TRB 3:1 - Investigation 2 - The Appearance of the Moon

Summary

Classroom demonstration shows how craters were formed on the moon.

Time Frame

1 class periods of 30 minutes each

Group Size

Large Groups

Materials

Instructional Procedures Activity

- soft soil, sand, or flour
- shallow pan
- several rocks of different sizes
- My Moon Book

Curriculum Extensions Activity

- Gray tempera paint
- Seven inch circle cut out of black construction paper
- Plastic sandwich bag
- Black construction paper and white copy paper to make stars (9x12)

Background for Teachers

Big rocks from space hit the moon, leaving holes called craters. The moon is made up of lots of gray. There are no animals and plants because there is no usable water or air. What are those light and dark areas on the moon's surface? The light areas are called highlands or mountains. The dark areas are flat, low plains. Most of the small craters on the moon were formed by the impacts of meteoroids crashing into the moon's surface. The larger craters were probably formed by larger celestial bodies (like asteroids and comets) hitting the moon's surface. The largest crater on the moon, the *Imbrium Basin*, is 700 miles wide.

Intended Learning Outcomes

- Use a Use a Science Process and Thinking Skills
- Manifest Science Interests and Attitudes
- Understand Science Concepts and Principles
- Communicate Effectively Using Science Language and Reasoning

Instructional Procedures

Invitation to Learn

How do you think craters are formed on the moon? Have students record their answers on page 4 in their moon books.

Instructional Procedures

- Put the soil, sand, or flour in the pan.
- Hold a rock over the pan (about as high as your chin).
- Drop the rock.
- Measure in metrics the diameter of the crater and record.
- Repeat this procedure holding the rocks at different heights.

Record discoveries in their journals on page 4.

Extensions

Art-

Have students wad a plastic sandwich bag and use it to apply gray tempera paint to cover a nine inch square paper. After it dries, cut out a 7-inch circle. Glue moon cutout onto the larger black paper and cut out white stars to add to the picture. *(Standard I, Objective 1)*

Language Art-

For a writing activity that is out of this world, tell students that many stories have been told about the shapes on the moon's surface. A well-known story states that the moon shows the face of a man ("The Man in the Moon"). Have each student study her or his project and write about what she or he sees on the moon (refer back to the *What the Moon is Like* by Frankly M. Branley). *(Standard VIII, Objective 6)*

Homework & Family Connections

Students conduct the same experiment with their families, explaining what they learned.
Share moon stories with their families.
Send home a list of websites and encourage students to look up with their families.
Read books about Earth and the moon.

Assessment Plan

Students can describe what they did, what they saw, and what they learned in their journals.
Check for accuracy on page 4 of their journals.

Authors

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