



Lesson: Mapping Yellowstone's Thermal Features

Grade Level: 5-12

Activity Duration: 60 minutes - a full day

Objectives:

- Students will understand the basic concepts behind how a volcano works
- Students will recognize that Yellowstone is a supervolcano
- Students will understand the connection between Yellowstone's thermal features and the fact that it is a supervolcano
- Students will learn the term "caldera"
- Students will research a thermal feature in Yellowstone, and identify how it occurs

Kit Materials:

- Thermal Features map template
- Blank Yellowstone map template

Classroom Materials:

- Markers
- Pencils
- Copies of Thermal Features map
- Copies of blank Yellowstone map
- Computers or library books about Yellowstone

Lesson Procedure:

1. Ask half of the students to create a diagram of how they think a volcano works. Ask the other half of the students to create a diagram of how they think a geyser or hot springs works. Then, have the students pair off and discuss the similarities and differences between their diagrams.
2. Gather as a class and review the similarities between hot springs and geysers. Tell students that today they will each get to research a particular thermal feature in Yellowstone.
3. Allow students to conduct independent research on one thermal feature in Yellowstone. This can be as in-depth as time or grade level allows. Students should make sure to include the following:
 - a. The location of their thermal feature within Yellowstone National Park
 - b. The way their thermal features is created
 - c. The name of their thermal feature
 - d. The parts of their thermal feature
4. Ask students to plot their thermal feature on the blank map of Yellowstone
5. Hand out the Thermal Features map. Have students draw the Yellowstone caldera on their blank map. Ask them if their feature is inside the caldera.
6. Hang up one of the Thermal Features maps in the front of the classroom. Have each student plot their thermal feature on the class map. As a class, count how many of the features are inside of the caldera. Find the percentage.