Metamorphic Rock Notes

Metamorphic Rock – type of rock that forms from an existing rock that is changed by extreme heat and/or pressure

The pressure and heat responsible for metamorphic rocks come from:
- The internal heat of the earth
- Intruding magma within the earth
- The weight of overlying rock

Typically occurs at depths between 10 to 30 km where pressure is 6 times greater and temperature is 800 °C greater than at the surface of the earth!

Metamorphic rocks are denser and harder than igneous and sedimentary rocks.

There are two groups of metamorphic rocks based on their textures:

1. Foliated Metamorphic Rocks – metamorphic rocks with visible layers or elongated grains of minerals
   - The minerals in these rocks have been squeezed into parallel layers by intense pressure

2. Non-foliated Metamorphic Rocks – rocks that do not have distinct layers or bands
   - The majority of these rocks are formed by extreme heat

Examples of Metamorphism:
- Granite turns into Gneiss
- Sandstone turns into Quartzite
- Limestone turns into Marble
- Shale turns into Slate