



**Rockdale School District 84**



This curriculum guide provides an overview of what your child will learn by the end of 7th grade in science. While this is an overview, your child's actual experience may differ from this guide depending on your child's individual needs. This guide focuses on the key skills your child will learn, which will build a strong foundation for success in other subjects and in future learning opportunities. If your child is meeting the expectations outlined in this curriculum guide, he or she will be well prepared for freshman science.



You should use this guide as a resource to gain an understanding of the key skills that will be introduced and/or mastered by your child this year. This will help promote a better understanding, as well as allow for a strong relationship to be developed with your child's teacher. Regular ongoing dialogue about teaching and learning, beyond parent-teacher conferences, is expected and desired.

At home, you play an important role in setting and reinforcing high expectations for your child, while providing support for your child in meeting them. If your child needs additional help or wants to learn more about a topic, work with his or her teacher to identify opportunities for support or to find additional resources to supplement the learning. High expectations do not just surround the content being learned. Your conveyed expectations should also surround the development and use of the following soft skills: effective time-management, persistence and perseverance, self-confidence, growth mindset, productive use of constructive criticism, thinking critically, exhibiting independence, and being motivated.

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# 7th grade Science



## Summary description with key emphasis/activities

Science at HBRMS follows the Next Generation Science Standards (NGSS). For more information regarding the NGSS please visit <http://www.nextgenscience.org/search-standards-dci>.

### Unit One: Inside Earth (MS-ESS1-4, MS-ESS2-1, MS-ESS2-2, MS-ESS2-3, MS-ESS2-4)

- Layers of the Earth
- Plate Tectonics
- Earthquakes
- Volcanoes
- Rocks and Minerals

### Unit Two: Astronomy (MS-ESS1-1, MS-ESS1-2, MS-ESS1-3)

- Earth and the Moon
- Planets
- Stars and Galaxies
- Rockets
- Space Technology

### Unit Three: Weather and Climate (MS-ESS2-4, MS-ESS2-5, MS-ESS2-6, MS-ESS3-2, MESS3-5)

- Earth's Atmosphere
- Weather Factors and Patterns
- Natural Disasters



## **A sample of skills to be gained:**

- Develop and use model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
- Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.
- Analyze and interpret data to determine scale properties of objects in the solar system. • Construct a scientific explanation based on evidence from rock strata and how the geologic time scale is used to organize Earth's history.
- Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process
  - Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.
- Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
- Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
- Develop and use a model to describe how unequal heating and rotation of the earth cause patterns of atmospheric and oceanic circulation that determine regional climates.
- Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
- Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.



## Help your Child learn at home

### List of primary sources for learning:

- Prentice Hall Science Explorer-Inside Earth, Astronomy, Atmosphere and Weather.

As you invest in your child in many different ways each day, take the following things into consideration as you invest in his or her learning. These strategies will have a direct impact on the learning of your child at home.

- Create a suitable place for learning at home to be completed.
- Create a daily routine and stick to it as much as possible.
- Work with your child on their homework on a regular basis. Have them start the homework on their own and then provide assistance when asked. When they ask for help, try utilizing the following prompts to help them think through their learning.
  - What do you remember from the learning activities in school?
  - Is there a place that you can reference that will help you?
  - What do you think would help?
  - Explain to me what you are struggling with.
  - What do you think you should do next?

It is important to help your child work through the answer, not just provide them with the answer. This process is extremely important in helping your child develop strategies that can be used whether he or she is with you or not.

