Do you have rocks in your head?…or
Using Scientific thinking to learn about rocks

The first item on the agenda in doing any science activity with kids (or adults!) is to allow some time to freely explore the materials. When you're finished exploring, work with a partner to try the challenges below. After completing each activity, reflect on what scientific thinking processes you used. Refer to the handout, *Scientific Thinking,* to help you identify the process.

Try this rock activity	**Thinking Process**
1. Using the paper and colored pencil provided, choose one rock to carefully illustrate. Don't let you partner know which one you are drawing. Can your partner guess which rock you drew?	
2. Take 5 rocks out and put them in a line using a secret plan (in order by size, hardness, color, etc.). Have your partner deduce which attribute you used to order them and then have him/her put the remaining rocks into the "line-up."	
3. Choose two rocks and name as many ways as you can that they are different (your partner can keep score) and then as many ways that they are similar. Be sure to use precise words that describe properties. Switch roles.	
4. Play "I Spy" with your rock collection. Secretly choose one rock to describe to your partner. See how many clues he/she needs to guess your chosen rock.	
5. Choose two characteristics to sort your rocks by, e.g. smooth vs. rough and one-color vs. multi-colored. Sort the rocks into four piles with each pile representing two characteristics, e.g. rough and multi-colored.	
6. Put a few rocks on the table between you. One partner picks up a rock and describes it without using the sense of sight (touch, smell, and hearing are O.K.). Lay the rock back down. Can your partner find it with his/her eyes still closed?	
7. Choose a single characteristic that rocks possess and sort your rocks into groups based on that characteristic (e.g. color or texture). Can you partner guess your plan?	

8. Think of different attributes of measurement related to a rock. Design and carry out an investigation related to a rock's measurement. (e.g. displacement of water, surface area, circumference, weight compared to length, etc.	