

Section 2 – The Rock Cycle describes how rocks form and change over time**2.1 What are Rocks and Minerals**

- The building blocks of rocks are naturally occurring solid materials called ...
 - granules
 - grains
 - minerals**
 - crystals
- Specific patterns such as cubic, tetragonal, hexagonal, orthohombic, monoclinic and triclinic describe how minerals line up in a regular pattern creating smooth surfaces and sharp edges, making systems of ...
 - mineral hardness
 - crystal structure**
 - cleavage types
 - synthetic models
- Minerals can be identified by certain clues. The clue that identifies the color of the powdered form of the mineral left behind when it is rubbed against a rough surface is called its ...
 - streak**
 - lustre
 - color
 - cleavage
- The way a mineral reflects light describes its ...
 - streak
 - lustre**
 - color
 - cleavage
- The relative hardness of a mineral is measured with a scale. The scale is used to help identify different minerals, because each mineral will scratch all the minerals with a lower scale ranking than its own. Named after a German scientist, the scale is called...
 - Newton's Force Scale
 - Fahrenheit's Scale
 - Mohs Hardness Scale**
 - Richter's Seismic Scale
- On the scale of hardness, this mineral is the softest and can be scratched with a soft pencil point ...
 - talc**
 - gypsum
 - quartz
 - diamond
- There are over 500 mines and quarries scattered across Canada, with mining operations taking place in every province and territory. Canada is the world's largest exporter of minerals. The Ekati mine in Lac de Gras, Northwest Territories began operations in 1998. It was the first mine in Canada to recover this mineral ...
 - copper
 - molybdenum
 - silver
 - diamond**

2.2 Three Classes of Rocks: Igneous, Sedimentary and Metamorphic

1. Igneous rock, can be intrusive rock and extrusive rock. These rocks are all formed from ...
 - A. crystals
 - B. sediments
 - C. **magma or lava**
 - D. earth's crust

2. Igneous rock can be classified by how it is formed. If it has formed beneath the surface, cooling slowly, it has larger grains and is called ...
 - A. interior
 - B. **intrusive**
 - C. exterior
 - D. extrusive

3. Allison and Rachel were investigating the banks of the river and discovered a large section had been eroded away. They could see layers of different soil types. These visible layers are called ...
 - A. cementation
 - B. sedimentation
 - C. calcification
 - D. **stratification**

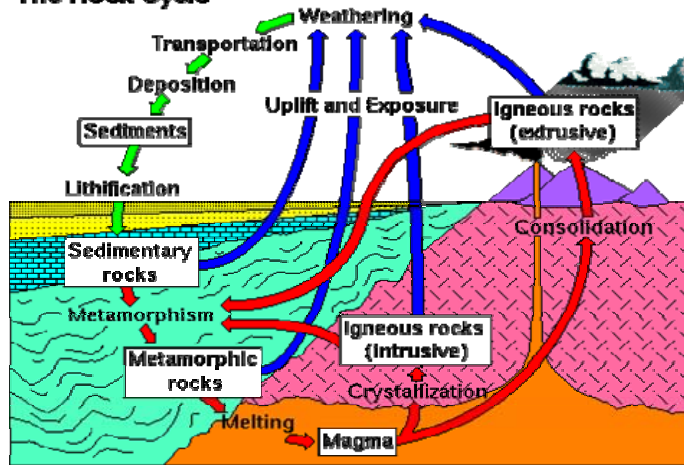
4. Soil that has organic, living material, gets covered over and each layer puts pressure on the organic debris – compressing it into peat, lignite, bituminous and anthracite. The hardest type of coal ...
 - A. peat
 - B. **anthracite**
 - C. lignite
 - D. bituminous

5. Metamorphic rock is rock that has changed form. It is usually formed ...
 - A. **below the earth's surface**
 - B. on the earth's surface
 - C. when rock is heated
 - D. when rock is cooled

6. Shale changes to slate and then changes to schist. To change these rocks into other types requires ...
 - A. time and technology
 - B. time and sediments
 - C. **heat and pressure**
 - D. heat and temperature

7. Geologists identify mineral ores locations, which are hidden below the surface of the Earth, using different tools and technologies. Using sensitive instruments, such as a magnetometer, geologists are using this technique ...
 - A. remote sensing
 - B. **geophysical prospecting**
 - C. geochemical prospecting
 - D. exploration

2.3 The Rock Cycle



- The formation of different types of rocks is described in the Rock Cycle. An important feature of this cycle is that it ...
 - always forms rocks the same way
 - cannot be reversed
 - does not have a set order
 - doesn't have any shortcuts or detours
- The rocks and minerals that cover the first 50 meters or so of the Earth's surface include sand, gravel, stones, and boulders. This material is called ...
 - underburden
 - overburden
 - shield cover
 - common rock cover
- Pelican rapids in the northeastern part of Alberta reveal rocks that are from the oldest rock layer (hundreds of millions of years) that make up Alberta. Most of these types of rocks are hidden beneath the surface in Alberta, however, they are revealed in Pelican Rapids ...
 - igneous
 - magma
 - sedimentary
 - metamorphic
- You will likely find dramatic examples of these types of rocks in *The Badlands* of Dinosaur Provincial Park, around Drumheller. The erosion and exposure of this type of rock took many years to complete.
 - igneous
 - magma
 - sedimentary
 - metamorphic

Rock Cycle Song
(Sing to the tune of "Row, Row, Row Your Boat")

SEDIMENTARY rock
Has been formed in layers
Often found near water sources
With fossils from decayers

Then there's **IGNEOUS** rock
Here since Earth was born
Molten Lava, cooled and hardened
That's how it is formed

These two types of rocks
Can also be transformed
With pressure, heat and chemicals
METAMORPHIC they'll become.