

**Lab 4, part one: Newport Way field trip**

In this lab, you will put your experience with rocks and minerals in the classroom to use in the field. In nature, rocks do not exist in isolation; we use **stratigraphy** to *infer* earth history from a sequence of contiguous rocks. The fundamental unit of stratigraphy is the **formation**; in this case, it will be the **Blakely Formation**. Formations can be broken down into component **members** (layers or beds which share some similar characteristic like grain size). Rocks in formations are usually visible in **outcrops**; these outcrops erode and deposit **float** at their base. Clearly, studying a fresh outcrop surface (use a hammer to expose it) is preferable to studying float, though in some cases, float is the only rock available.

*Directions: Head south on I-5 to I-90 eastbound. Go across Lake Washington and get off at exit 13 (Newport Way). Turn right at the bottom of the exit ramp, then take an immediate right onto Newport Way. Drive another half mile or so and pull off where the right shoulder widens. The outcrop is located along the left (south) side of the road. Watch for traffic as you cross the street.*

Take five minutes and make a quick **sketch** of the outcrop (the ends will be marked with flags). It should show a **scale** and a **compass orientation**. Feel free to include trees, shrubs, grass, the rock face, and surface water. Color it in if you have color pencils, or write in the color if you do not.

Go to the outcrop and examine the rocks of the Blakely Formation. Does the **grain size** or **mineral composition** of the rock face stay the same from flag to flag or is there variance? Can you break the formation down into **members**? Are there any distinguishing aspects at either **contact** of the member? Are there any **fossils** present? If so, what are they, and are they **intact** and **articulated**? Do the fossils define a **bed**? Are there any **sedimentary structures**?

Now draw the outcrop through a geologist's eyes. **Remove** any modern vegetation. **Subtract** any weathering effects (like iron oxide staining or cracking of rocks due to landslides). **Draw** the contacts between the members of the formation, if any. **Keep** the tilt of the bedding, if appropriate. **Use** the patterns to indicate rock type/grain size and the symbols to represent fossils. And don't forget the **scale** and **compass orientation**.