



Desert Erosion

Introduction

In *Around One Cactus: Owls, Bats and Leaping Rats* author Anthony Fredericks describes the desert landscape as “a place of sun-baked majesty, with shifting dunes and rocky edges.” In this activity students study the effects of wind erosion in the desert and how sand dunes are created.

Materials Needed

- ◆ 9x12x2 cake pan
- ◆ Sandbox sand
- ◆ 2 or more drinking straws
- ◆ Small rocks or pebbles

Procedure

1. Invite students to fill a 9x12x2 cake pan halfway up with sand.
2. Gently shake the pan until the sand is fairly smooth.
3. Provide one or two students with a drinking straw.
4. Ask the students to gently blow across the surface of the sand to create sand dunes, sand patterns and other shapes.
5. Provide students with photos of natural desert sand patterns. Can the students recreate those patterns in the cake pan?
6. Invite students to discuss the various patterns that may be found in the desert - particularly those created by wind blowing over the sand for extended periods of time.
7. Have the students place a few rocks in the pan to see how those objects might affect the patterns in the sand.

Key Concepts

- ◆ Models can be used in explanations.
- ◆ Interactions result in change.
- ◆ Use knowledge and evidence (data) to formulate explanations.
- ◆ The surface of the Earth changes.

For standards correlation please see our website.

Nature Connections

- ◆ Invite students to collect several copies of travel magazines or nature periodicals. Ask them to prepare a “desert collage” composed of pictures, photographs and illustrations cut from these magazines or from the internet.
- ◆ Invite students to gather information and data from the school and/or public library on cacti. They can then put together a booklet entitled “Cactus Olympics,” a compendium of the world records held by individual cactus species or single cacti throughout the world. Some of the following categories may be appropriate - tallest, oldest, smallest, longest roots, biggest seeds, smallest seeds, heaviest cacti, most common and rarest cactus

Additional Resources

Sand Dune Geology

<http://digital-desert.com/natural-formations/sand-dunes.html>

Playas

<http://digital-desert.com/mojave-preserve/geology/14.html>

Hoodoos

<http://www.desertusa.com/mag03/feb/hoodo.html>

Desert Caves

<http://www.desertusa.com/mag99/feb/stories/caves.html>

