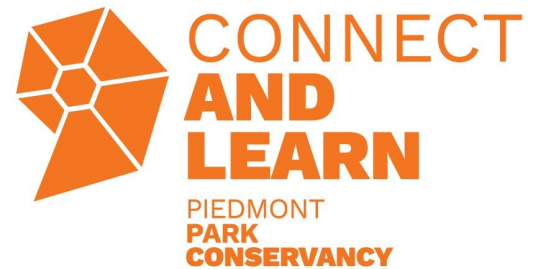


Superhero Rocks

This dynamite activity lets us use our creativity to learn about the three different types of rocks!



Background

The Earth is made up of three main types of rock: igneous, metamorphic, and sedimentary. No two rocks are exactly the same! They are formed over time due to heat, pressure, water, or weather. Our Earth is continually going through changes, even if we do not notice it. We use rocks in almost every aspect of our life, even unknowingly. Some fields that could not thrive without rocks include: arts, technology, construction, and medicine!

Key Terms

Igneous Rock - Igneous rocks are formed when magma cools and solidifies. Magma is a hot liquid made up of melted minerals, and it can be found both above and below the surface of the Earth.

Appearance: Can be hard, dense, glassy, crystalized, or have air bubbles

Examples: Basalt, granite, pumice, or obsidian

Metamorphic Rock - Metamorphic rocks withstand time and are a product of changes in pressure and heat. These rocks can be formed under the surface of Earth and often appear due to friction of tectonic plates or erosion.

Appearance: Can look stacked - often looks changed or weathered

Examples: Quartzite, marble, or slate

Sedimentary Rock - Sedimentary rocks form due to deposits of sediments (naturally occurring material that is broken down by weathering). These rocks can include minerals or organic matter and take many years to form.

Appearance: Can seem to have lines, layers, or grains - often looks layered

Examples: Chalk, coal, limestone, or sandstone

Materials

Various rocks, at least 10

Paper (2+ sheets)

Hand lens (optional)

Pencil

Art supplies (Crayons, markers, glitter glue, googly eyes, etc.)

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Activity

1. Head outside and search the ground for rocks. Collect 10 or more different rocks.
2. Time to observe your findings up close! Investigate the rocks and group them into the 3 rock categories: igneous, metamorphic, and sedimentary. You can use your hand lens to get a closer look at details. Be sure to only take rocks from your own backyard/space!
Observation tips: Look for similarities in how the rocks feel, their coloration, and their shapes!
3. Don't forget to jot down notes. Keep a record of how many of each rock that you found. Once done, share your findings!

Observation Log Example:

Color	Feel	Shape	Rock Classification
Tans and browns	Chalky	Square and flat	Sedimentary
Shiny black	Smooth, but sharp edges	Jagged	Igneous
Gray with speckled dots	Rough	Coarse and lumpy	Metamorphic

Craft

Time to invent a superhero! Using your knowledge on the three types of rocks, create your own character for each. This activity lets your imagination run wild - perfect for creating a story that you can tell your family or friends!

Your creation should include the following:

- Name of superhero
- Which rock type it represents
- Distinctive appearance/superhero suit
- Special powers or items (think about how each are uniquely formed)

Examples:

- An igneous rock superhero might have the ability to turn things into lava just by looking at them through special glasses
- A metamorphic rock superhero might have a mighty shield that has withstood the tests of time

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- A sedimentary superhero may be able to summon fossils to help them with missions



Superhero 1

Name:

Rock type:

Special powers:

Superhero 2

Name:

Rock type:

Special powers:

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Superhero 3

Name:

Rock type:

Special powers:

Guiding Questions

1. What are the five senses? Which did you use for this challenge? How did your senses help you identify the rocks?
2. What textures do you think of with each rock: metamorphic, igneous, and sedimentary?
3. What types of rocks did you observe? Did you see all types? If not, where are some places you might see other types of rock?
4. What features helped you identify the rocks? Think of five different descriptive words that you could use!
5. What are rocks used for? List as many reasons as you can.
Additional list of uses: <http://www.coaleducation.org/lessons/wim/20.htm>
6. What are things that all of the rocks have in common? Differences?