Gabbro is an intrusive igneous rock. Its color is usually black or dark green. Gabbro is commonly found in the deep oceanic crust.

Gneiss is a foliated metamorphic rock. Its foliations are characterized by alternating dark and light bands. Gneiss is typically formed from shale that undergoes high pressure and heat.

Granite is a light-colored igneous rock with large visible grains. It’s mostly composed of quartz and feldspar.

Quartzite is a non-foliated metamorphic rock. It’s mostly composed of quartz from sandstone after it undergoes high pressure and heat.

By observing the layers, and where the magma is located; we can determine which one is the intrusive layer. By following the Cross-cutting Relationships in Laws of Stratigraphy, the intrusive layer is the youngest of the layer.

Index Fossils are fossils that have only lived a tiny lifespan over a huge area.

These are the criteria:

1. The fossil must be easily recognizable and distinct.

2. It must be found over a large area.

3. It must have lived for a short time, such that it's only found in one stratum.

Igneous rocks form when magma cools off, creating crystals.

Metamorphic rocks form when pressure is applied to other rocks. Pressure generates heat, causing rocks to change.

Sedimentary rocks form when other types of rocks are broken down into sediments by weathering and erosion. These sediments cement together after a long period of time.