



Dear Parents,

We are beginning our third unit in which we will learn about the Earth. We will be focusing on the structure of Earth, as well as plate tectonics and the rock cycle. We will also test minerals to identify their physical properties. We will also be using Argument-Driven Inquiry (ADI) in our investigations this year. ADI models the scientific publication process and students will be designing their investigations to answer big idea science questions. Emphasis will be on critical reading, designing experiments, collecting data, analyzing data, evaluating arguments, providing peer feedback and writing conclusions. Scientific argumentation will become the foundation of all laboratory activities. In our ADI lab, we will be identifying plate interactions. The following standards will be covered, and your child will be expected to do the following:

- build a model to illustrate the compositional and mechanical layers of Earth, including the inner core, outer core, mantle, crust, asthenosphere, and lithosphere;
- classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation;
- identify the major tectonic plates, including Eurasian, African, Indo-Australian, Pacific, North American, and South American; and describe how plate tectonics causes major geological events such as ocean basin formation, earthquakes; and
- test the physical properties of minerals, including hardness, color, luster, and streak.

We encourage you to talk to your child about what they are learning in class. Here are some questions that you can ask your child throughout this unit.

- What are the four main layers of the Earth?
- What are the primary elements in the crust, mantle, and core?
- What is the state of matter of the outer core and the inner core?
- What is the state of matter of the lithosphere, and how can its location be described?
- What is the state of matter of the asthenosphere, and how can its location be described?
- Where are the boundaries of the major plates on Earth's surface?
- What are divergent, convergent and transform movements of Earth's tectonic plates?
- How are rocks classified into categories? How are igneous rocks formed? Sedimentary rocks? Metamorphic rocks?
- What are minerals?
- How do you test for a mineral's hardness?
- How do you test for a mineral's streak?

If your child struggles with any material taught during this unit, we would urge you to make sure your child attends tutoring for assistance to gain a better understanding and demonstrate mastery. If you have any questions or concerns, please don't hesitate to contact your child's teacher. We look forward to your child's continued success in Science this year.

Sincerely,

The 6th Grade Science Team