

Locations of Earthquakes and Volcanoes

Summary

Students will map the location of various earthquakes and volcanoes. They will then relate the location of this phenomenon with the location of plate boundaries.

Time Frame

1 class periods of 45 minutes each

Group Size

Individual

Materials

- Longitude/Latitude Map (part of student worksheet attached)
- Map of plate boundaries (part of student worksheet attached)
- pencil
- blue and red pencils
- [student worksheet](#)
(attached)

Background for Teachers

You may have to teach longitude and latitude graphing.

Instructional Procedures

Explain Alfred Wegner and his idea of continental drift, perhaps a little about the controversy his theory caused. Explain how Harry Hess took the idea one step further theorizing that the earth's crust was made of plates. Explain that people needed more evidence to prove that the Earth was made of plates. Ask the students if they know of any other proofs that help support plate tectonics. Either use this as time to explain some of the other proofs or review what has already been taught. Ask the students "Why are there so many volcanoes in Washington state and not any in places like Colorado." You could extend the question by asking "Why are there so many earthquakes in California but not any in places like New York State." Chances are there students will respond, "because of plate tectonics." Lead them into the activity by saying that Alfred Wegner noticed patterns like this. Challenge them to see if the theory on plate tectonics is true then evidence should support that the greatest number of earthquakes and volcanoes take place at plate boundaries as opposed to other locations.

Hand out maps and student sheet

Lead a small discussion at the end of the activity to brainstorm their ideas.

Extensions

Allow the students to use the internet or Google Earth to find their own volcanoes and earthquakes to prove the trend between earthquakes and volcanoes and the relative plate boundaries.

Assessment Plan

Scoring Rubric

:

1. Students will be able to graph appropriately.....4
2. Students will be able to draw their own conclusion.....4
3. Students are able to report and support their data.....4

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)