

Tectonic Project

Summary

Students will create a unique project to demonstrate their understanding of plate tectonics.

Time Frame

4 class periods of 45 minutes each

Group Size

Individual

Materials

Internet access using INTEL mobile laptop lab, or a standard computer lab

Most materials should be supplied by the students themselves, students may ask you to make other equipment available such as:

TV, VCR

butcher paper

markers

overhead, whiteboard etc.

- [student worksheet](#)
(attached)

Background for Teachers

Brief Activity Description

: Students will create a unique project to demonstrate their understanding of plate tectonics. This is an inquiry project with students directing the majority of their learning. Student learning will take place both in and out of class. Students will be required to present their project to the teacher at the completion of the activity. This project may be formatted as an individual, partner, or group assignment.

Objective: To create a unique project which demonstrates the movement of the earth's plates and the resulting impacts on the several different spheres of the earth.

Duration: 200 minutes

Safety Concerns: Because the projects may be working models some students may want to get elaborate beyond the typical baking soda and peroxide volcano. They may find recipes on the Internet for explosive and even toxic volcanic reactions. Be sure that you are aware of all chemicals your students will be using. Whenever laptops or computers are used theft and vandalism are always a concern. Be sure students sign out all computers they use and that a count of equipment is done before and after each class period.

Student Prior Knowledge

Students should have some background in plate tectonics. They should also be familiar with the Internet.

Instructional Procedures

Plan on 30 minutes to explain the project to students and to allow for group formation and project planning. Be sure to read through the requirements with the students and clarify any questions or concerns.

Allow 2-3 full class periods (55 minutes each) for students to work on their projects. Monitor for

students preparedness (do they have their materials) and also participation. You should print out a class list to keep track of these participation points each day. As students spend time working on the projects in class, be sure to talk with all of your students about their projects. By being aware of what your students are doing before the due date hopefully you can avoid any parental problems or student "shocks" when grades are posted!

One class period should be allotted for project presentations. This can be set up similar to a science fair. Students should present their project to you while you grade the projects. You may want to have students also grading other projects or answering several generic questions concerning them. This helps with classroom management on a day that could be quite hectic. Sample Questions might be:

What tectonic activity does the project model?

Describe your favorite part of the project.

What is one thing you learned from the project?

You can have students answer these same questions (or others that you may come up with) for 10-15 projects during the class period and then turn the assignment in at the end of class.

Assessment Plan

Sample Scoring Guide

: See attached student sheet for rubric

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)