

# LESSON ONE

## GEOGRAPHY & GEOLOGY OF YOSEMITE NATIONAL PARK

### BROAD GOALS:

1. Students will demonstrate an understanding of where Yosemite National Park is.
2. Students will demonstrate an understanding of granite and its characteristics
3. Students will demonstrate an understanding of how a glacier erodes and forms land structures

### FOCUSING ACTIVITY:

The teacher will show students a map of the United States and ask them if they can find Yosemite. (No) The teacher will type in driving directions from Charleston, IL to Yosemite National Park and show the students that it is 2034.99 miles and takes 29 hours and 59 minutes to get there in a car. Slowly zoom in on the map till Yosemite appears on the map. The teacher will have students observe how the features of the park slowly appear as the teacher zooms in. The teacher will state, "Now that you have a feel for what Yosemite is like and where it is located, we will study some of the features of the land."

### CONTENT KNOWLEDGE:

The teacher will show the students a granite rock and remind them that 95% of all rock in Yosemite is granite. Explain to the students that the different colors are minerals that form the rock. The teacher will show an example of the 4 minerals that make up granite while describing it.

The teacher will then demonstrate Simulating a Glacier activity for the students.

The teacher will tell the students, "This clay represents land. The ice represents a glacier. What do you think will happen when I rub the ice cube over the surface?" The teacher will then rub the ice over the surface of the clay several times. The teacher will then ask the students "What actually happened? Were you correct?" The teacher will then place some sand in the trench, and tell students, "I will now put our glacier on top of the sand and rub like before. Will it make a difference having the sand here? How?" After a few minutes of rubbing the ice over the sand and clay, the teacher will show students the ice and ask what happened to it. Students will also write down what happened to the clay and if their predictions were correct. The teacher will then wipe the excess sand from the clay and then rub the ice with the sand embedded against the clay surface. The teacher will then ask students to record how the sand affected the clay.

### LESSON 1 STUDY GUIDE

1. Yosemite National Park is \_\_\_\_\_ from Charleston, IL.
2. Yosemite National Park is made of 95% \_\_\_\_\_.
3. Observations about granite rock  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Granite is made up of \_\_\_\_\_ minerals.
5. The Sierra Mountains that make up Yosemite National Park are \_\_\_\_\_ miles long, \_\_\_\_\_ miles wide, and \_\_\_\_\_ feet above sea level.
6. The Sierra Mountains are still growing at a rate of \_\_\_\_\_ foot per \_\_\_\_\_ years.
7. Snow and ice filled the rivers and valleys until the increased \_\_\_\_\_  
\_\_\_\_\_ and \_\_\_\_\_ caused the ice to move.

8. Yosemite National Park has had \_\_\_\_\_ major episodes of ice.

9. A \_\_\_\_\_ shape is typical of a valley formed by glaciers.

10. Prediction before ice is rubbed over the surface of the clay

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11. What actually happened?

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12. Will the sand and ice affect the clay differently? How?

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13. What actually happened?

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14. How does the sand in the glacier affect the clay land form?

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