

# THE STORYTELLING STONES

*"If only stones could speak the stories they could tell"*

Rocks can talk! Stones do tell stories! If you learn to read the geological history of the earth, if you learn to read the layers, colors, patterns, and minerals within a stone it will tell you stories of a time before humans, before dinosaurs. Hundreds of millions of years of the earth's history is recorded in every stone. Geology is the science of reading rocks to learn their tales!

Go for a walk and collect several different types of stones. Your job is to be a detective and identify each rock. You must test their hardness, confirm their color, and determine if they are igneous, sedimentary, or metamorphic.

- ❖ First test their hardness. Scratch each rock against the others to see which is hardest and which is softest. Arrange them in order from left to right, soft to hard. A scientist named Mohs invented a scale of 1-10 for testing hardness. For comparison your fingernail is rated 2.5 on Mohs scale. A steel nail is 5.5 and a quartz crystal is 7. Diamonds are the hardest at 10 and talc is the softest at 1. (See A Golden Guide to Rocks and Minerals, page 18, for more information.)
- ❖ Next test their color. In a few words describe the color and luster of each stone. Make a streak test on the white side of the tile to confirm the color of the stone. Some metallic ores may leave a different colored streak. Also note if the rock has any crystals, layers, and / or if it breaks or cleaves at special angles.
- ❖ Finally, determine if it is igneous, sedimentary or metamorphic. Sedimentary stones are usually the most obvious because they form when other rocks are eroded and then settle into layers. They often contain fossils, clear layers and are commonly types of sandstone, limestone, coal or shale. Igneous rocks are rocks that have melted and then cooled. Crystals, metallic ores, basalt (cooled lava), and granites are most common. Meta means big and morph means change. Metamorphic rocks could be igneous or sedimentary stones that have gone through big changes through pressure, heat, or through the absorption of other minerals. Gneiss, schist, slate, marble, quartzite and hornfels are common metamorphic rocks.
- ❖ Use your findings to identify each stone! (See A Golden Guide to Rocks and Minerals.)

Choose one rock that most interests you. Write a lengthy description of its shape, size, color, texture, component parts, and anything else that interests you. This rock is the main character in your story. Most of these rocks are from this area, so the setting is here hundreds of thousands or millions of years ago. How old is your rock? The plot of your story is the way in which this rock was formed and how it got here. Was it plate tectonics and volcanoes or sediments at the bottom of an ancient sea or swamp? Use this information to write an adventurous story. Rewrite and edit your story. As a class you can put together a book that includes your picture on one page and your story on the facing page; each stone becomes a Rock Star!

Draw your favorite rock: