Instructor Notes:

This laboratory exercise took place over two 3-hour lab periods. Broke students up into three groups; each group got a different rock composition; groups took turns working on three modules; groups then gave presentations, showing other students what they learned about their rock. Rock powders can be obtained from the USGS.

Ideas for improvement:

Use volcanic rocks for starting material. Use thin sections instead of grain mounts to characterize starting material.

Have students mount run products in epoxy in addition to making grain mounts so they can image and analyze using an SEM. Ask students to compare mineralogy & textures of starting material and run products.

Alternative approaches to laboratory experiments:

* To avoid purchasing and cleaning expensive Pt crucibles, have students use Coors ceramic crucibles. They can carefully pour partially molten liquid onto a sheet of Aluminum to quench it (suggested by Dexter Perkins). Or use very small Pt crucibles made from 3 mm o.d. tubing. These can be suspended on a wire in a vertical tube furnace.