Fifth Grade Parent Guide - Science

	1st Grading Period	2nd Grading Period	3rd Grading Period	4th Grading Period
Topics	**Matter** **Force and Motion**	**Light and Shadows** **The Sky**	**Rocks, Soil, Water** **Plants**	**Plants** **Animals**
Topic Focus	**Scientific Investigation & Reasoning** • Use scientific practices to plan and conduct descriptive and simple experimental investigations and use engineering practices to design solutions to problems. • Identify and use patterns to explain scientific phenomena or to design solutions. • Explore interactions between magnets & various materials **Content** • Compare and contrast matter based on its physical properties by selecting the best material for the project. • Compare and contrast the behavior of matter based on its physical state. • Physical properties of some substances change when they are mixed, but the properties of other substances do not. • Forces and energy affect the motion of an object.	**Scientific Investigation & Reasoning** • Collect observations and measurements as evidence. • Identify and use patterns to explain scientific phenomena or to design solutions. • Explain how factors or conditions impact stability and change in objects, organisms, and systems. **Content** • Observe the sun setting and begin to connect how Earth's rotation causes the apparent motion of the sun across the sky. • Connect how shadows change position and shape throughout the day. • Water cycles can move plastics and waste from land into the ocean and other bodies of water. • Matter cycles through Earth's system and can be moved from one place to another. • Certain types of rock can hold oil and natural gas. • Conservation can reduce the environmental impact of using natural resources. **Assessment Topics:** • Energy is everywhere and can be observed in cycles, patterns, and systems. • Recognition of patterns among the sun, Earth, and Moon system and their effects.	**Scientific Investigation and Reasoning** • Evaluate experimental and engineering designs. • Identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems. **Content** ● Connect how the rain cycle can move plastics and other waste from land into the ocean and other bodies of water. ● Connect how matter cycles through the Earth system and can be moved from one place to another. ● Certain types of rock can hold oil and natural gas. ● Conservation can reduce the environmental impact of using natural resources. ● Organisms need living and nonliving resources to survive. ● Changes in an ecosystem can affect the cycling of matter and flow of energy in a food web. Human activities can affect the health and stability of ecosystems. **Assessment Topics:** • There are recognizable patterns and processes on Earth. • Natural Resources are important and can be managed. • Describe patterns, cycles, systems, and relationships within environments.	**Scientific Investigation & Reasoning** ● Analyze data by identifying any significant features, patterns, or sources of error. ● Develop explanations and propose solutions supported by data and models. ● Explain the relationship between the structure and function of objects, organisms, and systems. **Content** ● Sort animals by color, size, body covering, & identify basic parts of animals ● Describe how animals meet their needs with specific animal structures. ● The student is expected to research his/her own animal, the habitat it lives in, & the physical characteristics of the animal. **Assessment Topics:** • Organisms undergo similar life processes and have structures and behaviors that help them survive within their environments.

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	Assessment Topics: • Matter has measurable physical properties that determine how matter is identified, classified, changed, and used. • The student knows the nature of forces and the pattern s of their interactions.			
Fundamental Questions	• How is this mixture different from its parts? • How does this rocket lift off the ground?	• What happens to make the shoes light up? • How do Shadows move?	• How can we impact the environment in Texas? • How can animals live safely near the road in Texas?	• How does crawling help baby sea turtles in Texas?
Suggestions for Parental Involvement/ Support	• Cook with your student. Talk about how the properties of individual ingredients compare to the properties of the final product.	• Ask your student to draw a picture of a toaster. Ask them to label the energy transformations that occur when toasting a piece of bread.	• Take your student on a walk around your neighborhood. Identify and record examples of organisms and their ecosystems. Have your student list or draw abiotic and biotic factors and label them. For example, air, water, butterfly, flower.	• Take a trip to the zoo to observe animals & their habitats.

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