BLUE VALLEY DISTRICT CURRICULUM

Science | Grade 1

ORGANIZING THEME/TOPIC	FOCUS STANDARDS & SKILLS
Unit 1: Sun, Moon and Stars **Bring Science Alive!** Unit 3: Sky Patterns Lessons 1 - 5 **STAR LAB** Suggested Time Frame: 45 days	**1-ESS1-1. Use observations** of the sun, moon, and stars **to describe patterns** that can be predicted. **Science and Engineering Practice** • **Analyzing and Interpreting Data –** Use observations to describe patterns in the natural world in order to answer scientific questions. **Disciplinary Core Idea** • **ESS1.A: The Universe and Its Stars -** Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. **Crosscutting Concept** • **Patterns –** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. **1-ESS1-2. Make observations** at different times of year **to relate the amount of daylight to the time of year.** **Science and Engineering Practice** • **Planning and Carrying Out Investigations –** Make observations to collect data that can be used to make comparisons. **Disciplinary Core Ideas** • **ESS1.B: Earth and the Solar System -** Seasonal patterns of sunrise and sunset can be observed, described, and predicted. **Crosscutting Concept** • **Patterns –** Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

Unit 2: Parents and Offspring: Similarities and Differences **Bring Science Alive!** Unit 1: Plant and Animal Parts Lessons 1 - 2 Suggested Time Frame: 19 days	**1-LS3-1. Make observations to construct an evidence-based account that** young plants and animals **are like, but not exactly like, their parents.** **Science and Engineering Practice** • **Constructing Explanations and Designing Solutions –** Make observations to construct an evidence-based account for natural phenomena. **Disciplinary Core Ideas** • **LS3.A: Inheritance of Traits -** Young animals are very much, but not exactly, like their parents. Plants also are very much, but not exactly, like their parents. • **LS3.B: Variation of Traits -** Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. **Crosscutting Concept** • **Patterns –** Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.
Unit 3: Plant and Animal Parts **Bring Science Alive!** Unit 1: Plant and Animal Parts Lessons 3-4 Suggested Time Frame: 21 days	**1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals** use their external parts to help them survive, grow, and meet their needs. **Science and Engineering Practice** • **Constructing Explanations and Designing Solutions -** Use materials to design a device that solves a specific problem or a solution to a specific problem. **Disciplinary Core Ideas** • **LS1.A: Structure and Function -** All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. • **LS1.D: Information Processing -** Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs **Crosscutting Concept** • **Structure and Function** – The shape and stability of structures of natural and designed objects are related to their functions.

Unit 4: Parents and Offspring: Behaviors **Bring Science Alive!** Unit 1: Plant and Animal Parts Lessons 5-8 Suggested Time Frame: 36 days	**1-LS1-2. Read texts and use media to determine patterns in** behavior of parents and offspring that help offspring survive. **Science and Engineering Practice** • **Obtaining, Evaluating and Communicating Information** – Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. **Disciplinary Core Idea** • **LS1.B: Growth and Development of Organisms -** Adult plants and animals can have young. In many kinds of animals, parents and offspring themselves engage in behaviors that help the offspring to survive. **Crosscutting Concept** • **Patterns** – Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.
Unit 5: Light **Bring Science Alive!** Unit 2: Light and Sound Lessons 1 - 3 Suggested Time Frame: 30 days	**1-PS4-2. Make observations to construct an evidence-based account** that objects in darkness can be seen **only when illuminated.** **1-PS4-3. Plan and conduct investigations to determine the effect of** placing objects made with different materials in the path of a beam of light. **Science and Engineering Practice** • **Planning and Carrying Out Investigations –** Plan and conduct investigations collaboratively to produce evidence to answer a question. **Disciplinary Core Ideas** • **PS4.B: Electromagnetic Radiation -** Objects can be seen if light is available to illuminate them or if they give off their own light. **Crosscutting Concept** • **Cause and Effect –** Simple tests can be designed to gather evidence to support or refute student ideas about causes.

Unit 6: Sound Waves **Bring Science Alive!** Unit 2: Light and Sound Lessons 4 - 6 Suggested Time Frame: 29 days	**1-PS4-1. Plan and conduct investigations to provide evidence** that vibrating materials **can make** sound and that sound **can make** materials vibrate. **1-PS4-4. Use tools and materials to design and build** a device that uses light or sound **to solve the problem of communicating over a distance.** **Science and Engineering Practices** • **Planning and Carrying Out Investigations** – Plan and conduct investigation collaboratively to produce evidence to answer a question. • **Constructing Explanations and Designing Solutions** – Use tools and materials provided to design a device that solves a specific problem. **Disciplinary Core Idea** • **PS4.A: Wave Properties -** Sound can make matter vibrate, and vibrating matter can make sound. • **PS4.C: Information Technologies and Instrumentation -** People also use a variety of devices to communicate (send and receive information) over long distances. **Crosscutting Concepts** • **Cause and Effect** – Simple tests can be designed to gather evidence to support or refute student ideas about causes.