First Grade Science Curriculum Unit

Taneyville R-II School
2021-2022

Grade: First **Subject: Science**
Unit Title: Plant & Animal Superpowers

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
1.LS1.A.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 1.LS3.A.1-**Make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents**	Observation Similar Investigation Trait Comoflauge	Week 1: How can you help a lost baby animal find its parent? In this lesson, students make observations of baby animals and their parents, gathering evidence that they look similar because they share many of the same traits. In the activity, Baby Bird Rescue, students help identify lost baby birds based on observations of their specific traits. Week 2: Why do birds have beaks? In this lesson, students carry out an investigation to determine the relationship between the shape of different bird beaks and the food each bird eats. In the activity, Find the Best Beak, students experiment with long pointy beaks that are great for picking up seeds and wide flat beaks that are good for scooping. They discover that different beaks are best for different	Observation Participation Verbal Check for Understanding

		kinds of food. Week 3: Why do baby ducks follow their mother? (read along) In this Read-Along lesson, Juan Carlos visits his grandmother who has a backyard full of ducks. The lesson includes a short exercise where students get moving by acting like ducks. Complete this activity, What's Going On?, where students watch videos and discover ways that animal parents help their offspring. Week 4: Why are polar bears white? In this lesson, students make observations to construct an explanation of why camouflage is helpful to animals. In the activity, Moth Hide and Seek, students test their ability to spot camouflage moths, and then design a camouflage pattern for a moth of their own and hide it in the classroom! Week 5: Why don't trees blow down in the wind? In this lesson, students examine	

		structures like roots, branches, and leaves that keep trees from blowing down. In the activity, Wind-Proof Umbrella, they use their observations to create their own tree-inspired umbrellas that stay up in the wind. Week 6: Why do family members look alike? (read along) In this Read-Along lesson, Amy notices that baby animals look a lot like the adults in their families—and then discovers that she does, too! The lesson includes a short exercise where students get moving by acting like farm animals. Week 6- What do sunflowers do when you're not looking? In this Read-Along lesson, Jin plants some sunflowers in a sunny spot and some in a shady spot, watches to see which grow best, and then figures out why. The lesson includes a short exercise where students stand up and pretend to be sunflowers, turning their faces to the sun as young sunflowers do.	

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Unit Title: Spinning Sky

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
1.ESS1.A.1- Describe the presence of the Sun, Moon, and stars in the sky over time. **1.ESS1.A.2- Use observations of the sun, moon, and stars to describe patterns that can be predicted.** **1.ESS2.D.1- Identify patterns indicating relationships between observed weather data and weather phenomena (e.g.,**	Stationary Position Rotation Visible phase	Week 1: Could a statue's shadow move? In this lesson, students investigate what it takes to make a stationary object's shadow move. In the activity, Moving Shadows, students use flashlights and paper gnomes to explore how moving the position of a light makes shadows move. Students	Observation Participation Verbal Check for Understanding

temperature and types of precipitation, clouds and amounts of precipitation)		relate these observations to shadows changing throughout the day and the Sun's position moving across the sky. Week 2: What does your shadow do when you're not looking? (read along) In this Read-Along lesson, Jada explores why her shadow changes over the course of a day at the beach. The lesson includes a short exercise where students act out the movement of shadows with their bodies. Week 3: How can the sun help you if you're lost? In this lesson, students develop a model of the sun's daily path across the sky, then use this model to help someone who's lost. In the activity, Sun Finder, students create a mobile paper model of the sun and earth to illustrate the position of the sun throughout the day. Week 4: Why do you have to go to bed early in the summer? In this Read-Along lesson, Arushi wonders why she has to go to bed	

		while the sun is still up, and learns that the sun stays up longer on some days than others. The lesson includes a short exercise where students get moving by acting out a bedtime routine. Week 5: When can you see the full moon? In this lesson, students explore all of the different shapes of the Moon that can appear on different nights. In the activity, My Moon Book, students observe photos of the Moon taken over the course of four weeks and draw pictures of the Moon's phases in their book. They use these observations to discover patterns in how the Moon's shape changes and predict when the next full moon will appear. Week 6: Why do the stars come out at night? In this lesson, students use a model to investigate why the stars are visible at night but disappear when the Sun comes out during the day. In the activity, Star Projector, students use paper cups to project stars onto a sky picture, and observe what happens to these stars when a flashlight acts as a model of the Sun.	

		Week 7: How can stars help you if you get lost? In this Read-Along lesson, Ryan's camping trip with his dad includes a night of stargazing, and a mystery to solve. The lesson includes a short exercise where students imagine what they might see looking through a telescope.	

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Unit Title: Lights and sound

Standards	Vocabulary	Activities/Resources	Formative/Summative Assessments
1.PS3.A.1-Identify the source of energy that causes an increase in the temperature of an object (e.g., Sun, stove, flame, light bulb) **1.PS4.A.1-Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.** **1.PS4.C.1-Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance** **1.ETS1.A.1- Ask questions, make observations, and gather information about a situation**	Source Energy Wave Vibration Frequency	Week 1: How do they make silly sounds in cartoons? In this lesson, students investigate vibrations as a source of sound effects for movies. In the activity, Be a Sound Effects Artist, students use their hands and feet to create a "rainstorm," and then use rulers to create a “boing” sound for a cartoon bouncy ball. Week 2: Where do sounds come from? (read along? In this Read-Along lesson, Lin explores	Observation Participation Verbal Check for Understanding

people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. **1.ETS1.B.1-Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.** **1.ETS1.C.1-Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.**		the sounds made by different kinds of instruments, and discovers what happens when vibrations start—and when they stop. The lesson includes a short exercise where students experiment with a piece of paper to make the connection between vibrations and sound. Week 3: What if there were no windows? In this lesson, students consider materials from the perspective of how much light they let through. In the activity, Paper Stained Glass, they use these materials to create a work of art. Week 4: Can you see in the dark? In this Read-Along lesson, Santiago visits a cave and discovers that when it's dark (really dark!) he can't see anything. The lesson includes a short exercise where students find the sources of light around them. Week 5: How can you send a secret message to someone far away? In this lesson, students practice using	

		light to communicate information. In the activity, Secret Signals, students work in pairs to build a device that solves the problem of communicating over a distance. They send secret messages to one another using light and colored markers. Week 6: How do boats find their way in the fog? In this Read-Along lesson, Gabrielle sets sail with her aunt—the captain of a tugboat—and discovers how the sights and sounds on the bay can help boats find their way. The lesson includes a short exercise where students get moving by pretending to be boats.	

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