



Homeschool Learning Network

Week 24 Science: Crashed on the Moon (Grades 6-12)

Name _____

Date _____

Lesson adapted with permission from OCFN <http://www.ofcn.org/> - Original lesson Claudia Todd-Sonnichsen, Ponca City School District, Ponca City, OK

OVERVIEW:

This lesson is used in Earth-Space Science to make the differences between the environments on the earth and the moon more relevant, and to set the stage for study of the basic environmental differences between the earth and other planets.

PURPOSE:

Students memorize the environmental differences among the planets but usually do not develop a feel for how they might affect life in that environment. This lesson stimulates student thinking about what their life might be like on the moon and sets the stage for a brief study of the environments on other planets.

OBJECTIVES:

1. Compare and contrast the environments of our moon and the earth.
2. Give practical examples of how these differences might affect one's daily activities on our moon.

WEB REFERENCES:

- The Moon <http://nssdc.gsfc.nasa.gov/planetary/planets/moonpage.html>

RESOURCES/MATERIALS:

A script of the spaceship crash, The list of survival equipment available on the spaceship

ACTIVITIES AND PROCEDURES:

1. The teacher or students who have done the necessary research compare and contrast, both verbally and in writing, some of the major environmental differences between the earth and our moon.

Examples of some major factors:

- | | |
|-------------------------|--|
| a. Atmospheric Pressure | f. Organisms |
| b. Temperature | g. Oxygen available |
| c. Weather | h. Crustal activity--quakes, volcanos... |
| e. Gravity | |



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2. Examples are solicited from students about how these differences might affect daily activities.
3. Students can then work individually or could be divided into groups for a classroom environment. Each individual or group is the crew on a spaceship that is about to crash on the moon.
4. They usually read a prepared script describing their "crash" on the moon. Older students can take this activity on as a special project and work up a skit, complete with a space ship, background music, black light, and a narrator. For younger students, the teacher may prefer to create the script.
5. Following the crash, an announcement is made that the spaceship is disabled, the radio is broken, and nearest base is 50 km. away. Each group must get to the base with no outside help.
6. Their task is to decide which emergency supplies from their disabled spaceship to take with them. They are to list the supplies in order of priority and state why they chose each item. Below is a partial list that is usually given:
 - First Aid Kit
 - Water
 - Freeze dried food
 - 50 feet of rope
 - Parachute
 - Inflatable Raft
 - Small backpack Stove
 - Stove Fuel
 - Matches
 - Standard backpack tent
 - Sleeping Bags
 - Pressure Suits
 - Extra oxygen cylinders compatible with pressure suits
 - Compass
 - Map of Moon
 - Suit repair kit
 - Flashlight
7. Afterwards each individual or group reports on their list and why they chose each item.

TYING IT ALL TOGETHER:

1. The teacher or the students in charge discuss the "official list" and why the items were prioritized as they were. There are no real right and wrong answers although some items would obviously be more valuable on the moon in an emergency.
2. Students compare and contrast the environmental differences found on the earth and the moon on paper. They give examples of how each difference might affect their life if they were living on the moon.
3. The teacher uses this activity to introduce the study of the environments of the other planets.