# Fourth Grade Parent Guide - Science

| | 1st Grading Period | 2nd Grading Period | 3rd Grading Period | 4th Grading Period |
|---|---|---|---|---|
| **Topics** | **Matter<br>Force and Motion** | **Energy<br>Earth and Space** | **Patterns on Earth<br>Interactions in Ecosystems** | **Organisms and Environments** |
| **Focus TEKS** | 4.6ABC, 4.7 | 4.8ABC, 4.9AB | 4.10ABC, 4.11ABC, 4.12 A | 4.12BC, 4.12AB |
| **Topic Focus** | **Scientific Investigation & Reasoning**<br>● Develop explanations supported by data and models<br>● Identify and use patterns to explain scientific phenomena.<br>**Content**<br>● Describe how matter is identified, classified, changed, and used.<br>● Matter has observable physical properties.<br>● Matter has measurable properties.<br>● Observe how different surfaces increase or decrease force.<br>● Magnetic forces affect the motion of magnetic objects.<br>**Assessment Topics:**<br>• Measurable physical properties determine how matter is identified, classified changed and used.<br>• Force and Motion. | **Scientific Investigation & Reasoning**<br>● Develop explanations supported by data and models.<br>● Identify and use patterns to explain scientific phenomena.<br>**Content**<br>● Transfer of energy<br>● Connect how conductors and insulators affect energy transfer.<br>● Electrical energy powers a light bulb.<br>● Trees change throughout seasons.<br>● Predict moon patterns<br>● Analyze phases of the moon.<br>**Assessment Topic:**<br>• Energy is everywhere and can be observed in cycles, patterns, and systems.<br>• Recognize patterns among the Sun, Earth, and Moon System and their effects. | **Scientific Investigation & Reasoning**<br>● Develop explanations and propose solutions supported by data and models.<br>● Explain how factors or conditions impact change in systems.<br>● Identify and investigate cause and effect relationships to explain scientific phenomena or analyze problems.<br>**Content**<br>● Make models to describe the movement of water on Earth's surface<br>● Sunlight is part of the water cycle.<br>● Changes to Earth's surface<br>● Natural resources. Life cycles.<br>**Assessment Topic:**<br>• Processes on Earth create patterns of change.<br>• Natural resources are important and can be managed.<br>• Patterns, cycles, systems, and relationships exist within environments. | **Scientific Investigation & Reasoning**<br>● Ask questions and define problems based on observations or information from text, phenomena, models, or investigations.<br>● Explain the relationship between the structure and function of objects, organisms, and systems.<br>**Content**<br>● Observe how a plant's structures and functions help it survive in an environment.<br>● Identify and compare inherited and acquired traits, explain how different traits help organisms survive in their environment.<br>● The student will learn that all organisms have structures and functions that help them survive.<br>**Assessment Topic:**<br>• Structures and functions of plants enable them to survive in their environment.<br>• Differentiate between inherited and acquired physical traits of organisms. |
| **Anchoring Phenomena** | ● How did the glass get this shape?<br>● What happens when skateboards roll across different surfaces? | ● How does energy move in pinball?<br>● How can you predict moon patterns? | ● How can sunlight power devices?<br>● How does a bamboo plant make food that pandas can eat? | ● Why does a plant have a growth spurt? |
| **Suggestions forParental Involvement / Support** | • Combine two samples of clay of different colors. Compare the combination to original samples.<br>• Discuss a soccer ball's paths - one up in the air and one rolling on the grass. Discuss the difference in forces that affect the ball's motion. | • Let your student build and play with different types of energy.<br>• Talk about the path energy takes.<br>• While cooking dinner discuss the tools you are using, and which ones are conductors? Insulators? | • Fill 2 cups with the same amount of water. Measure and record the initial temperature of the water. Place one in the sun and one in the shade. Take the temperature every 5 minutes for 30 minutes. Compare. Discuss differences.<br>• Talk with your student about plants that humans and other animals eat. | • Since life cycles are explored in the spring, allow your student to plant a plant or go to the Fort Worth Botanical Gardens to explore butterflies.<br>• My family tree- create a family tree illustrating which traits your student inherited. Use the roots to highlight traits they learned or acquired. |

SAVVAS Experience Texas Science is your students' online resource. It is available in their EMS ISD (SSO) Single Sign On. §112.6

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