

The Secret Rock

Name _____ Date _____

Find the secret rock and identify it.

Clue # 1: Your mineral does not have cleavage

Clue # 2: Your mineral is not magnetic

Clue # 3: Your mineral can cut glass

Clue # 4: Your rock leaves a red to brown streak

What is the name of your rock? _____

Draw a picture of your rock and give its special qualities



Rock name: _____

Color: _____

Luster: _____

Hardness: _____

Streak: _____

Cleavage: _____

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Useful Information:

Color- we tend to group objects based on their color, but sometimes this characteristic doesn't work so well with minerals. Use your observation of color together with their other physical properties when identifying minerals.

Luster- metallic or non-metallic. Does the mineral look like it is made up of metal. Be careful- shiny specimens do not necessarily have a metallic luster.

Hardness: how hard is the specimen on a scale of 1-10?

- If you can scratch it with your fingernail, it is a 2 on the hardness scale
- If it cuts glass it is harder than a 5
 1. talc
 2. gypsum
 3. calcite
 4. fluorite
 5. apatite
 6. potassium feldspar
 7. quartz
 8. topaz
 9. corundum
 10. diamond

Streak- this refers to the color it leaves when you rub it on the white porcelain streak plate. This color is sometimes different than the color of the specimen itself.

Cleavage- This is the tendency of the mineral to break along lines or planes of weakness. For example, if your sample made of flat sheets that peel away, then your mineral has one direction of cleavage, which is parallel to the orientation of the sheets.

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Rock Names and Classifications

Talc

Luster- Non-metallic
Hardness- 1
Cleavage- 1 or 0
Greasy feel
Various colors

Gypsum

Luster- Non-metallic
Hardness- 2
Cleavage- 1 perfect
Variety name- Selenite

Galena

Luster- Metallic
Hardness- 2.5
Cleavage- 3 at 90°
Streak- Grey

Calcite

Luster- Non-metallic
Hardness- 3
Cleavage- 3 slanted
Fizzes with HCl
Double refraction

Potassium Feldspar:

Orthoclase

Luster- Non-metallic
Hardness- 6-6.5
Cleavage- 2 at 90°

Quartz

Luster- Non-metallic
Hardness- 7
Cleavage- None
Conchoidal fracture
Various color

Amphibole

Luster- Non-metallic
Hardness- 6
Cleavage- 2 slanted
Black color

Graphite

Luster-Metallic
Hardness- 1
Cleavage- None
Streak- Steel grey

Halite

Luster- Non-metallic
Hardness- 2-2.5
Cleavage- 3 at 90°
Salty taste

Fluorite

Luster- Non-metallic
Hardness- 4
Cleavage- 4
Various colors

Garnet

Luster- Non-metallic
Hardness- 7-7.5
Cleavage- None
Several varieties

Olivine

Luster-Non-metallic
Hardness- 6.5- 7.0
Cleavage- None
Green crystals

Hematite

Luster- Metallic
Hardness- Varies
Cleavage- None
Streak- Red to Brown