

Semester 1: Ecology and Matter and Energy

Week #	Standards	Essential skills/objectives	Activities	Assessments
1:	HS-LS1-2 HS-LS1-1	Ice Breakers Syllabus and Class Expectations Quantitative and Qualitative Observations Design and Experiment/Scientific Method	Worm Identification and Experiment Lab Nature of Science	Worm Lab Packet Worm Experiment Poster Gallery Walk
2:	HS-LS1-6 HS-LS 2-1 HS-LS 2-2 Hs-LS 2-3	Sagebrush Ecosystem Abiotic and biotic factors Food Webs/Food Chains Limiting Factors	Sage Grouse-Sagebrush Sea Sagebrush organisms food web card sort and poster activity Deer Population Activity	Local Food Web Summary Limiting Factors Lab
3:	HS-LS 2-1 HS-LS 2-2 Hs-LS 2-3 ETS 1-1, 1-3	Limiting Factors Population Dynamics Sustainability-Wildlife Crossings	Local Mule Deer Population article and data analysis Design a Wildlife Crossing PBL Evaluate Designs in presentations	Ecology quiz/ Wildlife Crossing Project
4:	HS-LS 2-1 HS-LS 2-2 Hs-LS 2-3	Ecological Pyramids Food Webs/Food Chains 10% rule Photosynthesis and Cellular Respiration	ID local Owls by sound Owl Pellet Lab and lab conclusion How to write a lab conclusion Adaptations of owls	Owl Pellet Lab conclusion

5	HS-LS 2-2 HS-LS3-1 HS-LS1-2	Biodiversity Classification of Life-Prokaryotes And Eukaryotes	Last Tepui-video and guide Invasive Species Research Project Classification of Life doodle notes	Classification of life quiz Invasive Species Poster
---	-----------------------------------	---	--	--

6	HS-LS2-6 HS-LS2-7 HS-LS2-5	Biodiversity Fire and Ecosystems Carbon cycle and Reservoirs	Carbon Cycle Game Carbon Sink-solutions for climate change Biggest Wildfire Research Matchstick model Fire Lab Data Nugget-Prairie Fires	Fire lab Data sheet Carbon Cycle Reflection
7	HS-LS3-1 HS-LS 1-2	Macromolecules Photosynthesis and Cellular Resp Energy Transfer	Cells and Energy Stations Activity Plant vs. Animal Cells-microscope Macromolecules (carbon time) in food Elodea and BTB	Photosynthesis and CR quiz
8	HS-LS1-1 HS LS1-3 HS LS 1-7	Homeostasis Cellular Respiration and Fermentation	Plant Stomata Lab Effect of Sugar on Yeast Respiration Marathon Runner (New visions PBL)	Initial model and data
9	HS-LS1-1 HS LS1-3 HS LS 1-7	Aerobic vs. Anaerobic Respiration Homeostasis	Marathon Runner (New visions PBL) Muscle Fatigue Clothespin Lab	Final model for marathon runner PBL
	Extras	Metric Measuring and Metric Olympics		

Semester 2: Genetics and Evolution

Week	Standards	Essential skills/objectives	Activities	Assessments
10	HS-LS 3-1 HS-LS 1-1 HS-LS 3-2	DNA Structure and function-transcription, translation, replication, codons, amino acids, proteins Mutation types	DNA paper model DNA, genes, etc video and worksheet DNA doodle notes Mutations Activity	DNA Quiz
11	HS-LS 3-1 HS-LS 3-3	Punnett Squares Variation of traits	Class Survey of Traits Are your traits dominant	Lab Conclusion and Punnett

		Dominant and Recessive Traits	Coin Flip Baby Lab PTC Lab	Square Quiz
12	HS-LS 3-2 HS-LS 3-1	Mitosis and Meiosis	Mitosis and Meiosis Packet and Stations activity Mitosis under microscope	Choice assessment
13	HS-LS 3-2 HS-LS 3-1	Epigenetics Mutations DNA	Identical Twin Studies Epigenetics and chemicals research activity	Genetics Unit Test
14	HS-LS 4-1 HS-LS 4-2 HS-LS 4-3	Evolution-4 Lines of evidence Adaptations Fossil Record Geologic Time	"Making of a Theory" video Darwin's Finches Activity Fossil Activity "Day the Mesozoic Died" Evidence for Evolution Foldable	Lizard Evolution Packet
15	HS-LS 4-1 HS-LS 4-2 HS-LS 4-3	Phylogenetic Tree Evidence for Evolution Homologous Structures	Lizard Evolution Biointeractive Homologous Structures Packet Tuskless Elephants	Choice Assessment
16	HS-LS 4-1 HS-LS 4-2 HS-LS 4-3	Convergent and Divergent Evolution Genetic Drift Coevolution	Evolution doodle notes Evolution types foldable Data Nugget Evolution	Evolution Quiz and Data Nugget
17	HS LS 1-1 HS-LS 4-1 HS-LS 3-1 HS-LS1-3 ETS 1-2 ETS 1-3	Evolution of Sick Humans-how have our environments changed and how is it affecting our health?	New Visions-Evolution of Sick Humans PBL	Initial Model and activities
18	HS LS 1-1 HS-LS 4-1 HS-LS 3-1 HS-LS1-3 ETS 1-2 ETS 1-3	Evolution of Sick Humans-how have our environments changed and how is it affecting our health?	New Visions-Evolution of Sick Humans PBL	Final Model Presented Biology Final