



Star Wars Geoscience

Grade Level: 6th and 9-12th

Where Taught: In a lab, or a classroom with flat tables, running water and working drains

Students: 30 or fewer

Time needed for presentations: 90 minutes; teachers with 50-min. classes can schedule 2 days, or we can teach one 50-minute version if your school schedule requires.

Targeted GA Performance Standards: 6th grade: portions of S6E1, 3-5; High School: portions of SES1-2.

George Lucas' Star Wars movie series is set against a background of several planetary systems. Since many of the features that distinguish these planets were adapted from conditions commonly encountered on earth, they can be used to illustrate a large number of geologic phenomena. Students will view movie clips from the Star Wars movie and discuss the truth, fallacy, and/or possibilities of the presented clips.

Students will visualize geologic processes by recreating geologic features seen on several planets in the Star Wars movies and relating the features to planets within our galaxy. Students will recreate rivers and streams, hydrothermal vents, and view geologic evidence (ODP core model) for the mass destruction of the dinosaurs.

“Planets” discussed from the Star Wars movies include:

Hoth - the ice planet

Dagobah - the swamp planet

Naboo – the water planet

Yavin – the Giant gas planet

Yavin 4 – a moon of Yavin

Sanctuary Moon – the forest moon of Endor

Subjects discussed in this module include:

- Physics (pertaining to light sabers and the behavior of light)
- Biology/Ecology (concept of limited resources)
- Geography (film site locations)
- Geology (tectonics, planetary geology, and sedimentology)

Activities (as many as time permits) include:

- River making (with diatomaceous earth)
- Tectonics (using sand and Plexiglas boxes with moveable sides & hydrothermal vents)
- Pangaea puzzles (middle schools only)
- Water circulation and the behavior of ice
- Viewing a model of an ODP (Ocean Drilling Program) core

This module will need to be taught in a lab or classroom with running water and working drains. Large trash bins or cans (preferably on wheels) for the disposal of large amounts of sand should be provided in the classroom or lab. Because of the amount of equipment being brought into the classroom, it is very difficult for us to move equipment up flights of stairs. If this module isn't being taught on the entry-level, we need quick and easy access to elevators. If elevator use is not available the last teaching session may be cut short to ensure safe storage of equipment.

Note: All Star Wars video clips and photographs are the property of © Lucasfilm, Ltd.