

**WEBELOS**  
**GEOLOGIST ACTIVITY**

Page 1

What metals are made from these materials?

HEMATITE produces \_\_\_\_\_  
AZURITE produces \_\_\_\_\_  
SPHALERITE produces \_\_\_\_\_

What minerals are used to produce these products?

Glass: \_\_\_\_\_  
Jewelry: \_\_\_\_\_  
Fertilizer: \_\_\_\_\_

What minerals are used to make Road Construction Products?

\_\_\_\_\_

\_\_\_\_\_  
(Approved by)

\*Collect five geologic specimens that have important uses to man.

\_\_\_\_\_  
(Approved by)

**MOH'S HARDNESS SCALE** - The hardness of a mineral is the mineral's resistance to scratching. Hardness can be indicated on a scale from 1 to 10 with 1 representing the least hard and 10 the hardest.

\*Put in order of hardness:

- |           |            |
|-----------|------------|
| 1. _____  | gypsum     |
| 2. _____  | fluorite   |
| 3. _____  | talc       |
| 4. _____  | quartz     |
| 5. _____  | orthoclase |
| 6. _____  | apatite    |
| 7. _____  | topaz      |
| 8. _____  | diamond    |
| 9. _____  | calcite    |
| 10. _____ | corundum   |

\_\_\_\_\_  
(Approved by)

A mineral with a higher number can scratch anything beneath it or equal to it in hardness.  
**IF A MINERAL WILL SCRATCH ALL THE MINERALS IN THE SCALE UP TO 4  
AND IS SCRATCHED BY APATITE, ITS HARDNESS IS IN BETWEEN \_\_\_\_\_  
AND \_\_\_\_\_.**

Mineral hardness can be estimated by using common objects with a known hardness as follows:

Fingernail	2.5
Penny	3.0
Window glass	5.5
Knife blade	5.5
Steel file	6.5

The mineral shown on Moh's hardness scale that can be scratched with a steel file, but not with a knife blade is \_\_\_\_\_ and has a hardness of \_\_\_\_\_.

\*Make a list of some of the geologic materials used in the construction of your home:

\_\_\_\_\_  
(Approved by)

\*Give at least one use for each of the following rocks and/or minerals.

ROCK OR MINERAL

USED FOR

Barite

\_\_\_\_\_

Gypsum

\_\_\_\_\_

Mica (Muscovite or Biotite)

\_\_\_\_\_

Magnetite

\_\_\_\_\_

Galena

\_\_\_\_\_

Marble

\_\_\_\_\_

Hematite

\_\_\_\_\_

Quartz

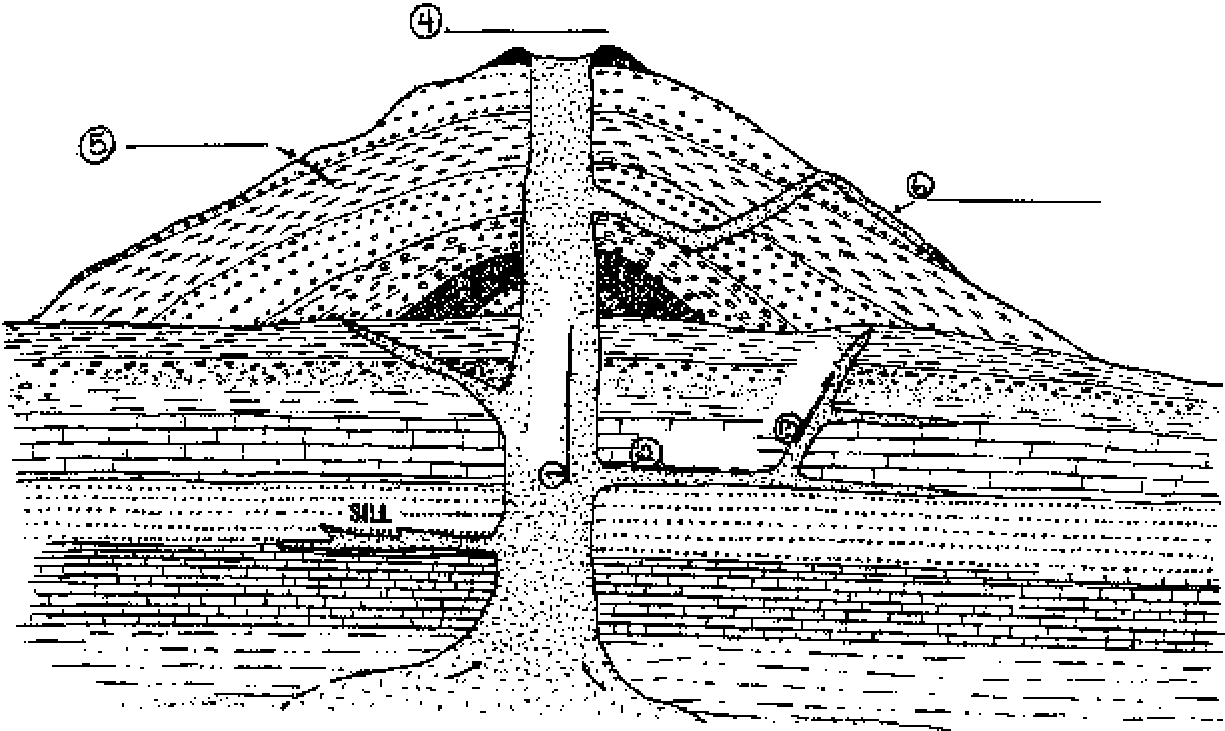
\_\_\_\_\_

Sphalerite

\_\_\_\_\_

\_\_\_\_\_  
(Approved by)

\*On the picture of the volcano, label the six parts:



Cross section of a volcano. The throat of a volcano usually follows a fissure in the rocks. The magma enlarges the opening and forces its way along cracks and joints to form dikes and sills, and reaches the surface as lava flows.

\_\_\_\_\_  
(Approved by)

\*Give a brief explanation of how a volcano forms:

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\_\_\_\_\_  
(Approved by)

\*Other types of mountains are fault block mountains, dome mountains, and folded mountains. Explain how one of these was formed.

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\_\_\_\_\_  
(Approved by)

Webelo Scout \_\_\_\_\_ has completed all requirements of the

Geologist Activity on \_\_\_\_\_  
(Date)

Completion verified by: \_\_\_\_\_