

More Physical Properties of Minerals

We have learned about the physical property of hardness to identify minerals. There are several other properties that can help to identify minerals. Color describes the dominant color of a mineral. Texture is the way a mineral feels. Descriptive words to use would be smooth or rough. Luster is the way a mineral reflects light from its surface. A metallic luster is shiny like aluminum foil. A non-metallic luster is not shiny and most are considered dull. If the mineral does not have a metallic luster then it should be considered to have a non-metallic luster.

Streak is the color of the mineral's powder. When you scratch the mineral across a porcelain streak plate it leaves a powder. Many times the powder is the same color as the mineral but there are several minerals, like pyrite, that have a very different color.

Materials: Mineral set, streak plate

What To Do:

1. For each of the minerals in the mineral set you should determine the color, texture and luster.
2. Place the information in the data table on the next page.
3. Use the streak plate to find out the color of the mineral's powder by following the instructions below.
 - a. Place the streak plate flat on the table.
 - b. Find a sharp corner of the mineral and firmly run it across the streak plate one time.
 - c. Observe the color of the powder and record it in the data table.

| Mineral | Color | Texture | Luster | Streak |
|---------------------------|-------|---------|--------|--------|
| 1. Fluorite | | | | |
| 2. Feldspar | | | | |
| 3. Hematite | | | | |
| 4. Pyrite | | | | |
| 5. Milky Quartz | | | | |
| 6. Calcite | | | | |
| 7. Muscovite Mica | | | | |
| 8. Magnetite | | | | |
| 9. Magnetite | | | | |
| 10. Talc | | | | |
| 11. Pyrolusite | | | | |
| 12. Biotite Mica | | | | |
| 13. Graphite | | | | |
| 14. Gypsum: Satin Spar | | | | |
| 15. Gypsum Selenite | | | | |

Questions:

1. Which minerals had a metallic luster? _____

2. Which minerals had a smooth texture? _____

3. Which minerals had a different color streak than the color of the mineral? _____



4. Which mineral did you like the best? _____

Why? _____

Watch the BrainPop video Mineral Identification and summarize your learning by completing the 3-2-1 information below. If you don't have access to BrainPop use the Mineral Identification video from www.missdoctorbailer.com

Write 3 things you already knew from the video.

Write 2 things you learned from the video.

Write one question you still have about minerals.

Physical Properties of Minerals 2

E R A H G A Y X R I E O B M K F F Q H D
 U T V E O M Y N T O J F E O V H V E G L
 S F A X R C G G X F L V Y Q L L X C U U
 M C J L L M K S D M M O O L U W I I O B
 O Z Q J P T E X T U R E C S C L S C R A
 O L E O P K D A I N A R T V L R M Q G B
 T S E A O W A R X J T E N A Y N I H S B
 H A P C V S H E D S R G T S B Z T L H C
 D F P I V K L U R R T E Q Q W Y W D Y B
 M L X L R P R V K T M R Z C B K Z H F X
 T G Q L A W X Y S B S Q E B J D N I E K
 H U X A A W X I Y C L B T A S Q O C L O
 T A O T T B Y N A X L Z V E K U X M A D
 Y T R E P O R P L A C I S Y H P F T B P
 E Y P M D Q V F R D F Q W H M U U Q M D
 W J T N G E U T Q Z P S V O R I R C Z A
 A A T O I L J M B L C F J G T K P I O C
 G K K N L P Y A T I A K Z S Q N D R S R
 P W T U Y D R F B J D Q V H D U E Z A E
 Z Y D K R X D A M Q T E K C Y B G E B T

Color

Dull

Luster

Nonmetallic

Metallic

Rough

Smooth

Streak

Streak Plate

Texture

Physical Properties

Shiny



Name _____ period _____

EXIT TICKET

More Physical Properties of Minerals

Match the physical property with its description below.

- | | |
|-------------------|-------------------------------------|
| _____ 1. Luster | a. the powder color of the mineral. |
| _____ 2. Texture | b. tested with a nail or penny |
| _____ 3. Hardness | c. how shiny or dull a mineral is |
| _____ 4. Streak | d. how a mineral feels |

5. How are gold and pyrite similar?

- A. Both have the same streak color
- B. Both are very soft
- C. Both are gold in color
- D. Both have a dull luster



Name _____ period _____

EXIT TICKET

More Physical Properties of Minerals

1. How are gold and pyrite similar?

- A. Both have the same streak color
- B. Both are very soft
- C. Both are gold in color
- D. Both have a dull luster

Match the physical property with its description below.

- | | |
|-------------------|-------------------------------------|
| _____ 2. Luster | a. the powder color of the mineral. |
| _____ 3. Texture | b. tested with a nail or penny |
| _____ 4. Hardness | c. how shiny or dull a mineral is |
| _____ 5. Streak | d. how a mineral feels |