

Charting the Moon

Summary

Students design an investigation, construct a chart, and collect data depicting the phases of the moon.

Time Frame

2 class periods of 30 minutes each

Group Size

Individual

Materials

Paper
Pen or Pencil

Background for Teachers

The appearance of the lighted portion of the moon changes in a predictable cycle as a result of the relative positions of Earth, the moon, and the sun.

This lesson begins with an inquiry activity and provides students with the time to plan how to chart the phases of the moon. Avoid the temptation to create a chart or give students specific directions on how to observe the moon. Provide support and suggestions, but encourage the students to carry out their own plans.

After the initial presentation, allow students two weeks to a month to complete their charts. Then conclude by having students share their charts with one another.

Intended Learning Outcomes

Plan and conduct simple investigations.
Demonstrate a sense of curiosity about nature.
Cite examples of how science affects life.

Instructional Procedures

Introduction:

Ask students the following questions:

Does the appearance of the moon change or does it always look the same?

How does the moon change?

How could you find out how the moon changes?

How could you find out if there is a pattern to the changing of the moon?

These questions should help lead students to planning an investigation in which they will observe and record the appearance of the moon.

Help students understand possible variables and constants during their observations. Consider such things as:

Time of day

Location

Position of the moon in relation to the horizon

Appearance

Have students write their plan for observing the moon. (Writing the steps down often helps

students be precise and consider all aspects.)

Observations:

Provide students with time (2 weeks to a month) to carry out their plans.

Conclusion:

Have students bring their completed charts to class and share their experiences with one another.

Discuss difficulties that arose as well as areas of success.

Help students identify the pattern of the phases of the moon.

Have students write a reflective paragraph summarizing their experience. In addition to summarizing the phases of the moon, students should also reflect on their plan for the observations. They should note effective characteristics of their plan as well as areas that could be improved in the future.

Assessment Plan

Assess the reflective paragraphs in the following areas:

Summarized and understands the phases of the moon.

Identified effective areas in their observation plan.

Identified areas for improvement in future activities.

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