



We learnt about Rocks, their formation and structure during the 2nd learning cycle in school. This ignited my curiosity and I read and researched about them. I performed some experiments at home and then decided to show them to my classmates.

Following is a summary of show and tell on Rocks & Minerals conducted by me.

- ✓ Rocks are naturally occurring (not man made), solid (not a liquid or a gas) substance forming map-able deposits on the Earth. They may or may not contain minerals. So according to this definition snow, sand & coal are also rocks.
- ✓ Weathering means breaking down of rocks while erosion means scattering of the broken down pieces. As an analogy, take a paper and tear it up- that would be weathering. When you drop them using the help of a natural force (like water, wind, gravity) that would be erosion and settling of loose pieces will be deposition.
- ✓ Igneous rocks have bubbles in them because of trapped gases like SO₂, CO₂, water vapour etc. When the magma cools down, the gases, still trapped, leave behind bubbles once they escape. An analogy is the foam on carbonated drinks. This has CO₂ trapped in it. If you flash-freeze the foam, you will get an equivalent of Igneous rock.
- ✓ How well the crystals are formed in rocks depends on whether the cooling happened gradually or quickly. Granite has well-formed crystals since it cooled deep below the surface of the Earth while Basalt has small crystals since it cooled quickly on the Earth's surface. A super-saturated solution of sugar can have well-formed or poorly formed crystals depending on the rate of cooling.
- ✓ Minerals are naturally occurring (not man made) and in-organic (not part or ever were part of a living thing) in nature. They have an internal crystalline structure & a definite chemical formulae. Even though they are more than 3,000 minerals found until now only 20 to 30 are common as the rest are rare. One of the important properties of minerals is its hardness. I have enclosed a photo of the Moh's Hardness Scale underneath for some common minerals.

Mohs Hardness Scale		
Mineral Name	Scale Number	Common Object
Diamond	10	
Corundum	9	Masonry Drill Bit (8.5)
Topaz	8	
Quartz	7	Steel Nail (6.5)
Orthoclase	6	
Apatite	5	Knife/Glass Plate (5.5)
Fluorite	4	
Calcite	3	Copper Penny (3.5)
Gypsum	2	Fingernail (2.5)
Talc	1	