

Name _____
Period _____ Date _____

Unit 8 Rocks and Minerals
Earth Science

I. General Information

- a. _____ and _____ have helped us understand the variety and complexity of Earth materials.
- b. The use and distribution of _____ and fossil fuels have important economic and environmental impacts.
- c. Rocks and minerals are _____ and must be used wisely.
- d. List three things that humans can do to help save our natural resources.

II. Mineral Definition

- a. _____ occurring
- b. _____ (non-living)
- c. _____
- d. _____ atoms arranged in a fixed pattern.
 - i. _____ - when patterns of atoms can be seen with the human eye.
- e. Composed of _____ or _____
 - i. _____ - substances that cannot be broken down into simpler substances by ordinary chemical means.
 - ii. _____ - consist of molecule/atoms joined together in a definite proportion.

III. Mineral Information

a. Minerals are

b. Minerals are

2. _____ from water caused by evaporation, chemical reactions, temperature changes and the rearrangement of atoms

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IV. Physical Properties of Minerals

- a. A mineral's physical properties are determined by its chemical composition and _____ of _____.
- b. We need to look at _____ the properties to identify a mineral.
1. _____ - most minerals do not have a distinctive color.
 - a. Exception: Sulfur
 2. _____ - the color of a mineral's powder.
 - a. White, none, colored
 3. _____ - the resistance to being scratched.
 4. _____ - the way a mineral reflects light
 - a. _____ looks like metal
 - b. _____ does not look like metal
 5. _____ - can calculate
 6. _____ -
 7. _____ -
 8. crystal shape

V. Chemical Properties of Minerals

a. Acid Test-

b. HCl causes minerals with Sulfur in them to smell.

- _____ content and _____.
- e. _____ - rocks composed of more than one mineral
 - f. _____ - rocks composed of only one mineral
 - g. ****Know how to read the Rock Cycle Chart on page 6 or your ESRT

VII. Igneous Rocks

- a. Igneous rocks are formed by the _____ of molten _____.
 - i. _____ - melted rock below the Earth's surface
 - ii. _____ - melted rock at the Earth's surface
- b. made from _____ crystals
- c. _____ (_____) are present in some igneous rocks.
- d. What is used to identify an igneous rock?

- e. We can tell the rate of cooling by observing the _____ size.
 - i. Big crystals must have cooled _____.
 - ii. Small crystals must have cooled _____.

- f. There are two types of igneous rock:
 - i. _____
 - ii. _____

g. ****Know how to use the Igneous Rock Chart on page 6 of your ESRT.

VIII. Sedimentary Rocks

- a. are often composed of rounded _____ cemented in _____.
- b. Grains may be too small to be seen (_____)
- c. In general, sedimentary rocks are classified _____.

4.

- e. Usually form _____.
- f. May be made from a single sediment (_____)
- g. Are usually _____ and deposited _____.

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- h. Sedimentary rocks are usually the _____ resistant to weathering.
- i. Found near the _____ of the Earth.
- j.

k. Fossils provide evidence of the environment in which they formed. Ex. Clam shells:

l. Evaporate sedimentary rocks precipitate (comes out of solution) from _____, shallow seas.

m. Show some ripple _____ and mud cracks.

n. Are classified as

1. _____ -
2. _____ -
3. _____ -

o. **** Know how to use the Sedimentary Rock Chart on page 7 of your ESRT.

IX. Metamorphic Rocks

a. Are formed by the _____ of existing rocks.

b. Changes are caused by:

1.

2.

3.

c. Metamorphic rocks are not formed from the _____ melting of other rocks.

g. Usually contains intergrown crystals.

h. Can undergo _____ changes or _____ changes.

i. _____ - the rock it used to be before it changed

j. It is possible to infer (guess at) the parent rock from the mineral _____ and the _____.

k. The same parent rock can form many different metamorphic rocks.

l. There are two types of metamorphism

1. _____ - very deep, over a large area from mountain building and plate tectonics.

2. _____ - occurs when molten rock comes into contact with cooler rock, small area (intrusion or extrusion)

m. ****Know how to use the Metamorphic Rock Chart on page 7 of the ESRT.

