After rocks are broken up from weathering they need to be moved. Erosion is the process of moving these sediments.

Over time erosion helps shape and lower all surface features. Agents of Erosion are forces set in motion by gravity that cause sediments to move.

Gravity has a role and force behind most agents of erosion. It causes rivers to flow, ice to move, and rocks to slide. The Sun has a role that drives the Sun. It produces rain and fuels winds that drive ocean currents.

Deposition occurs when sediments are deposited in locations where they form layers of sedimentary rock. The sediments determine how fast they are deposited:

- Size: larger sediments will settle faster.
- Shape: rounder sediments settle faster and flatter sediment will take longer.
- Density: more dense sediment will settle faster.
Deposition [continued]

- Sorted Sediment - ________________________________________________________________

  - Example: deposition from a stream

- Unsorted Sediment - ______________________________________________________________

  - Example: deposition from a glacier

- Horizontal Sorting - when the _________________ of a wind or water erosional system gradually _________________; the size, roundness, and density gradually _________________ as you move farther out

- Vertical Sorting - __________________________________________________________________

  - Example: as a stream slows down throughout the year it can no longer transport larger material and begins to deposit the sediments according to size order
PART I QUESTIONS: MULTIPLE CHOICE

1. Which is the best evidence that erosion has occurred?
   a. a large number of fossils embedded in limestone
   b. a soil rich in lime on top of a limestone bedrock
   c. sediments found in a sandbar of a river
   d. a layer of basalt found on the floor of the ocean

2. For which movement of earth materials is gravity not the main force?
   a. snow tumbling in an avalanche
   b. moisture evaporating from an ocean
   c. boulders carried by a glacier
   d. sediments flowing in a river

3. Which sediment is the largest that could be carried by a stream flowing at a velocity of 100 cm/sec?
   a. sand
   b. cobbles
   c. silt
   d. pebbles

4. What can a stream flowing at a velocity of 100 cm/sec can transport?
   a. silt, sand, and pebbles, but not cobbles
   b. silt, but not sand, pebbles, or cobbles
   c. silt, sand, pebbles, and cobbles
   d. silt and sand, but not pebbles or cobbles

5. A glass sphere and a lead sphere have the same volume. Each sphere is dropped into a container of water. Which statement best explains why the lead sphere settles faster?
   a. The lead sphere has a higher density.
   b. The lead sphere takes up less space.
   c. The glass sphere has more surface area.
   d. The glass sphere has a smoother surface.

6. Which rock particles will remain suspended in water for the longest time?
   a. pebbles
   b. silt
   c. clay
   d. sand

7. Compared to a low-density spherical particle, a high-density spherical particle of the same size will sink through water
   a. more rapidly
   b. more slowly
   c. at the same rate
Base your answers to questions 8 and 10 on the diagram and data table below. The diagram shows the equipment used to determine the factors affecting the rate of erosion in a stream. The data table shows the time it took a 10-gram sample of quartz sand to move 100 centimeters down the rain gutter under various conditions.

8. In this experiment, the water velocity could be increased by
   a. decreasing the slope of the rain gutter
   b. increasing the amount of water from the faucet
   c. lowering the flexible hose
   d. widening the rain gutter

9. What is the relationship between the water velocity and the rate of erosion?
   a. If the water velocity decreases, the rate of erosion increases.
   b. If the water velocity increases, the rate of erosion increases.
   c. If the water velocity remains constant, the rate of erosion decreases.
   d. If the water velocity remains constant, the rate of erosion increases.

10. By adding more textbooks underneath the rail gutter, what happens to velocity?
    a. increases
    b. decreases
    c. remains the same