

Objective: Know the properties of minerals and how they are used to identify a mineral.

Hardness is used to identify minerals

We've learned about several properties that stay consistent between samples of the same mineral: _____ and _____ are two. Today we shall learn about a third consistent property: hardness.

Hardness is a mineral's _____ to being _____. It was a property known for a long time. However, it was Frederich Mohs who made a scale showing the _____ hardness of minerals. This scale is called the Mohs Scale.

The Mohs scale ranks minerals relatively (like finishing places in a race) with a rating of 1-10. The softest mineral is ____ and the hardest mineral is _____. To determine the ranking, Mohs scratched the minerals against each other. Here is how this works:

- If a mineral scratches another mineral, it is _____ than the mineral it scratched.
- If two minerals scratch each other, they have the _____ hardness.

The scale only shows the relative hardness of the minerals. This means the scale only shows that one mineral is harder or softer than the other. Just like in a race: your friend comes in 2nd place, but you don't know how much slower they were than the person in first.

There are _____ scales which tell you precisely how much harder a mineral is than another mineral. The hardness is determined by the _____ and how the atoms _____. The hardness of the mineral can vary if the structure or bonds are damaged.