

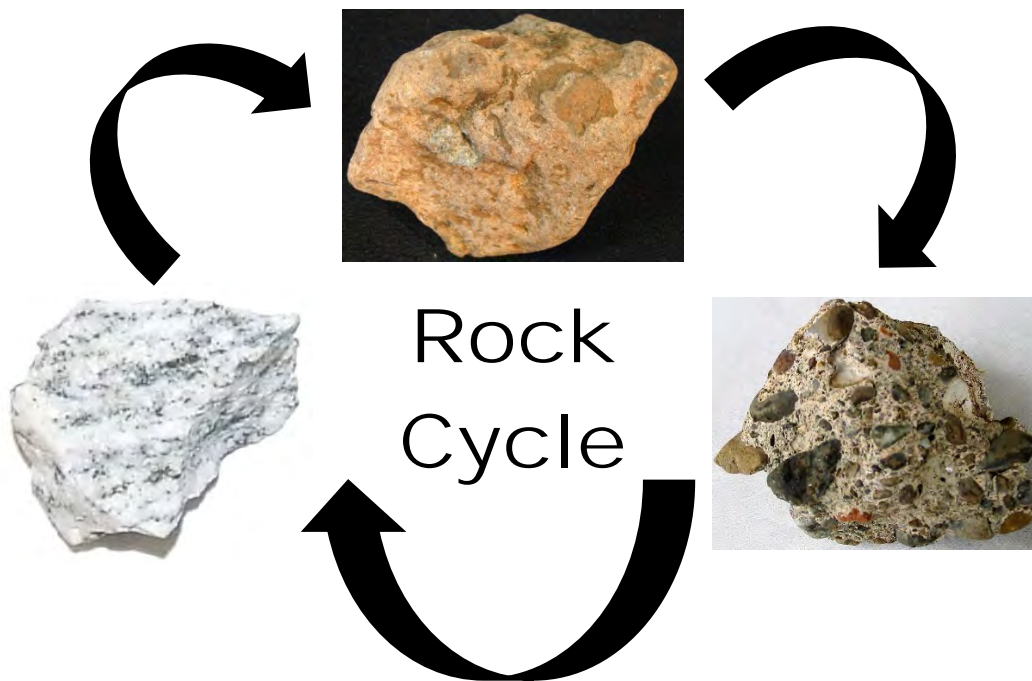
# The Rock Cycle

## Chapter 1

The rock cycle consists of three major families of rocks: igneous rocks, sedimentary rocks and metamorphic rocks. Each of the families are defined by the process that creates the rocks.

### Igneous rocks

The first major family is igneous rock, which comes from the Latin term *igneous*, meaning fire. All igneous rocks form when molten rock cools and solidifies into solid rock.



### Sedimentary rocks

Rock particles dissolve and are carried away by rainwater when rock weathers. Water in streams carry most of the pieces of rock away from their source. Most of this water borne sediment eventually is deposited in the oceans.

Winds also transport sediments from one area to another where they can form large sand dunes. Sedimentary rocks form when sediments turn to stone (lithify) through compaction and cementation.

### Metamorphic rocks

The third major family in the rock cycle is metamorphic rocks. The term comes from the Greek word *meta*, meaning change and *morpho* meaning form. Hence, the term metamorphic means change of form.

Metamorphic rocks change their form due to heat and/or pressure. The process is like pottery makers firing clay pots in a kiln as the soft clay hardens. The mineral grains in the

# Starting a Rock Collection

## Activity 1

### Introduction

Collecting rocks is a good way to remember places you have been. You can usually pick up some unique rocks in areas where you visit. Be sure and not collect on private land or in National Parks. This activity will give you some hints about how to organize the rocks that you collect.

### Materials

- ◆ Collection of rocks
- ◆ Egg carton or small cardboard box
- ◆ Small index cards
- ◆ White glue
- ◆ Plain paper for labels and numbers
- ◆ Black felt pen



### Directions

1. If you are just starting a rock collection gather 10 or 12 different rocks. Rocky stream beds or road cuts often have interesting rocks you might collect.
2. Write your name on the top of an egg carton or a small cardboard box.
3. Print a set of numbers on a piece of paper so that each rock will have its own number.
4. Cut out the numbers. (If you have a paper punch you can punch out the numbers.)
5. Glue a different number on each rock with white school glue.
6. Write the name of each rock on a small piece of paper and glue it to the top of the egg carton. (Blank address labels will stick to the lid and are easy to use.)
7. Write the number of each rock on a separate small index card.
8. Write the following information about your rocks on the index card.
  - a. Name of the rock
  - b. Date collected
  - c. Type of rock: organic limestone, cinder, slate, etc.
  - d. Where you collected the rock.
  - e. Any other information that is available
9. If you do not have all the information suggested just list the date and place the rock was collected.
10. You can add more information about the rocks later.
11. Each time you find a rock to add to your collection write a number on it and start an index card about the rock

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