

## Mini LAB

### Classifying Sediments

**Procedure**   

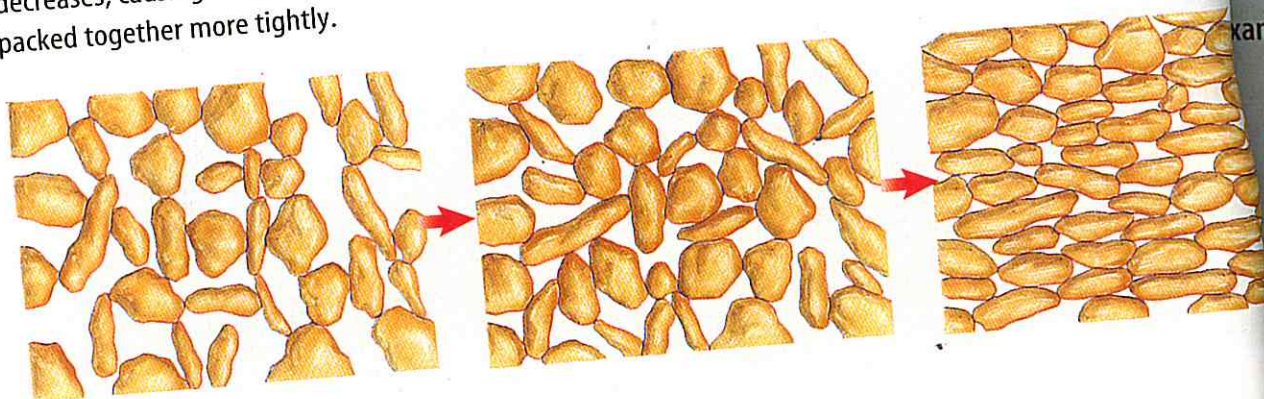
**WARNING:** Use care when handling sharp objects.

1. Collect different samples of sediment.
2. Spread them on a sheet of paper.
3. Use Table 2 to determine the size range of gravel-sized sediment.
4. Use tweezers or a dissecting probe and a magnifying lens to separate the gravel-sized sediments.
5. Separate the gravel into piles—rounded or angular.

#### Analysis

1. Describe the grains in both piles.
2. Determine what rock could form from each type of sediment you have.

**Figure 12** During compaction, pore space between sediments decreases, causing them to become packed together more tightly.



## Classifying Sedimentary Rocks

Sedimentary rocks can be made of just about any material found in nature. Sediments come from weathered and eroded igneous, metamorphic, and sedimentary rocks. Sediments also come from the remains of some organisms. The composition of a sedimentary rock depends upon the composition of the sediments from which it formed.

Like igneous and metamorphic rocks, sedimentary rocks are classified by their composition and by the manner in which they formed. Sedimentary rocks usually are classified as detrital, chemical, or organic.

### Detrital Sedimentary Rocks

The word *detrital* (dih TRI tul) comes from the Latin word *detritus*, which means “to wear away.” Detrital sedimentary rocks, such as those shown in Table 2, are made from the broken fragments of other rocks. These loose sediments are compacted and cemented together to form solid rock.

**Weathering and Erosion** When rock is exposed to water, or ice, it is unstable and breaks down chemically or mechanically. This process, which breaks rocks into smaller pieces, is called weathering. Table 2 shows how these pieces are classified by size. The movement of weathered material is called erosion.

**Compaction** Erosion moves sediments to a new location where they then are deposited. Here, layer upon layer of sediment builds up. Pressure from the upper layers pushes down on the lower layers. If the sediments are small, they can be pushed together and form solid rock. This process, shown in Figure 12, is called **compaction**.

#### ✓ Reading Check

How do rocks form through compaction?