Lesson	Performance Expectations (PE)	Core Ideas (DCI)	Crosscutting Concepts (CCC)	Science & Engineering Practices (SEP)
Byte-Sized Botanist (Photosynthesis & Plant Growth)	- 5-LS1-1: Support an argument that plants get their materials from air and water. - 2-LS2-1: Investigate if plants need sunlight and water to grow. - 3-LS4-3: Explain why organisms survive better in some habitats than others.	- LS1.A: Structure and Function (Plants use photosynthesis to make food and oxygen) - LS2.A: Interdependent Relationships in Ecosystems (Plants support the food chain and provide oxygen)	- Cause and Effect: How sunlight and water affect plant growth. - Energy and Matter: Plants use sunlight to make food. - Systems and Models: The seed mosaic models plant-environment interactions.	- Asking Questions: What do plants need to grow? - Planning & Carrying Out Investigations: Experiment with seed mosaics in different conditions. - Analyzing Data: Track plant growth under different light and water conditions. - Constructing Explanations: Use observations to explain photosynthesis.
Byte-Sized Chemist (Chemical Reactions & Properties of Matter)	- 5-PS1-1: Develop a model to describe that matter is made of particles too small to see. - 2-PS1-2: Analyze data to determine which materials are best for a task.	- PS1.A: Structure and Properties of Matter (Gases and liquids have different properties). - PS1.B: Chemical Reactions (Substances react to form new materials).	- Patterns: Different reactions produce different amounts of bubbles. - Cause and Effect: Acids reacting with bases cause fizzing. - Energy and Matter: Chemical reactions release gas.	- Asking Questions: Why do some juices react more with baking soda? - Analyzing & Interpreting Data: Observe and compare reactions. - Constructing Explanations: Explain how acidity affects reactions.
Byte-Sized Geneticist (DNA & Inheritance of Traits)	- 3-LS3-1: Explain patterns of inheritance and variation in traits. - 3-LS3-2: Describe how traits can be influenced by genetics and environment.	- LS1.A: Structure and Function (DNA carries genetic instructions). - LS3.A: Inheritance of Traits (Traits are passed through DNA). - LS3.B: Variation of Traits (Traits differ due to genes and environment). - PS1.A: Particles Too Small to Be Seen (DNA molecules become visible in extraction).	- Patterns: Offspring look like their parents. - Cause and Effect: DNA determines traits. - Structure and Function: DNA is a structure that carries information.	- Developing and Using Models: DNA extraction models genetic principles. - Analyzing Data: Compare DNA amounts in different samples. - Constructing Explanations: How DNA determines inherited traits.
Byte-Sized Bioengineering (Forces, Motion, and Engineering Design Process)	- 3-5-ETS1-1: Define a simple design problem with constraints. - 3-5-ETS1-2: Compare multiple solutions to an engineering problem. - 3-5-ETS1-3: Plan fair tests to improve models.	- LS1.A: Structure and Function (Joints and bones allow movement). - PS2.A: Forces and Motion (Pushes and pulls affect objects). - ETS1.A: Defining Engineering Problems. - ETS1.B: Developing Possible Solutions. - ETS1.C: Optimizing Design Solutions.	- Structure and Function: How robotic hands mimic human hands. - Cause and Effect: How force affects motion. - Systems & Models: The robotic hand models real systems.	- Asking Questions: What would happen if the robotic hand had no joints? - Developing Models: Create and test robotic hands. - Constructing Explanations: How design choices affect function.
Byte-Sized Geologist (Earth's Layers, Plate Tectonics, & Fossils)	- 4-ESS2-2: Analyze data to describe Earth's changing surface. - 3-ESS2-1: Represent data on Earth's features. - 3-ESS3-1: Make claims about how natural hazards impact people.	- ESS2.A: Earth's Materials and Systems (Earth's layers and processes). - ESS2.B: Plate Tectonics (Tectonic movements shape Earth's surface). - ESS1.C: The History of Planet Earth (Fossils show past environments).	- Patterns: Fossils show changes over time. - Cause and Effect: Plate movement causes earthquakes and volcanoes. - Stability and Change: Weathering and erosion reshape Earth.	- Developing Models: Create an Earth model showing layers. - Analyzing Data: Observe how tectonic movement causes changes. - Constructing Explanations: Why do volcanoes and earthquakes happen?