

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?
- The positive side of the water molecule attracts negative ions in the rock
 - The negative side of the water molecule attracts positive ions in the rock
 - The positive ions attract positive ions and negative ions attract negative ions
 - A & B are correct
5. Oxidation is a type of ____.
- Chemical weathering
 - Biological weathering
 - Mechanical weathering
 - 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 ____.
- Chemical weathering
 - Biological weathering
 - Mechanical weathering
 - Both A and B
7. Carbonation is a type of biological weathering as the carbon-dioxide that forms carbonic acid is released by organisms.
- TRUE
 - FALSE
8. Hydrolysis occurs when ____.
- Dissolved minerals are carried to lower layers in soil
 - Acid rain happens
 - Hydrogen or hydroxide ions replace the cations in a mineral to change the mineral
 - 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