

Unit:	Key Ideas:	Standards:	Assessment:
Introduction to Science	Characteristics of Life Science as a Process	LS1: From Molecules to Organisms SEP 1: Asking questions and Defining Problems SEP 4: Analyzing and Interpreting Data SEP 5: Use Math and Computational Thinking SEP 6: Constructing Explanations/Designing Solutions	Summative: Test Labs: Drawing Conclusions from Evidence (Check Lab)
Trophy Caper Case	Testing Hypotheses; Using Evidence to Support Conclusions	SEP 1: Asking Questions and Defining Problems SEP 6: Constructing Explanations/Designing Solutions	Summative: Conclusion Paragraphs Labs: Observations; Chromatography Lab; Fingerprint Lab; Peer Review
Intro to Chemistry	Atomic Structure Properties of Water pH	PS1.A: Matter and Its Interactions ESS2.C: Earth Systems SEP 6: Constructing Explanations/Designing Solutions	Summative: Test Labs: Properties of Water Lab; pH Lab

<p>Ecology</p>	<p>Levels of Ecological Organization Abiotic vs. Biotic Factors Food Webs and Energy Dynamics Bioaccumulation Climate vs. Weather Community Interactions Population Dynamics and Growth Human Population Water Quality Investigation</p>	<p>LS2: Ecosystems, Interactions, Energy, and Dynamics (LS2.A; LS2.B; LS2.D) ESS3: Earth and Human Activity (ESS3.C; ESS3.D) ETS1.B: Engineering Design SEP 1: Asking questions and Defining Problems SEP 2: Developing and Using Models SEP 3: Planning and Carrying Out Investigations SEP 4: Analyzing and Interpreting Data SEP 5: Use Math and Computational Thinking SEP 6: Constructing Explanations/Designing Solutions SEP 8: Obtaining, Evaluating, and Communicating Information</p>	<p>Summative 1: Test- Levels of Organization Summative 2: Ecosystems and Communities Summative 3: Population Dynamics Summative 4: Water Quality Lab Report Lab: Creek Water Quality Lab; Bioaccumulation Lab; Populations of Madagascar</p>
<p>Biochemistry</p>	<p>Structure and Function of Proteins, Lipids, and Carbohydrates</p>	<p>LS1: From Molecules to Organisms (LS1.A)</p>	<p>Summative: Test Lab: Identification of Macromolecules</p>
<p>Cells</p>	<p>Cell Parts Cell Transportation</p>	<p>LS1: From Molecules to Organisms</p>	<p>Summative: Test Lab: Cell Identification and Transportation</p>

Photosynthesis	Light Waves Electromagnetic Spectrum Light Dependent Reaction Light Independent Reaction	LS1: From Molecules to Organisms (LS1.C)	Summative: Test Lab: Chromatography Lab
Cell Respiration	Glycolysis Kreb's Cycle Electron Transport Chain	LS1: From Molecules to Organisms (LS1-2; LS1-7) SEP 1: Asking questions and Defining Problems SEP 2: Developing and Using Models SEP 3: Planning and Carrying Out Investigations SEP 4: Analyzing and Interpreting Data SEP 5: Use Math and Computational Thinking SEP 6: Constructing Explanations/Designing Solutions	Summative: Test Lab: Rolling In the Dough Lab
DNA and Replication	DNA Discover DNA Structure DNA Replication	LS1: From Molecules to Organisms (LS1.A)	Summative: Test Lab: DNA Extraction
RNA and Protein Synthesis	Types of RNA Transcription Translation Protein Structure Mutations	LS1: From Molecules to Organisms LS3: Heredity (LS3.A)	Summative: Test Lab: Modeling Protein Synthesis

Cell Division	Chromosome Structure Stages of Cell Division Cell Cycle Asexual vs. Sexual Reproduction Genetic Variation	LS1: From Molecules to Organisms (LS1.B) LS3: Heredity (LS3.B)	Summative: Test Lab: Mitosis Onion Root Tip Lab; Modeling Meiosis
Genetics	Mendel's Principles of Genetics Punnet Squares Variations to Inheritance Rules Pedigrees Mutations	LS3: Heredity (LS3.A; LS3.B)	Summative: Test Lab: Baby Face Genetic Lab
Debate	GMO's	SEP 7: Engaging in Argument from Evidence SEP 8: Obtaining, Evaluating, and Communicating Information	Summative: Debate
History of Life	Radiometric Dating Relative Dating Fossils Geologic Timeline Plate Tectonics	ESS2.B: Earth Systems	Formative: Quiz Lab: Radiometric M&m Lab *Note: TCH Students Teach This Unit

Evolution	Charles Darwin Natural Selection Evidence for Evolution Speciation	LS4: Biological Evolution (LS4.A; LS4.B; LS4.C)	Summative: Test Lab: Battle of the Beaks; Natural Selection Lab; Peppered Moth Lab
Taxonomy	Phylogenetics Dichotomous Keys	LS4: Biological Evolution (LS4.A)	Lab: Dichotomous Key Lab
Microbiology	Viruses Bacteria	LS1: From Molecules to Organisms	Summative: Test Lab: Disease Research Poster