Planning Guide for Pebbles, Sand, and Silt

**Prior to starting the unit...we can create a KWL chart on rocks...students can write everything they know about rocks in their science journals...

#1 Investigation  First Rocks

A*Three Rocks activity  2 sessions
(Use “The Rock” extension worksheet...record what I learned in student journals)

*My Rock activity extension (rock from home/homework)  Students can share/display these rocks

*Using rocks brought from home, students can create as long a list as possible of adjectives describing their rocks...add them to our word bank

B*Washing Three Rocks activity  1 session + time to record
(Use another Rock Record sheet to list observations...record what I learned in student journals)

C*First Sorting/Read Peter and the Rocks
(I used Sorting Mat Side One to sort rocks by different properties...we recorded these properties on our word bank)

-SKIP SORTING GAMES...

D*Answer What Rock Are You Thinking About? and Colorful Rocks Review? from the student book  1 or 2 sessions

*View Bill Nye: Rock Cycle

#2 Investigation  River Rocks

A*Screening River Rocks free exploration activity  1 session
(Cut out labels...large pebbles, small pebbles, large gravel, small gravel, and sand...use the sheet ROCK ON! to reinforce rock vocabulary)

B*Complete River Rocks Create a Graph worksheet

C*River Rocks by Size  2 sessions
(Use Sand, Gravel, and Pebbles worksheet...you can draw a line through the gravel and pebble circles so you can further separate them into large and small sections)

*Introduce the Balance...I had the students sketch and label the parts of the balance before using them to weigh their rocks...Cut out and order the Steps for Weighing an Object worksheet. Glue into their science journals.
*Complete the How many grams? worksheet

*Record what I learned in student journals

D* Sand and Silt 1 session + time to record
(Read *A Grain of Sand*. Complete the Sand and Water Drawing sheet. Record observations.)


*Record what I learned in student journals

F* Exploring Clay 1 session + time to record
(Complete the Clay and Water Drawing sheet and record observations)

*Complete Bottle Drawing assessment sheet

*Math extension A and B...River rocks

#3 Investigation  Rocks In Use

A* Take a fieldtrip around the neighborhood and list where and how rocks are used. 1 session

B* Read...What Moved the rocks? About erosion and weathering...complete grid sheet.

C* Looking at Sandpaper 1 session
(Have students do rubbings of the different grades of sandpaper...label the sketches and answer the Sandpaper questions in their journal).

D* Create Sand Sculptures. Make them thick not thin! 2 sessions (Form and paint)

-I SKIPPED Clay beads and Making Bricks

E* Complete Making Things with Rocks review sheet

#4 Investigation  Soil Explorations

A* Homemade soil 1 session + time to record
(Complete Soil Drawings worksheet...record observations...compare with soil from our school garden)

*Student should write what I learned in their journals

B* Students can read and then answer What is in Soil? Worksheet
C* Water in Soil investigation...record results in journals 1 session

D* Fossils ...I need to further develop this part of the unit...I found the I DIG FOSSILS unit to be somewhat drawn out and boring...

E* Students can complete IF I WERE A GEOLOGIST sheet
Think of a name for your rock...

Why did you name it this?

Carefully sketch your rock below...

Where did you find your rock?

Describe five different things that are special about your rock...

If your rock could talk, imagine two things that it would say...
Rock A

Rock B

THE ROCK!

Date
Rub your rocks together and see what happens...

Rock A and Rock A

Rock B and Rock B

Rock C and Rock C

Rock A and Rock B

Rock A and Rock C

Rock B and Rock C

What observations can you make from these rubbings?
Try rubbing your rocks on the paper. Sketch and describe what happens...

Rock A

Rock B

Rock C
Name________________ What Rock Are You Thinking About?

**Read pp. 3 - 7 in Pebbles, Sand, and Silt

1. Describe and draw the rock you were thinking about.
2. What new thing did you learn from the reading?
3. Name three places you can find rocks.
4. Why are rocks so different from one another?
1. We poured earth materials through different sizes of _____________.
2. The screens helped separate the rocks by _____________.
3. The largest rocks we separated are called _____________.
4. The smallest parts of earth materials were _____________.
5. These are bigger than sand but smaller than pebbles _____________.

Word list... pebbles, sand, gravel, screens, size
Please answer the following questions in your science journal.

1. How do you think sandpaper is made?
2. What is sandpaper used for?
3. Why are there different types of sandpaper?
Some extension activities to accompany Pebbles, Sand, and Silt

*A lesson from The Amazing Earth Model Book...students create a 3-D Earth Model...see attached Earth Layers reproducible pages

*Students can create a mini edible earth model...a lesson from Geology Rocks...see attached lesson plan. Students can complete the accompanying worksheets.

*Students can read, How to Dig to the Other Side of the World. Students can draw their own imaginary vehicle that could dig through the earth. Students can then write about their vehicles.
After hearing, *How to Dig a Hole to the Other Side of the World*, use your imagination to design a machine/vehicle that could drill all the way to the earth’s core...keep in mind all of the heat, pressure, and so forth....

*Be Neat! Be Creative
*Carefully sketch and label the parts of your machine, explain how it could possibly work
*This is due on Friday, March 9, 2007.
Earth Machine/Vehicle Blurbette...

In a short paragraph...at least four sentences...describe your earth machine/vehicle that can drill to the inner core of the earth.

You need:

*A name for your earth machine/vehicle

*Explain its special features

*Explain how it can withstand the incredible pressure and heat
OUR EDIBLE EARTH!

Our edible earth has four layers. Please describe what food you used to make each layer.

1. For the CRUST, I used ________________________________

2. For the MANTLE, I used ________________________________

3. For the OUTER CORE, I used ________________________________

4. For the INNER CORE, I used ________________________________

NEATLY sketch your EDIBLE EARTH below...
We have learned some ideas about the different layers of the earth...

How would you describe:

1. **THE CRUST:**

2. **THE MANTLE:**

3. **THE OUTER CORE:**

4. **THE INNER CORE:**
Supplemental Books for 2nd Grade Science Kits...

**Pebbles, Sand, and Silt**

*The Big Rock*  
Bruce Hiscock

*DIRT The Scoop On Soil*  
Natalie M. Rosinsky

*Everybody Needs a Rock*  
Byrd Baylor

*How Mountains Are Made*  
Kathleen Weidner Zoehfeld

*How to Dig a Hole to the Other Side of the World*  
Faith McNulty

*If You Find a Rock*  
Peggy Christian

*Let's Go Rock Collecting*  
Roma Gans

*Rocks In His Head*  
Carol Otis Hurst

**Balance and Motion**

*Around and Around*  
Patricia J. Murphy

*Back and Forth*  
Patricia J. Murphy

*Experiments With Motion*  
Salvatore Tocci

*Force and Motion*  
Delta Education

*Move It: Motion*  
Adrienne Mason

*How Do You Lift a Lion*  
Robert E. Wells

*Simple Machines*  
Allan Fowler

*What’s Faster Than a Speeding Cheetah*  
Robert E. Wells

*Mirette On the High Wire*  
Emily Arnold McCully

**Insects and Plants**

*Ant Cities*  
Arthur Dorros

*Are You a Bee?*  
Judy Allen

*Bees*  
Deborah Hodge

*Creepy Crawly Baby Bugs*  
Sandra Markle

*Dandelions: Stars in the Grass*  
Mia Posada

*Eye Wonder: Bugs*  
Penelope York and Mary Ling

*A Fruit is a Suitcase for Seeds*  
Jean Richards

*A House Spider’s Life*  
John Himmelman

*Gotta Go! Gotta Go!*  
Sam Swope

*Two Bad Ants*  
Chris Van Allsburg

*Insectlopedia*  
Douglas Florian