

Identifying Minerals based on their Physical Properties

You have three sets of minerals. Let's start with Set A.

Set A

Remove the bags from Set A. Take the three **minerals** out. What type of luster do these minerals have? _____.

Now, to ID them! Which one is **soft**, feels **slippery** and easily **leaves a mark** on this paper?



These two minerals are harder than graphite. Way to tell these apart is crystal habit and color. Which mineral is gold and/or shaped like a soccer ball?



This mineral is sometimes called Fool's Gold, but the correct name is **PYRITE**.
Label the bag #2



The cubic grey mineral is **GALENA**.
Label the bag #3

This soft grey mineral is called **GRAPHITE**.
Label the bag #1

Set B

Take the bags out of Set B. Both of these minerals **are colorful**. Which one is **green**?



The green mineral is **MALACHITE**.
Label the bag #4



The **purple** mineral is **AMETHYST**. Some of the minerals have a crystal habit like a 6-sided prism with a pyramid on top
Label the bag #5



This mineral is called **MUSCOVITE MICA**. Another physical property of muscovite is that you can pull it apart into thin sheets!
Label the bag #7

Set C

Remove the bags from Set C and take the minerals out. Two of these minerals are so soft that **scratching them with your fingernail** will leave a mark on them. The other one is very hard. Which mineral is so hard that you cannot scratch it with your fingernail?



This mineral is **CRYSTAL QUARTZ**.
Label the bag #6



Both of these minerals are soft. One way to tell them apart is by slightly bending each of them at a corner. One will bend and one will break. Which one is elastic (bends but returns to its original shape)?



The mineral you can scratch but breaks when you try to bend the corner is called **SELENITE (Gypsum)**.
Label the bag #8