GRADE 3 SCIENCE

Key Features

Focus Areas

- The relationship of force and motion,
- electric and magnetic forces,
- unique and diverse life cycles of plants and animals,
- animal traits influenced by their environment,
- rate of events on Earth,
- weathering of rocks,
- types of bodies of water, and
- human impacts on natural resources.

By the end of Grade 3, students can

- Represent data in tables and graphs
- Ask questions that can be investigated based on patterns such as cause and effect relationships.
- Develop and use models to describe phenomena.
- Construct an argument with evidence, data, and/or a model.
- Analyze and interpret data.
- Make a claim about a solution to a problem by citing relevant evidence.
- Provide evidence of unbalanced forces causing motion and balanced forces not causing motion
- Use patterns from observations and measurements to predict future motion
- Investigate the electric and magnetic forces between a pair of objects.
- Develop solutions to a simple design problem by applying information learned about magnets.

Home to School Connections

Questions you can ask your learner could include:

- When pushing a swing, can you predict the motion?
- How do we use magnets in our everyday life?
- What's an example of a group of animals here in South Carolina that work together to survive?
- Why do cats have a variety of colors?
- What are traits?
- What preparation can we take if a natural hazard such as a hurricane or tornado hits South Carolina?

Questions you can ask your learner's teacher could include:

- Which organism life cycles do you focus on in class?
- What local museums, zoos, nature centers or state parks have items that enhance student learning?

Activities and learning you can do outside of the classroom to support your learner could include:

- Push an object such as an empty box or a swing with force from one side and observe the motion. Also, push on a heavier object that cannot be moved. Talk about balanced and unbalanced forces.
- Create static electricity by rubbing an inflated balloon on your hair.
- Use toys with magnets or refrigerator magnets to investigate how the distance between two magnetic objects affects the strength of the force.
- Read books, look up examples online, or observe in nature the life cycles of organisms, such as the monarch butterfly, frogs, dragonflies, or ducks. Have the learner draw out the phases in the life cycle.
- Watch videos of bees working together to support the hive. Other groups to view include hive wasps, termites, ants, humpback whales, and dolphins.
- Visit a local garden to observe variations of the same type of flowering plant. Visit a local farm, zoo, or pet store to observe the variety of organisms of the same species. For example, look at the stripes of tigers or the color patterns of cats or guinea pigs
- Discuss examples such as stunted growth in plants due to insufficient resources or obesity in animals that eat too much and get little exercise.
- Local museums, nature centers or state parks can provide insight into changes to the environment over time with fossil evidence.
- Look for examples around you including plants that have larger thorns than other plants may be less likely to be eaten, or animals that have better camouflage may be more likely to survive and produce offspring.

- Identify the needs and characteristics of the organisms in the local habitat. Discuss how changes in a habitat are sometimes beneficial, sometimes neutral, or sometimes harmful to an organism.
- Identify the local land use in your area such as agriculture, urbanization, or tourism and how the environment has changed in recent years. Discuss how it has impacted the land, water distribution, temperature, resources, and organisms. For example: new housing developments lead to less trees, land changes, and increased pollution.
- Make predictions about weather conditions based on average temperature, precipitation, and wind direction in your local community.
- Flooding can be a major issue throughout South Carolina. Discuss how flooding has impacted your family, and what can be done to prevent damage from flooding.

Books

- Barnett, Judi. *Cloudy with a Chance of Meatballs*
- Dussling, Jennifer. *Looking at Rocks*
- Drummond, Allan. *Green City: How One Community Survived a Tornado and Rebuilt for a Sustainable Future*
- Gibbons, Gail. *Hurricanes!*
- Pellant, Chris. *Smithsonian Handbooks: Rocks & Minerals*
- Pushing Apart - Schreiber, Anne. *Magnets*
- Stille, Darlene R. Motion: *Push and Pull, Fast and Slow*
- Wells, Robert E. *Polar Bear, Why is Your World Melting?*
- Whalley, Margaret. *Magnetism & Electricity*

Resources

- American Museum of Natural History: Ology (https://www.amnh.org/explore/ology)
- Britannica Kids (https://kids.britannica.com/)
- CK-12 Foundation: (https://www.ck12.org/student/)
- Discus Kids (https://www.scdiscus.org/discus-kids)
- Edventure Children's Museum (https://edventure.org/)
- Exploratorium (https://www.exploratorium.edu/)
- Khan Academy Kids (https://learn.khanacademy.org/khan-academy-kids/)
- NASA Kid's Club (https://www.nasa.gov/learning-resources/nasa-kids-club/)
- PBS Kids Science (https://pbskids.org/games/science)
- South Carolina State Museum (https://scmuseum.org/)