



Opportunity Outside The Classroom

Grades 9-10, Science

Lesson: Earth Science

Theme: Emergence

Overview & Purpose

My co-teachers and I are taking the High School students to Joshua Tree National Park this Spring, April 8-12. We will learn about the unique geography of the park, the Native American populations, the history of the park itself, as well as learn about the local artist population.

Education Standards

1. Explain the geologic record and how it preserves evidence of past change through fossilization, striations in rock, and landmass formations.
2. How unique rock formations were formed: Convergent, Divergent, or Transform Boundaries.
3. Local geologic process: erosion, earthquakes, mudslides, etc...
4. Park History including archeological sites, historic structures, and cultural landscapes.

Objective

1. Identify multiple formations and examples of past change in the valley
2. Look for evidence of geologic process
3. Create a timeline of the park's history
4. Build community

Contact Information

1. This is a National Park - no permission needed, no calls required
2. Rental Vans will be used
3. Permission slips required
4. Ranger information: <https://www.nps.gov/jotr/planyourvisit/programs.htm>
- 5.

Materials Needed

1. Students will need:
 - a. Notebooks
 - b. Writing utensils
 - i. Colored Pencils
 - ii. Markers
 - c. Geology information sheet from lesson (lists formations, process, etc...)
 - d. Water bottle
 - e. Snacks

Needs of the Adolescent (Gateways)

1. Urge for Transcendence
 - a. Some students will go beyond their perceived limits intellectually, artistically as well as physically
2. The Creative Drive
 - a. Creating drawings/sketches/photos
 - b. Journaling about their experiences
3. Deep Connections
 - a. Many deep connections are forged outside of the classroom

Need/Experiences of Class

1. Two students have Down Syndrome and tire quickly.
2. The class is small so minimal supervision will be required.
 - a. There will be 3 guides and possibly parental supervision for some of the differently abled students.

Student Assessment

1. See “general rubric”
2. Journaling
3. The drawing/sketches/photos will be assessed by the guide for correct formation identification as well as level of effort made.

