



Practice

Write **True** if the statement is correct. Write **False** if the statement is not correct. In each **false** statement, **circle** the word or words that make the statement false.

- _____ 1. Color is a property of minerals.
- _____ 2. Texture is how a mineral shines.
- _____ 3. Streak is a property of minerals.
- _____ 4. All minerals streak the same color.
- _____ 5. All minerals have the same density.
- _____ 6. Some minerals are softer than others.
- _____ 7. A mineral has cleavage when it breaks along rough surfaces.
- _____ 8. Most minerals have crystals.
- _____ 9. Some minerals are shiny.
- _____ 10. A mineral fractures when it breaks along flat surfaces.
- _____ 11. Talc is the hardest mineral.
- _____ 12. Diamond is the softest mineral.
- _____ 13. The ability of a magnet to attract a mineral can help identify it.
- _____ 14. All samples of a mineral will be the same color.
- _____ 15. Some minerals fizz or bubble when acid is dropped on them.



Practice

Match each description with the correct name of the **mineral identification test**. Write the letter on the line provided.

- | | | |
|-----------|--|------------------------|
| _____ 1. | the way a mineral reflects light; it may have a metallic, glassy, pearly, greasy, silky, or brilliant appearance | A. acid test |
| _____ 2. | the color of a mineral in its powdered form; shown by rubbing the mineral across a piece of unglazed porcelain | B. cleavage |
| _____ 3. | a mineral's resistance to being scratched; it is measured on a scale from one to 10 | C. color |
| _____ 4. | when a mineral breaks along a smooth or flat surface | D. crystals |
| _____ 5. | when a mineral breaks along an uneven or curved surface | E. flame test |
| _____ 6. | the comparison of the weight of the mineral with an equal amount of water | F. fracture |
| _____ 7. | atoms arranged to form flat faces | G. hardness |
| _____ 8. | can be attracted by a magnet | H. luster |
| _____ 9. | the mineral will bubble or fizz when acid is dropped on it | I. magnetic properties |
| _____ 10. | the color of flame given off by a mineral gives its identity | J. Mohs' scale |
| _____ 11. | scale used to measure the hardness of a mineral | K. specific gravity |
| _____ 12. | one of the first observable properties | L. streak |



Lab Activity 7: Forming Sediments

Purpose

Use laboratory materials to form sediments.

Materials

- large container
- sodium carbonate
- calcium carbonate
- water
- 2 test tubes

1. Dissolve about 1 gram of sodium carbonate in 10 milliliters of water in a test tube.
2. In a second test tube, dissolve about 1 gram of calcium carbonate in 10 milliliters of water. (Both of these solutions should be clear and colorless.)
3. Pour the contents of these two test tubes into the same larger container.

4. What happened? _____

5. After a few minutes, what forms in the bottom of the container?

6. How could this be similar to the way sediment forms in the water?



Lab Activity 8: Form Sedimentary Rocks from Other Rocks

Purpose

Form sedimentary rocks from other rocks.

Materials

- large jar
- mixture of sedimentary particles
- paper cups
- plaster of Paris

Part 1

1. Mix some soil, sand, and pebbles in a jar.
2. Add water and stir or shake this mixture well. Watch how the particles settle.
3. Which one settled first? _____
4. Why do you think it settled first? _____

5. Does it settle in layers? _____

Part 2

1. Pour the mixture above into a paper cup.
2. Very carefully, pour the water out of the paper cup, leaving a mixture of sand, soil, and pebbles.
3. Mix a small amount of plaster of Paris in another paper cup. The plaster should be thin and watery.
4. Pour plaster of Paris into the first cup with the sand, soil, and pebble mixture.
5. Set aside to dry.



6. The next day, if the plaster of Paris is dry, tear away the paper cup.
7. Describe what you see when you tear away the paper cup.



Lab Activity 9: Rock Types

Purpose

Identify rock types by their physical characteristics.

Materials

- rock samples
- magnifying glass

Rock	Color	Fragments Present	Describe Layers	Describe Crystals Present	Color Bands	Texture	Rock Type
A							
B							
C							
D							
E							
F							
G							

1. Choose a rock sample and examine it carefully.
2. Record the physical characteristics in the chart above.
3. Compare the characteristics with rock characteristics described in the unit.
4. Determine the type of rock, and record it in the chart above. Write **I** for Igneous, **M** for Metamorphic, and **S** for sedimentary.
5. Repeat for each sample.



6. List three characteristics used to identify igneous rocks.

7. List three characteristics used to identify sedimentary rocks.

8. List three characteristics used to identify metamorphic rocks.

9. What type of rock is the easiest to identify? _____

Why? _____

10. Does color aid in the identification of rock types? _____

Explain. _____



Practice

Use the drawing of the **rock cycle** on page 160 to answer the following by writing **yes** or **no**.

The Rock Cycle

A rock may change in many different ways. A rock may even repeat the changes over and over again. This is known as the rock cycle. Follow the arrows in the diagram on page 160 to see how a rock of one kind can be changed into a rock of another kind.

1. Is there a specific place in the cycle where the rock cycle begins?

2. Do the changes in a rock's form take place in any special order?

3. The arrows show the paths a rock can take to change into another type of rock. Can the paths be traveled in all directions? _____
4. Can a sedimentary rock turn into either a metamorphic or igneous rock? _____
5. Can a metamorphic rock turn into either a sedimentary or an igneous rock? _____
6. Can an igneous rock turn into either a metamorphic or a sedimentary rock? _____
7. Can a rock change into another type of rock (igneous, metamorphic, sedimentary) in any order? _____



Answer the following using complete sentences.

8. What does the word cycle mean? _____

9. Why do you think mineralogists call this a cycle? _____

10. What takes place for an igneous rock to become a metamorphic rock?

11. What takes place for a sedimentary rock to become a metamorphic rock?



12. What takes place for an igneous rock to become a sedimentary rock?

13. What takes place for a metamorphic rock to become a sedimentary rock?

14. What takes place for a metamorphic rock to become an igneous rock?

15. What takes place for a sedimentary rock to become an igneous rock?



Practice

Answer the following using complete sentences.

1. What is the most abundant rock formation in Florida? _____

2. What is the chemical name and formula for limestone? _____

3. What are some uses of limestone? _____

4. Name three different types of limestone. _____

5. Which type of limestone is found on the coast of Florida? _____



6. How is coquina limestone formed? _____

7. What are three other important types of rocks found in Florida?

8. Why are these three important to the state? _____

9. How are the underground caves and caverns found in Central Florida formed?

10. How does a sinkhole form? _____



Practice

Circle the letter of the correct answer.

- _____ is not one of the three main types of rocks.
 - sedimentary
 - igneous
 - metamorphic
 - conglomerate
- Igneous rock that cools inside Earth is called _____.
 - extrusive
 - intrusive
 - sedimentary
 - metamorphic
- Sedimentary rocks are the result of _____.
 - weathering
 - fire
 - heat
 - pressure
- The rock that floats is _____.
 - granite
 - basalt
 - halite
 - pumice
- The coral reefs off Florida's coast are made of _____.
 - sandstone
 - limestone
 - shale
 - granite
- Coal is a(n) _____ rock.
 - chemical
 - fragmental
 - organic
 - extrusive



7. Rocks that change in form are called _____ .
 - a. igneous
 - b. sedimentary
 - c. metamorphic
 - d. fragmental

8. _____ sedimentary rocks form when water evaporates and leaves behind a mineral deposit.
 - a. Fragmental
 - b. Organic
 - c. Intrusive
 - d. Chemical

9. Rocks made of large pebbles mixed with mud and sand are _____ .
 - a. conglomerates
 - b. sandstone
 - c. limestone
 - d. shale

10. Igneous rocks are also known as _____ .
 - a. rocks that have changed in form
 - b. fire-formed rocks
 - c. rocks that result from weathering
 - d. organic

11. Marble is a metamorphic rock that forms from _____ .
 - a. shale
 - b. limestone
 - c. sandstone
 - d. granite

12. _____ is not a metamorphic rock.
 - a. marble
 - b. gneiss
 - c. slate
 - d. granite



Practice

Use the list below to write the correct term for each definition on the line provided.

gems	magma	ore
igneous rock	metamorphic rock	sediment
inorganic	mineral	sedimentary rock
lava		

- _____ 1. does not contain carbon and has never lived
- _____ 2. a rock or mineral from which metals and nonmetals can be removed in usable amounts
- _____ 3. rare, precious, or semiprecious minerals
- _____ 4. an igneous or sedimentary rock that has been changed by heat and pressure
- _____ 5. an inorganic solid with a definite chemical formula and specific shape
- _____ 6. small pieces of rock
- _____ 7. melted rock found inside Earth
- _____ 8. rock made up of several layers of sediment cemented together
- _____ 9. a rock formed after magma has cooled
- _____ 10. melted rock on the surface of Earth



Practice

Use the list below to write the correct term for each definition on the line provided.

cleavage
extrusive
fracture
intrusive

luster
metallic
mineralogist
Mohs' scale

nonmetallic
rock
rock cycle

- _____ 1. a scientist who studies and identifies minerals
- _____ 2. continuous change of rocks from one form to another
- _____ 3. the tendency of a mineral to break along a jagged, uneven, or curved surface
- _____ 4. the tendency of a mineral to break along a smooth or flat surface
- _____ 5. a solid material made of one or more minerals
- _____ 6. igneous rocks that cool on Earth's surface
- _____ 7. a scale used to test the hardness of a mineral
- _____ 8. minerals without metal, with no shine
- _____ 9. the reflecting qualities of a material
- _____ 10. igneous rocks that cool below Earth's surface
- _____ 11. has a shiny appearance



Practice

Circle the letter of the correct answer.

1. A rock formed after magma has cooled is _____ .
 - a. sedimentary rock
 - b. sediment
 - c. metamorphic rock
 - d. igneous rock

2. The melted rock found inside Earth is _____ .
 - a. magma
 - b. sediment
 - c. metamorphic rock
 - d. sedimentary rock

3. The melted rock on the surface of Earth is _____ .
 - a. lava
 - b. sedimentary rock
 - c. ore
 - d. metamorphic rock

4. Small pieces of rock are _____ .
 - a. sedimentary rock
 - b. ore
 - c. metamorphic rock
 - d. sediment

5. Rock made up of several layers of sediment cemented together is _____ .
 - a. ore
 - b. metamorphic rock
 - c. sedimentary rock
 - d. inorganic

6. A rock changed by heat and pressure is _____ .
 - a. ore
 - b. inorganic
 - c. mineral
 - d. metamorphic rock



7. A rock or mineral from which metals and nonmetals can be removed in usable amounts is a(n) _____ .
 - a. gem
 - b. crystal
 - c. mineral
 - d. ore

8. An inorganic substance with a definite chemical formula and specific shape is a(n) _____ .
 - a. crystal
 - b. inorganic
 - c. mineral
 - d. luster

9. Materials that do not contain carbon and have never lived are called _____ .
 - a. metallic minerals
 - b. nonmetals
 - c. crystals
 - d. inorganic

10. Rare, precious, or semiprecious minerals are called _____ .
 - a. gems
 - b. metallics
 - c. crystals
 - d. nonmetallics

11. The surface appearance of a material is called its _____ .
 - a. rock cycle
 - b. lava
 - c. fracture
 - d. luster

12. Minerals that have a shine and are good conductors of heat and electricity are _____ .
 - a. rocks
 - b. crystals
 - c. nonmetallic
 - d. metallic



13. Minerals without metal and that have no shine are _____ .
- a. rocks
 - b. gems
 - c. nonmetallic
 - d. crystals
14. A scale used to test the hardness of a mineral is _____ .
- a. Mohs' scale
 - b. nonmetallic
 - c. metallic
 - d. inorganic
15. The continuous change of rocks from one kind to another is a _____ .
- a. rock cycle
 - b. metallic
 - c. Mohs' scale
 - d. nonmetallic
16. A solid material made of one or more minerals is a _____ .
- a. Mohs' scale
 - b. nonmetallic mineral
 - c. metallic mineral
 - d. rock
17. The breakage of a mineral along a jagged, uneven, or curved surface is a(n) _____ .
- a. fracture
 - b. cleavage
 - c. nonmetallic
 - d. organic
18. A scientist who studies and identifies minerals is a _____ .
- a. geologist
 - b. biologist
 - c. chemist
 - d. mineralogist



19. The tendency of a mineral to break along a smooth or flat surface is a(n) _____ .
- a. organic
 - b. fracture
 - c. cleavage
 - d. intrusive
20. Igneous rocks that cool on Earth's surface are called _____ .
- a. nonmetals
 - b. extrusive
 - c. intrusive
 - d. organic