MOTION AND STABILITY: FORCES AND INTERACTIONS

Performance Expectation	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
Clarification Statement	Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, or two objects colliding and pushing on each other. Content includes contact forces with different relative strengths or different directions, but not both at the same time.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
1. Asking questions and defining problems 2. Developing and using models 3. **Planning and carrying out investigations:** Planning and carrying out investigations to answer questions (science) or test solutions (engineering) to problems in K-2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions. • With guidance, plan and conduct an investigation in collaboration with peers. 4. Analyzing and interpreting data 5. Using mathematics and computational thinking 6. Constructing explanations and designing solutions 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information	**FORCES AND MOTION** Pushes and pulls can have different strengths and directions. (LE.PS2A.a) Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (LE.PS2A.b) **TYPES OF INTERACTIONS** When objects touch or collide, they push on one another and can change motion. (LE.PS2B.a) **RELATIONSHIP BETWEEN ENERGY AND FORCES** A bigger push or pull makes things speed up or slow down more quickly. (LE.PS3C.a)	**CAUSE AND EFFECT** Simple tests can be designed to gather evidence to support or refute student ideas about causes.

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSE

Performance Expectation	Use observations to describe patterns of what plants and animals (including humans) need to survive.
Clarification Statement	Examples of patterns could include that plants make their own food while animals do not, the different kinds of food needed by different types of animals, the requirement of plants to have light, or that all living things need water.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
1. Asking questions and defining problems 2. Developing and using models 3. Planning and carrying out Investigations 4. **Analyzing and interpreting data**: Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Use observations to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. 5. Using mathematics and computational thinking 6. Constructing explanations and designing solutions 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information	**ORGANIZATION FOR MATTER AND ENERGY FLOW IN ORGANISMS** All animals need food in order to live and grow. Animals obtain their food from plants or from other animals. Plants need water and light to live and grow. (LE.LS1C.a)	**PATTERNS** Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.

EARTH'S SYSTEMS

Performance Expectation	Use and share observations of local weather conditions to describe patterns over time.
Clarification Statement	Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, or warm); examples of quantitative observations could include numbers of sunny, windy, or rainy days in a month. Examples of patterns could include that it is cooler in the morning than in the afternoon or the number of sunny days versus cloudy days in different months.

Science & Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
1. Asking questions and defining problems 2. Developing and using models 3. Planning and carrying out investigations 4. **Analyzing and interpreting data:** Analyzing data in K-2 builds on prior experiences and progresses to collecting, recording, and sharing observations. • Use observations to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. 5. Using mathematics and computational thinking 6. Constructing explanations and designing solutions 7. Engaging in argument from evidence 8. Obtaining, evaluating, and communicating information	**WEATHER AND CLIMATE** Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (LE.ESS2D.a)	**PATTERNS** Patterns in the natural and human designed world can be observed, used to describe phemonena, and used as evidence.