

Life Science Pacing Guide

Life Science Pacing Guide		
SOL #	NW1 - Topic/Unit	Suggested Time Frame
LS.1 & LS.2	Unit 1: Scientific and Engineering Practices; and The Nature of Science (steps of the scientific method, graphing, independent and dependent variables, accuracy/precision, quantitative vs qualitative)	5-day Review; Embedded throughout the year
LS.1 & LS.2	Unit 2: Cell Theory and Structure/function of cells (scientific laws/theories, cell theory, cell structure, function of organelles, similarities/differences of plant & animal cells, microscope use & advancement)	25 days
LS.2 & LS.4	Unit 3: Life Processes (Cellular Respiration, Photosynthesis, osmosis, diffusion, permeability) <i>Embed 6.4: The student will investigate and understand that there are basic sources of energy and that energy can be transformed.</i>	10 days
LS.3	Unit 4: Cellular Organization (multi- and unicellular organisms, organism structure, form fits function of cells)	5 days
SOL #	NW 2 - Topic/Unit	Suggested Time Frame
LS.1	Scientific and Engineering Practices	Embedded throughout the year
LS.2 & LS.10	Unit 5: Cell Division (Mitosis, Meiosis, and forms of DNA)	10 days
LS.10	Unit 6: DNA & Genetics (Structure/function of DNA, reproduction, Dominant/recessive traits, genes, alleles, Punnett Squares, genotypes/phenotypes, Mendelian genetics, inheritance)	20 days
LS.7b & LS.11	Unit 7: Change over Time (Adaptation, Mutation, Natural Selection, Extinction and Fossil Record, Evolution, Genetic Variation and Environmental Factors)	15 days
SOL #	NW3 - Topic/Unit	Suggested Time Frame
LS.1	Scientific and Engineering Practices	Embedded throughout the year
LS.8ab	Unit 8: Change over Time (Organism response to change, tropisms, dormancy, circadian rhythm, factors that affect population size)	10 days

LS.4a, LS.7a & LS.5bc	Unit 9: Ecosystems (Abiotic/biotic factors, Ecosystem hierarchy, terrestrial, marine and freshwater ecosystems, Food webs/ chains)	20 days
LS.6	Unit 10: Interactions within Biological Communities (Predation, cooperation, competition, symbiotic relationships, niches) <i>Embed 6.7: The student will investigate and understand that air has properties and that Earth's atmosphere has structure and is dynamic.</i>	15 days
SOL #	NW 4-Topic/Unit	Suggested Time Frame
LS.1	Scientific and Engineering Practices	Embedded throughout the year
LS.9	Unit 11: Human Activity and its effect on the Ecosystem - worldwide and locally (habitat alteration, habitat stability, land use, abiotic and biotic factors, competition)	10 days
LS.5a & LS.8c	Unit 12: Large Scale effects on Ecosystems (Cycles of Nature, Eutrophication, Climate Change, and Catastrophic Disturbance)	14 days
LS. 3c	Unit 13: Classification (Binomial Nomenclature, taxonomy)	14 days
6.2	Investigations: To understand that the solar system is organized and the various bodies in the solar system interact	3 days
6.3	Investigations: To understand that there is a relationship between the sun, Earth, and the moon	3 days