

How Fast Did the Grand Canyon Form?

Summary

Students will analyze rock layers and mathematically calculate the rate at which "small changes over time add up to major changes to Earth's surface" (St. III, Ob. 4e from Utah State Core).

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- [student sheet](#)
(attached)
- colored pencils
- calculators (optional)
- computers (optional if the teacher has copied information about each layer)

Instructional Procedures

Ask students if anyone has been to the Grand Canyon. Ask if anyone knows how "old" it is. Students may suggest out that the age would be related to the age of the rocks and the river. Show the video clip [Grand Canyon Geologic Time Clock](#) (scroll down to video). You may wish to shorten it slightly, the last minute is unnecessary to this lesson. Show students the handout of the stratigraphy of the Grand Canyon. Describe how the rock layers have names, geologic time spans and thicknesses associated with them. The students will not work with all the layers. Read the introduction and directions for the activity. Work an example with the students to get them started. Allow time for the students to work and use the computers to research their assigned layer. Each group should give a short presentation about their layer and fill in their data table with a brief summary.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)