

# Hydrology Objectives

**Correctly define:** abrasion, capillarity, deposition, discharge, erosion, evapotranspiration, hydrology, impermeable, infiltration, meander, permeable, porosity, water table, weathering, zone of aeration, zone of saturation

## **HYDROLOGY:**

- Explain what the hydrologic cycle is and correctly label a diagram of the hydrologic cycle.
- Explain the difference between permeability, porosity, and capillarity.
- Explain the relationship between particle size and each of the following: permeability, porosity, and capillarity.
- Describe how slope, particle size, and the state of soil (frozen or unfrozen) affect the rate of infiltration
- Describe the factors that affect runoff and stream discharge.

## **WEATHERING:**

- Identify the two types of weathering---physical and chemical.
- Give two examples of both physical and chemical weathering.
- Describe the environment in which chemical weathering would be the greatest.
- Explain surface area and composition affect the rate of weathering.
- Explain the normal progression of soil profile development.

## **EROSION:**

- Identify the greatest force and agents of erosion.
- Describe the difference in the shape of valleys carved out by streams and those carved out by glaciers.
- Describe the relationship between the rate of erosion and each of the following factors: stream discharge, slope, and location on a meander.
- Calculate the minimum of velocity required to move a specific size of sediment.

## **DEPOSITION:**

- Describe the relationship between the rate of deposition and each of the following factors: stream velocity, slope, location on a meander, size, density, and shape.
- Describe the pattern of deposition for each of the following: streams, wind, glaciers, mass movement.