

8. The chemical formula for QUARTZ is:
 a) H₂O b) NaCl
 c) SiO₂ d) FeS₂
9. Primary Minerals are those which are:
 a) present in the earth
 b) precipitated from a solution
 c) very hard and resistant to erosion
 d) the colors of the rainbow
10. ADAMANTINE, METALLIC, NON-METALLIC, GREASY, PEARLY, GLASSY, RESINOUS AND SILKY refer to a mineral's:
 a) crystal structure b) hardness
 c) color d) luster
11. The red color in sedimentary rocks is due to:
 a) impurities b) SiO₂
 c) iron oxides d) too much pollution
12. Most rocks on the earth's surface are:
 a) Sedimentary b) Metamorphic
 c) Igneous d) none of the above
13. Most metallic mineral deposits are found associated with:
 a) Sedimentary rocks b) Metamorphic rocks
 c) Igneous rocks d) Extrusive rocks
14. Most metamorphic rocks are formed:
 a) at the ocean bottom
 b) in the mountain building process
 c) near magma chambers
 d) by volcanic eruptions
15. Which of the following is NOT a Metamorphic rock?
 a) marble b) sandstone
 c) gneiss d) schist

Answers

15. B
 14. B
 13. C
 12. A
 11. C
 10. D
 9. B
 8. C
 7. A
 6. B
 5. A
 4. C
 3. D
 2. A
 1. B

The Physical Geography Series

Introduction to Rocks and Minerals

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Glossary

Mineral- A substance that is a unique combination of chemical elements arranged in a specific pattern.

Rock- A physical mixture of a mineral in varying amounts; an aggregate of minerals.

Luster- How the mineral appears in ordinary light. Luster can be metallic or non-metallic.

MOH's Hardness Scale-

1. Talc
2. Gypsum
3. Calcite
4. Fluorite
5. Apatite
6. Orthoclase
7. Quartz
8. Topaz
9. Corundum
10. Diamond

Vitreous- A glassy luster.

Streak- The color of a powder of a mineral.

Effervescence- The bubbling of a mineral after hydrochloric acid is placed on the mineral. This is a good test for calcite.

Sedimentary Rocks- Rocks formed by precipitation or evaporation from a solution. Example: limestone, shale and sandstone.

Metamorphic Rocks- Those formed or changed by heat and or pressure from other rocks. Example: shale under heat and pressure will become slate; calcite under heat and pressure changes to marble.

Suggested Teaching Activities

1. Have the students bring in three or four rocks and minerals found near their homes. Have them discuss their characteristics such as color, crystal structure, streak, hardness, etc. Have them try to identify them as SEDIMENTARY, METAMORPHIC, IGNEOUS OR MINERAL.

2. What are some important minerals used in our lives? Discuss the importance of minerals in BUILDING MATERIALS, FARMING AND AGRICULTURE, CARS AND TRANSPORTATION, ENERGY, FOOD AND NUTRITION.

3. Discuss Moh's Hardness Scale and go over the list of ten from softest (1) to hardest (10). If possible bring in a sample of some or all.

4. Discuss the physical characteristics of a mineral including hardness, color and luster.

5. Discuss IGNEOUS, METAMORPHIC AND SEDIMENTARY ROCKS. Discuss how each type of rock is formed and where you might expect to find them.

6. Have your students make a display of the three basic rock types from samples you may have in the classroom or which students may bring in from home. What kind of rocks are found in your state? Is it possible to find examples of all three types in your area? How did this occur?

Quiz

1. Valleys are often the result of:
 - a) hard, resistant rock
 - b) soft, easily erodible rock
 - c) volcanic action
 - d) earthquakes
2. Soils are:
 - a) mineral fragments of broken down rock
 - b) precipitation in ocean environments
 - c) found buried below the earth's surface
 - d) caused by living animals
3. Glass bottles and camera lenses are produced from this mineral:
 - a) mica
 - b) hornblende
 - c) feldspar
 - d) quartz
4. Rocks that have been changed from another rock by pressure or heat are known as:
 - a) igneous
 - b) sedimentary
 - c) metamorphic
 - d) none of the above
5. Rocks that were once molten but were allowed to cool and crystallize are called:
 - a) igneous
 - b) sedimentary
 - c) metamorphic
 - d) precipitates
6. An example of an igneous rock is:
 - a) pyrite
 - b) granite
 - c) slate
 - d) diamond
7. A CRYSTAL always has:
 - a) an internal, orderly arrangement of atoms
 - b) colorful faces
 - c) brilliance like a diamond
 - d) come from molten rock