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.