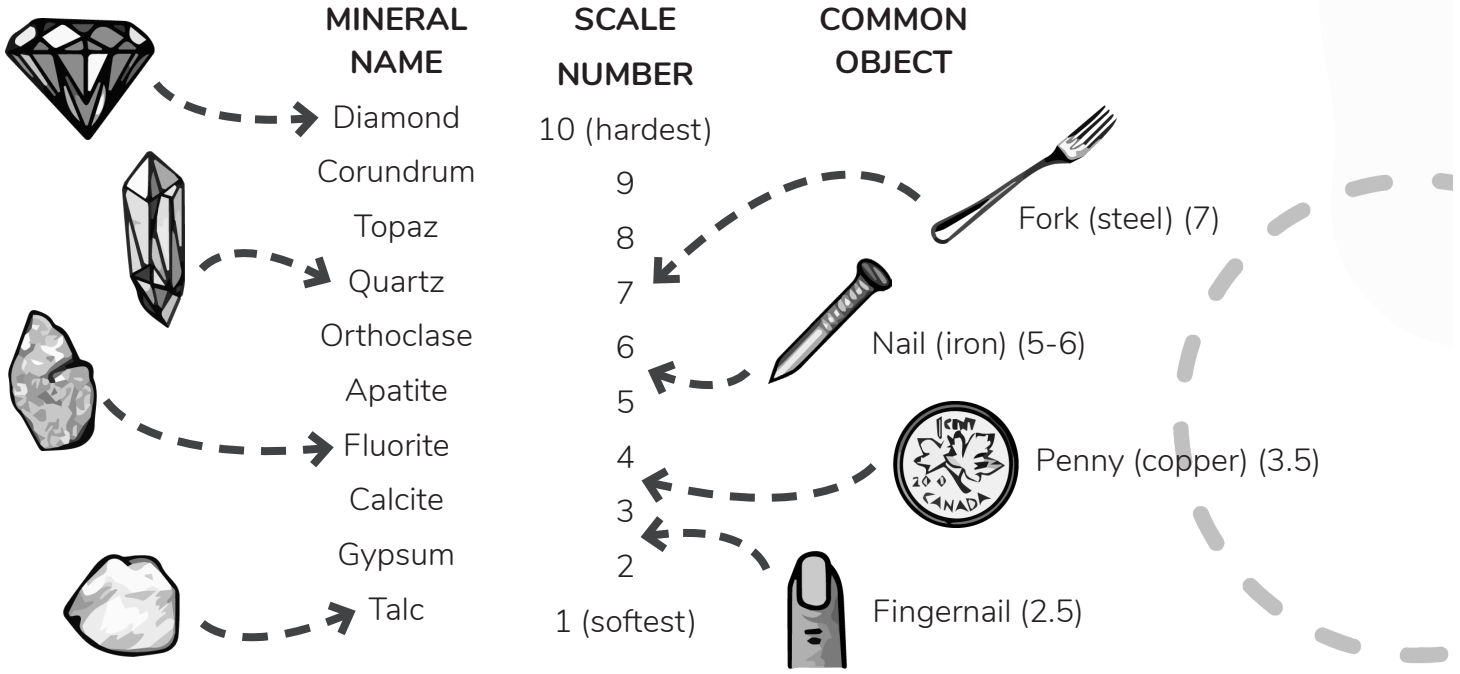
Date: _____ Name: _____

Scratch Test

This activity was created by Shannon

Hardness is a measure of how tough a material is. Harder materials are more difficult to cut than softer ones. In this activity, we'll be scratching objects to classify their hardness!



1. Go on a hunt around your house or neighbourhood to find a variety of rocks to test. Also gather as many as the "Common Objects" as you can to use as your testing materials.
2. Grab your rock and locate a smooth surface on it. With one hand, hold the rock firmly against a table. Hold one of the test materials in the other hand and with firm pressure, drag the testing material across the surface of the rock.
3. Take a look at the rock. With a finger, brush away any dust that may have been produced. Did the test produce a scratch? A scratch will be a distinct mark that doesn't go away when you wipe it.
4. Do the test a second time to see if the same thing happens.
5. If you don't have a scratch, that means your rock is harder than the material you're using to scratch. Therefore, grab the next harder object and repeat the tests.
6. Continue to do this until a scratch is produced. Now you can classify how hard your rock is! The hardness of your rock is the number lower than the hardness of the test material that scratched it (eg. if the fork scratched your rock, the hardness of your rock would be a 6).

TIPS:

• Start on the soft end of the scale and work your way up (meaning start with your fingernail, and if it doesn't scratch, move on to the next material).

SLO: 4-4-01, 4-4-03, 4-4-05

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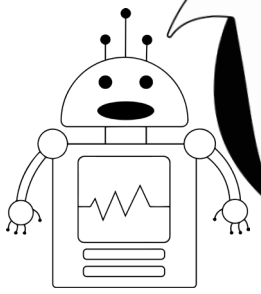
- After scratching, use a magnifying glass or lens to get a good look at what happened!
- After you do your test, make sure to wipe wherever you did the test on your rock with your finger. Sometimes it looks like a scratch is made, but it will disappear when wiped!

ROCK #1 **Materials that scratched my rock:** **Materials that didn't scratch my rock:** **Based on what materials did and didn't scratch my rock, how hard is the rock?** _____ **mohs**	**Drawing:**
ROCK #2 **Materials that scratched my rock:** **Materials that didn't scratch my rock:** **Based on what materials did and didn't scratch my rock, how hard is the rock?** _____ **mohs**	**Drawing:**
ROCK #3 **Materials that scratched my rock:** **Materials that didn't scratch my rock:** **Based on what materials did and didn't scratch my rock, how hard is the rock?** _____ **mohs**	**Drawing:**



Hard**ness**? As a robot, I deal with **hardware**. Hardware are the parts that make up a computer, such as a memory (the brain of the computer) or the motherboard (the heart of the computer). In order for hardware to work, it needs **software**. Software is a set of instructions that tells a computer what to do or how to perform a task. On the next page you'll find the "software" to test your rock's hardness!