LETTER TO FAMILY

Cut here and paste onto school letterhead before making copies.

Science News

Dear Family,

Our class is beginning an earth science unit. We will be studying rocks, one of the most important earth materials. Our investigations will center on the properties of rocks and the uses of various rock sizes (pebbles, gravel, sand, silt, and clay). Students will be working extensively with materials—observing, comparing, and communicating what they learn through their firsthand experiences with earth materials. We will also be investigating different kinds of soil and comparing soils that we gather from our community. At the end of the unit, students will be introduced to natural sources of fresh and salt water.

Your child may ask for help finding a rock or two to contribute to our class rock collection. A rock from your yard or neighborhood is fine. As our study continues, your child will be learning more and more about rocks. Try to find opportunities to talk with your child about sand, gravel, soil and water, and ways people use these materials in construction (asphalt, concrete, bricks, mortar, etc.) and landscaping. This is an engaging theme for a family outing.

We're looking forward to lots of discoveries and new experiences as we explore the earth materials that can be found all around us. If you have any questions or comments, or have expertise you would like to share with the class, please let me know. You can get more information on this module by going to www.FOSSweb.com.

Sincerely,

HOME/SCHOOL CONNECTION

Investigation 1: First Rocks

Invent a game that uses different kinds of rocks. It should use the properties of rocks you have.

Here are some examples. The goal of the game could be to put together similar-looking rocks, like the game rummy. Or the goal could be finding one rock among many. Or the goal could be to find ways that rocks are the same, as in the games dominoes or crazy eights. It could also be a brand new game that you invent.

Have a family member help you write the directions for the game so you can share it in class.

HOME/SCHOOL CONNECTION

Investigation 2: River Rocks

Play I Spy. Gather five to ten objects that share a property and place them on a table. A set might include pencils, pens, flatware, straws, and chopsticks because they are all long and narrow. A set of books and catalogs might constitute a second set, a collection of stuffed toys a third, and so on.

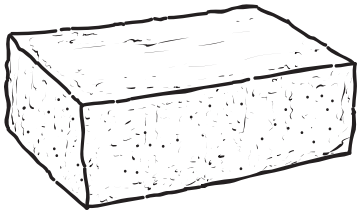
Two players play the game. First the players organize the objects from smallest to largest. Then one player secretly chooses one object and compares it to the others: "I spy something that is bigger than _____ and smaller than _____." The second player guesses which object was chosen by player 1. If the guess is incorrect, player 1 provides a second "I spy" hint.

Swap roles and play again. Choose new sets of objects.

Name _____ Date _____

HOME/SCHOOL CONNECTION

Investigation 3: Using Rocks



Rocks are used as building materials everywhere you look. We explored our school site for rocks in use. Where are rocks used in your neighborhood?

Go on a scientific field trip around your home. Let your child act as leader, pointing out where rocks can be found. Look for big rocks in walls and gardens, and tiny rocks, in the form of sand and gravel, in pavement, concrete, bricks, and lots of other places. List the rocks in use that you find so your child can share with the rest of the class.

Name _____ Date _____

HOME/SCHOOL CONNECTION

Investigation 4: Soil and Water

Our study of rock sizes led us to a study of soil. We now know that soil is mostly rock particles and some humus.

One important property of soil is its water content. Soil scientists often do tests to see how quickly water soaks into and passes through the soil. This is called permeability. Test and compare the permeability of soil in two or more places around where you live.

Use a trowel or metal spoon to dig a shallow hole in the soil, maybe the size of a soda can, but not very deep. Pour in about a cup of water and time how long the water takes to completely soak into the soil. Compare flower beds, gardens, edges of lawns, paths, sandboxes, and so on. Keep track of the time needed to soak into different soils and collect a little sample of the soil.

Remember, in order to compare, the holes should be the same size, and the amount of water should always be the same.

Record your results. Write about what you find out.