

Understanding Geologic Formations

Materials:

- Bedded rock samples (or pictures)
- Fossilized rock samples (or pictures)
- Pictures from Geology Field Course, or equivalent
- Rock I.D. flow charts
- Rock test kits (hardness test, acid test, grain size guage)

Background:

Students should know the rock cycle and the three main types of rocks; sedimentary, igneous and metamorphic. This would be a great way to reinforce the Principal of Uniformitarianism. It also would fit in nicely when discussing the geologic time scale and the history recorded in the rock layers.

Exploration:

1. Discuss with students how specific types of rocks can be identified and under what circumstances they may have formed. For example, fossiliferous limestone can be determined by the abundance of fossils, response to acid test, and hardness.
2. Show student different rock samples & pictures.
3. Have them work in groups of 2 to determine what the samples are and how they may have been formed and record their answers.
4. Discuss as a class the students different ideas.

Instruction:

1. Go back and explain what each sample is and describe how it was likely formed.
2. Show students how you know (i.e. acid test, silt size, hardness test). For example, show the difference between limestone and calk.

Assess:

Have students identify a few more sample rocks on their own and grade their answers.

Reteach:

Show pictures/video from the summer Geology Field Course and interpret them for students.