**Lab 1 Countertops Jigsaw Project Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Objectives:**

1) Describe rocks using petrologic terminology;

2) Create testable hypotheses about how the rocks formed based on petrography and geochemistry;

3) Present your results in poster format.

**Part 1: Due \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* You will work individually for Part 1. You may consult with your neighbor, TA, or instructor, but do not consult with the person that has the same countertop rock for their desk material.
* Fill out the complete sample description worksheet (separate sheet) for your countertop (copies available in class and on Blackboard). Use the igneous textures and classification handouts provided in class, as well as any other resources available to you. For the Petrogenesis section, do a Google search of your countertop and see if anything comes up about the origin of the rock.
* The countertop surface is your hand sample; there may be slabs or cut pieces of some of the countertops as well. There are at least two thin sections of each of the 10 countertops.

**Countertops Lab** **Part 2:**

**Poster Draft Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (so I can print out poster drafts)**

* **Combine forces:** pair up with the other person who has your countertop. For example, counter #1 should work with counter #11.
* **Combine your work:** **create ONE Sample Description Worksheet Draft** that everyone in the group agrees upon. In other words, come to a consensus about mineral identification, modal abundances, textures, etc., and make one sheet with this edited version.
* **Make a digital poster** 11”H x 17”W containing the information from your Sample Description Worksheet, and upload it to Blackboard under Lab Assignments so I can print it out. I posted a Powerpoint template slide on Blackboard. Include in your poster:

 **1)** The information from the Sample Description Worksheet, including your interpretations and hypotheses for how the rock may have formed and geologic provenance;

 **2)** *At least* two annotated photographs. Take one photograph using the petrographic microscope camera; try scanning your entire thin section using the slide scanner for the other.

 **3)** Any other diagrams that help explain the composition and textures of the rock.

**4)** Leave room for geochemical diagram(s); we will discuss these during the next lecture.

**Final Poster Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

* **Add Geochemical Data to your poster.**  Use this information to try to interpret magma source or tectonic environment using the diagrams and tables in Ch 18 of Winter. Do you have a peraluminous granite? Is it an I-type granite? What can you learn about the tectonic provenance of your rock using an appropriate geochemical discrimination diagram?
* **Turn in the excel spreadsheet you used to calculate geochemical data.** (upload to Blackboard under Lab Assignments)
* **Turn in a digital copy of the poster.** (upload to Blackboard under Lab Assignments)

**Grading: see grading rubric sheet on Blackboard.**