

NAME:

DATE:
WS Mineral Knowledge CHECK

PD:

Directions: Use the diagram to answer the next several questions about the physical property of a mineral.

1) What does the property of mineral hardness measure?

- A. Hardness measures how easily a mineral can reflect light
- B. Hardness measures how easily a mineral's breakage occurs
- C. Hardness measures how easily a mineral can be scratched
- D. Hardness measures how easily a mineral can leave a mark onto a porcelain tile

Mohs Hardness Scale		
	Hardness	Hardness of Common Objects
Talc	1 (softest)	
Gypsum	2	finger nail (2.5)
Calcite	3	piece of copper (3.5)
Fluorite	4	iron nail (4.5)
Apatite	5	glass (5.5)
Feldspar	6	steel file (6.5)
Quartz	7	streak plate (7)
Topaz	8	scratches quartz
Corundum	9	scratches topaz
Diamond	10 (hardest)	scratches all common materials

2) What is the softest mineral shown on the table on the other side?

- A. Talc
- B. Feldspar
- C. Quartz
- D. Diamond

3) From the previous question what is its hardness on the Mohs scale of such a sample?

- A. hardness of 1
- B. hardness of 4
- C. hardness of 5
- D. hardness of 10

4) What is the hardest mineral shown from the illustration on the other side?

- A. Talc
- B. Feldspar
- C. Quartz
- D. Diamond

5) From the previous question what is its hardness on the Mohs scale of such a sample?

- A. hardness of 1
- B. hardness of 4
- C. hardness of 7
- D. hardness of 10

6) Explain how you could estimate the hardness of a mineral that does not appear on the Mohs scale.

- A. By comparing a known sample to the unknown sample
- B. By comparing an unknown sample to the unknown sample
- C. By comparing a known sample to the known sample

7) Which common object will scratch feldspar?

- A. An iron nail
- B. A glass
- C. A steel file
- D. A Penny

8) From the choices listed below, which mineral on the Mohs scale will scratch apatite?

- A. Calcite
- B. Quartz
- C. Talc
- D. Fluorite

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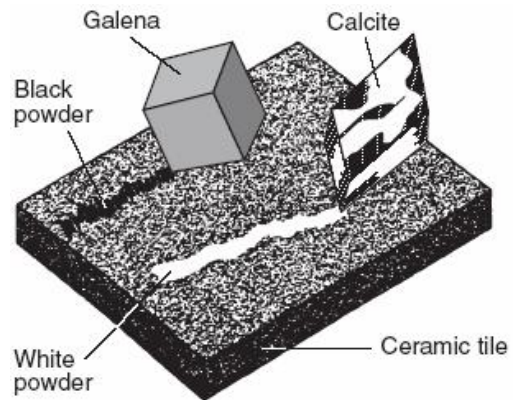
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- 9) From the choices listed below, which mineral will apatite scratch?
- A. Quartz
 - B. Calcite
 - C. Diamond
 - D. Feldspar
- 10) What is the hardness of a mineral that scratches gypsum but cannot scratch calcite?
- A. Hardness number that is below 2.0
 - B. Hardness number that is between 2.1 & 2.9
 - C. Hardness number that is above 3.0
- 11) Which of the following IS NOT a Mineral characteristic?
- A. Naturally occurring
 - B. Inorganic
 - C. Liquid
 - D. Definite chemical composition
 - E. Definite Crystal Structure
- 12) An element of chemical compound that is normally crystalline and that has been formed by geological processes is called?
- A. Crystal
 - B. Rock
 - C. Mineral
 - D. Magma/lava

The diagram below shows a method for determining a physical property of a mineral. The results are shown for two minerals, galena, and calcite.

- 13) Which property of the galena and calcite is indicated by the color of the powder each leaves on the ceramic tile?
- A. Hardness
 - B. Reaction to a solvent
 - C. Reaction to an acid
 - D. Streak



- 14) From the diagram to the right, which information would probably be most helpful to someone trying to identify a mineral sample?
- A. color and size of the sample
 - B. hardness and streak of the sample
 - C. location and mass of the sample
 - D. shape and texture of the sample

The diagram below shows a penny scratching the surface of the mineral calcite

- 15) Which physical property of the calcite is being tested?
- A. hardness
 - B. melting point
 - C. reaction to acid
 - D. streak

