

Identifying Physical Properties of Minerals

Problem

Can minerals be identified using specific physical properties?

Materials (per group)

Streak plate

Paper towels

8 minerals: pyrite, galena, hematite, quartz, talc, graphite, hornblende, *calcite*

Procedure

1. In the chart below, record the name of each mineral.
2. Examine each mineral and record its color.
3. Examine each mineral again. This time record its luster.
4. Rub each mineral across the streak plate. Observe the color of the streak. Be sure to wipe the streak plate clean before you test the next mineral. Record the color of each mineral's streak. Some minerals will scratch the streak plate. If a mineral scratches the plate, write "no streak" in the appropriate place in the chart.
5. Observe the mineral carefully. Are there any visible breaks in the sample? If so, record whether the break is a fracture or cleavage.

Observations

Mineral	Color	Luster	Streak

1. Which minerals have similar colors? _____

2. Which minerals have a metallic luster? _____

- A nonmetallic luster? _____

3. Which minerals have a streak unlike the color of the mineral? _____

Conclusions

1. Which physical property is the least helpful in identifying minerals? _____
2. Which physical property is the most helpful in identifying minerals? _____
3. Which physical properties are more helpful than others in identifying minerals?

4. What property or properties can you use to distinguish galena from graphite?

- Calcite from talc? _____

5. LIST FIVE PROPERTIES OF MINERALS

