Mountain Barriers

Summary
Students will understand how abiotic factors can influence biotic factors and how the lithosphere interacts with the atmosphere.

Main Core Tie
Science - Earth Science
Standard 2 Objective 3

Time Frame
1 class periods of 45 minutes each

Group Size
Pairs

Materials
- food coloring
- hot water
- cold water
- clear Water tight container (Rubbermaid works great)
- small paper cup (Dixie cups great)
- pencil
- student worksheet
  (attached)

Instructional Procedures
Ask the students how the feel the mountains affect our weather here in the valley.
Go over lab procedures
Monitor lab progress
Go over questions at the conclusion of the lab

Assessment Plan
Scoring Rubric:

1. Understand how to conduct a lab efficiently...........................................4
2. Understand how to draw conclusions from an experiment........4
3. Understand Abiotic factors and how the influence biotic factors ....4
4. Understand how the lithosphere interacts with the atmosphere...4

Answer Key:

Data:
1-4. Grade accordingly

Analysis:
Mountains can affect the temperature of the surrounding land as well as the vegetation and animal life. Mountain building can change temperature as well as precipitation causing plants and animals to either adapt or move. Abiotic factors, such as temperature and mountains, can cause the temperature to change making the area habitable or inhabitable for certain animals. Mountains can inhibit the transfer of air (cold or warm) from one place to another. Even areas in relatively the same area can change temperature depending on the geology of the area. The lithosphere has caused the cold air to become trapped or has inhibited the flow of air and temperature from one area to another. Anywhere there are mountains. Meteorology, Biology, etc. Plate tectonics may have contributed to the ice ages and times when the world was much warmer.
Grade accordingly.

Bibliography
Lesson Design by Jordan School District Teachers and Staff.

Authors
Utah LessonPlans