

LETTER TO FAMILY

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Science News

Dear Family,

We are about to begin a study of planetary systems. We'll start with Earth's star, the Sun, and use a variety of tools to observe and record its position in the sky. To orient our observations, we'll use a compass. And to monitor the Sun, we will use our shadows. While we use the language that the Sun rises in the east and sets in the west, we know that it really isn't the Sun moving but the rotation of Earth on its axis that makes it appear that the stationary Sun is moving across the sky.

We will be modeling the predictable pattern of the Sun as it travels across the sky during the day and during different seasons.

Then we will study the Moon, other planets, and stars. We will start as a class by observing the Moon during the day and follow that up with night-sky observations. As a bridge to what we have been studying in class, students will look for the Moon and other objects in the night sky when they are at home. To make night-sky observations, take your child outside at about the same time each evening (when it's dark) and observe the sky. Take a few minutes to enjoy the night sky together. Talk about what you see. For example, if it's cloudy, you won't see anything but clouds. If it's clear, you will see stars (you might want to point out a constellation or two), planets (points of light that appear larger and brighter than stars), and sometimes the Moon. Discuss the changes in the night sky from night to night, especially the changing appearance of the Moon, and where you see it in the sky. (You can use the Internet or local newspaper to find out when it rises.)

We will return to Earth to study our atmosphere and weather and learn about the weather variables that meteorologists use to measure the conditions of the atmosphere. We will be collecting local weather data from our class weather station and from nearby weather monitoring stations via the Internet. You can increase your child's interest in weather by asking him or her to talk about the science investigations. Keep track of the changes in weather together. Check out the weather maps in the daily newspaper or online, or watch the evening news for weather reports.

We will then turn our attention to heating Earth. We'll place containers of water and dry soil in the sunshine to find out if they heat up equally. We'll use the results of these experiments to consider how uneven heating of Earth's surface produces convection currents. These concepts come together in the water cycle, which continually renews the supply of fresh water. Finally, we'll develop the idea of climate and develop awareness of what is meant by climate change. And we will conduct experiments to design solar water heaters, sorting out the variables that influence the temperature and heating rate of a water-heating system.

Thanks for your help! You can get more information on this module by going to www.FOSSweb.com.

Sincerely,

