ½ days	HS-ESS3-1; HS-ESS3-6; HS-ESS3-5; HS-ESS3-4; HS-ETS1-3	Unit 2: 5 days Unit 3: 12 days	How do humans depend on Earth's resources?	Natural Resources Interdependence between Humans and Earth's Systems	Analyze Data Interpret data: table & graphs	Renewable Resources, Nonrenewable Resources, Sustainable Development, Agriculture, Monoculture, Green Revolution
December @ 16 days ** 1 day is ½ day	HS-ESS3-3; HS-LS2-7; HS-LS4-6	Unit 3: 8 days Unit 4: 8 days	Is the damage to the environment permanent?	Design a system to reduce the impact of Human activity of the environment	Modeling Concept map: to show the relationship among the terms	Agriculture, Monoculture, Green Revolution Ecosystem Diversity, Species Diversity, Extinction, Endangered Species, Habitat Fragmentation,

						Pollution, Invasive Species
January @ 20 days	HS-ETS1-1; HS-ETS1-2; HS-ETS1-3; HS-ETS1-4	Unit 4: 12 days Unit 5: 8 days	How do(es) the structure of organisms enable life's functions?	Structure and function of cells Role of specialized cells (support?) in maintenance and growth mitosis	Use of microscopes Investigation and inquiry	organelles
February @ 19 days **3 of these days are ½ days	HS-LS1-1; HS-L1-2; HS-LS1-3; HS-LS1-4	Unit 5: 12 days Unit 6: 5 days		Maintenance of homeostasis Interactions of organ systems	Observation of organisms	Cell transportation Levels of organization: cells, tissues, organs
March @ 20 days	HS-LS1-4; HS-LS3-1; HS-LS3-2	Unit 6: 15 days Unit 7: 5 days	How does the structure of DNA relate to the synthesis of protein? *(Need 10 days from unit 7 for unit 6)	DNA and inheritance protein synthesis structure and function of DNA meiosis	Statistical modeling Modeling of DNA structure Replication DNA Translation activity DNA coding Cloning essay	Chromosomes DNA replication Transcription and translation DNA sequence Gene expression genotype and phenotype Dominant and recessive Crossing over
April Easter is April 1 @ 16 days ***Assuming Easter break is March 31 - April 6	HS-LS4-3; HS-LS4-5; HS-LS2-8	Unit 7: 15 days	How does natural selection lead to adaptation of populations? Why is it so important to take all of the antibiotics in prescriptions to feel better?	Natural selection genetic variation Adaptation Speciation Mutation Comparative anatomy	Graphing compare and contrast body structure and function Cause and effect relationships	Natural selection Adaptation Genetic variation Comparative anatomy Speciation mutation
May @ 22 days	HS-LS4-1; HS-LS4-2	Unit 8: 20 days	What is the relationship between natural	Evolution Comparative anatomy		Evolution Cladogram phylogeny

			selection and evolution?			
June @ 10 days This does not include the last week of school						