

Calendar Skills

Activity 1: Lunar Calendar

OBJECTIVES

- The student will define a calendar
- The student will identify each phase of the moon
- The student will state how the beginning and end of each month in the lunar calendar is determined
- The student will understand chronological events.
- The student will practice identifying key calendar concepts.
- The student will demonstrate mastery of cluster-related vocabulary and historical awareness processes.

STANDARDS

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Historical Understanding

Standard Understands and knows how to analyze chronological relationships and patterns

Level I [*Grade: K-2*]

Understands calendar time in days, weeks, and months

Mathematics

Standard Understands and applies basic and advanced properties of the concepts of measurement

Level I [*Grade: K-2*]

Understands the concept of time and how it is measured.

Science

Standard Understands the composition and structure of the universe and the Earth's place in it

Topics

1. Motion of the Earth and Moon;
2. The Sun and other stars

Level I [*Grade K-2*]

Knows basic patterns of the Sun and Moon (e.g., the Sun appears every day and the Moon appears sometimes at night and sometimes during the day; the Sun and Moon appear to move from east to west across the sky; the Moon appears to change shape over the course of a month; the Sun's position in the sky changes through the seasons)

A. Apparent movement of the Moon

B. Day, night

C. Lunar, Full, Half, Quarter, Waxing, Waning

LESSON OVERVIEW

Students will identify the main phases of lunar activity. They will identify the critical changes in a monthly cycle and chart it on their calendar.

MATERIALS

- Flashlight
- Globe
- Worksheets: “Lunar Phases” and “Monthly Moon Calendar”
- MyTime Calendar website
- **OPTIONAL:** Book - “Mavis & Her Marvelous Mooncakes” by Dar Hosta

Lunar Phases Lesson Plan

ESTIMATED TIME

20 min

OBJECTIVES

- The student will demonstrate mastery of calendaring processes.
- The student will define the concept of a calendar.
- The student will list the number of months in the lunar calendar.
- The student will identify how the beginning and end of each month in the lunar calendar is determined.

MATERIALS

- MyTime Calendar Website
- Lunar Phases Worksheet

PROCEDURE

Anticipator Set

Ask student(s) the following questions and evaluate answers:

1. Have you ever noticed that the moon looks different from night to night?
2. Have you ever noticed that some nights, there doesn't appear to be a moon at all?
3. What do you think makes a full moon look so big?
4. Why do you think the moon changes?

Introduction

1. Read the suggested reading materials aloud with student(s). *[OPTIONAL]*
2. Ask students what phase the moon is currently in.

Learning Process

Step One

1. Students participate in a visual demonstration of the moon's phases with globe and flashlight.
 - a. Shine light on globe while gently rotating globe.
 - b. Identify the countries that are illuminated and those that are not.
2. Explain that this is caused by a rotation of the earth as demonstrated by the rotating globe.

Step Two:

1. Using the “MyTime Calendar” website, ask students to track the progress of the moon by evaluating its position each evening. Drag and drop the appropriate moon phase image from the calendar clipart gallery into the calendar on the website. Write the names of each phase.

2. Accompany student outdoors at the same time each evening and ask them to identify the shape of the moon using the Lunar Phases worksheet as a guide.
3. Upon returning indoors, ask them to drag and drop the appropriate moon phase from the MyTime Calendar clipart gallery into the correct day on the MyTime Calendar. Save your work on the website and revisit the calendar each night to add the correct moon phase for a time period of one month.

Step Three

1. At the end of the month, print your lunar calendar and observe the changes in the moon.

Activities

2. Ask students to complete the Lunar Phase worksheet by writing the appropriate phase on their diagrams. Begin with the terms: New, Quarter, Half and Full.
3. Gradually introduce other lunar terms (new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, last quarter, waning crescent, new moon)

DIFFERENTIATED LEARNING: *According to the latest findings by several leading psychologists, there are seven specific types of learning styles. This means that in order to maximize learning advantages, you must define the type of learner that you have, and cater the lesson to that particular learning style.*

Interpersonal: Assign students to work as “moon monitors”. Ask students how they think the moon effects others.

Linguistic: Ask students to discuss how they think the moon effects others. Ask them to create a story about how they act during various moon stages.

Logical: Ask students to identify where the earth would be in its rotation to create a “full moon” in North America.

Spatial: Ask students to pretend they live in another world and create a story how the moon is different in that world. Ask students what would happen if there were more than one moon.

Kinesthetic: Encourage students to trace the outline of the moon with their finger prior to completing worksheet each evening.

Intrapersonal: Ask students to reflect on how they would have thought the moon worked prior to this lesson. Ask them to explain it in a short story or poem.

Check for Understanding

Throughout the activities, the instructor should circulate through the class, assisting students having difficulties.

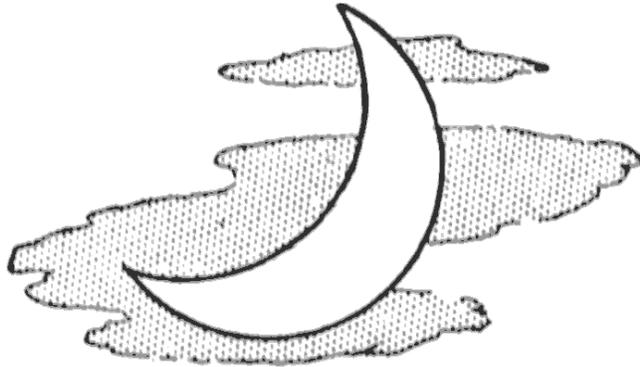
Independent Practice

Students should be encouraged to track the Phases of the Moon through MyTime Calendar each month and observe the differences.

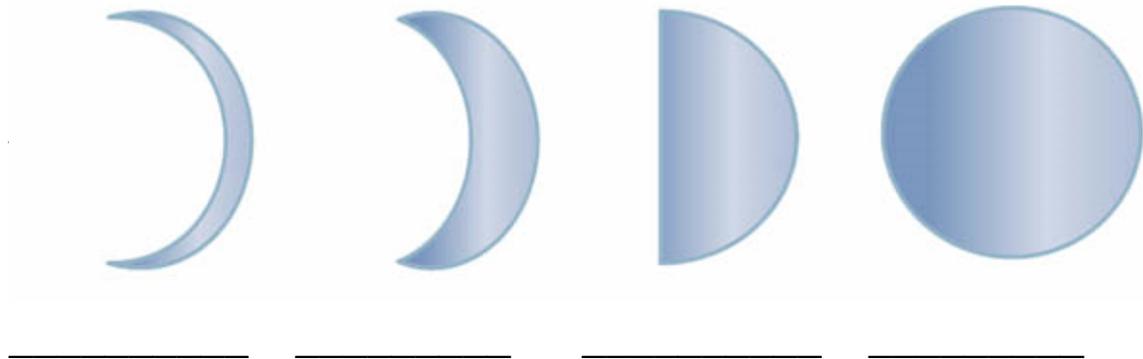
Lunar Phases

The picture shown below is:

- A circle
- The sun
- The moon



Label each phase of the moon:



Words:

Crescent

Quarter

Half

Full