Name

Chemical Weathering Practice Worksheet

1. Why do silicate minerals turn to clay at the surface?

    a. Unlike silicates, clay is stable at surface temperatures and pressures
    b. Silicate minerals are unstable in the acid rain found at the surface
    c. Clay is what all minerals at the surface eventually turn to, silicates are just quicker
    d. None of the above

2. Chemical weathering can change the composition of the rocks but not the size of pieces of rock materials.

    a. TRUE
    b. FALSE

3. The more surface area of a rock is exposed, the more chemical weathering can occur.

    a. TRUE
    b. FALSE

4. How does a water molecule dissolve rock?

    a. The positive side of the water molecule attracts negative ions in the rock
    b. The negative side of the water molecule attracts positive ions in the rock
    c. The positive ions attract positive ions and negative ions attract negative ions
    d. A & B are correct

5. Oxidation is a type of _____.

    a. Chemical weathering
    b. Biological weathering
    c. Mechanical weathering
    d. None of the above

6. Minerals rich in iron break down as the iron oxidizes and forms new compounds in soil. This is an example of _____.

    a. Chemical weathering
    b. Biological weathering
    c. Mechanical weathering
    d. Both A and B

7. Carbonation is a type of biological weathering as the carbon-dioxide that forms carbonic acid is released by organisms.

    a. TRUE
    b. FALSE

8. Hydrolysis occurs when _____.

    a. Dissolved minerals are carried to lower layers in soil
    b. Acid rain happens
    c. Hydrogen or hydroxide ions replace the cations in a mineral to change the mineral
    d. Oxygen reacts with another element to create a metal oxide

9. _____ is not a process of physical (mechanical) weathering because it involves a chemical change.

   a. Downloading
   b. Frost wedging
   c. Hydrolysis
   d. Thermal expansion

10. When breaking a rock into smaller pieces, the surface area to volume ratio _____.

   a. Increases
   b. Decreases
   c. Remains constant
   d. Can increase or decrease