

# Scratch It!

## Procedure

- 1. Collaborate** Geologists use the Mohs scale to rate the hardness of minerals. Work in a small group. Arrange the minerals in the Mohs scale in order from 1 to 7. Label the unknown minerals *A*, *B*, and *C*. Record your observations in the chart below.

Mohs Scale	Mineral A	Mineral B	Mineral C
1. Talc			
2. Gypsum			
3. Calcite			
4. Fluorite			
5. Apatite			
6. Feldspar			
7. Quartz			
Hardness of unknown mineral			

- 2. Observe** Pressing down hard, scratch mineral *A* against the talc. Rub any mark left. If the mark rubs off, it is not a real scratch.
- 3. Record Data** If mineral *A* leaves a scratch on the talc, make an X in the row marked Talc. Repeat steps 2 and 3 for the next six minerals in the Mohs scale.
- 4. Use Numbers** The hardness of mineral *A* is between the highest-numbered mineral that it scratched and the lowest-numbered mineral that it did not scratch. Write the estimated hardness of mineral *A* in the chart.

**5. Record Data** Repeat steps 2 to 4 for mineral B and mineral C.

## Conclusion

Write the answers to the questions below.

**1. Use Numbers** Order the unknown minerals from softest to hardest.

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**2. Predict** Based on your data, predict what would happen if you scratched mineral A with mineral B.

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## Investigate More!

**Design an Experiment** Instead of carrying a set of minerals, geologists often use common objects to perform scratch tests. Using the sample materials, test the hardness of your fingernail, a penny, a key, or other common objects.