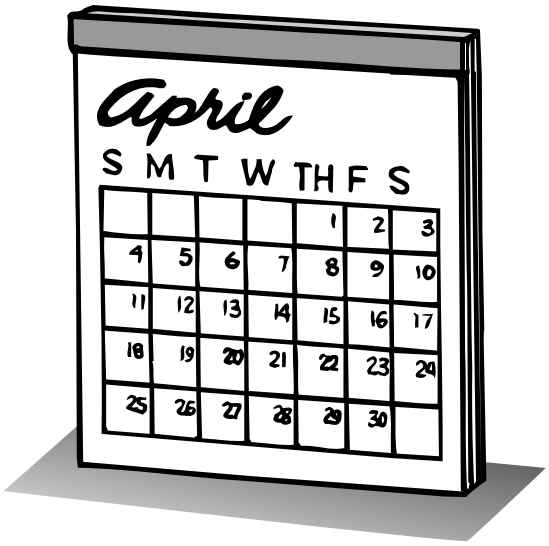
Chapter Science Investigation Name _____

Keeping a Solar and Lunar Log

What You Need



a calendar

a pencil

Find Out

Do this activity to see if there is a pattern in the movements of the sun and moon.

Process Skills

Predicting
Observing
Communicating

Time

- Five minutes four times a day for four weeks

What to Do

1. **Predict** what kinds of patterns the sun and moon might make.

2. Set up four calendar pages, one for each week. Divide each box on the calendar into four parts. Label them 1, 2, 3, and 4.

3. During recess, stand on the playground and face south.

4. In which direction do you have to look to see the sun?

   Safety! ***Do not look directly at the sun!***

5. After recess, write north, south, east, or west in part 1 of your calendar box.

6. Repeat Steps 3–5 after school, and again at the end of the day, filling in parts 2 and 3 on your calendar. Always stand in the same spot.

7. Each night, stand in the same place outside your home, facing south. **Observe** the moon. In which direction do you look to see the moon? What shape is it?

8. The next day, **draw a picture** of the moon in the fourth part of your calendar.

9. Next to the moon, **write** north, south, east, or west to **record** where you saw it in the sky.

10. Continue your observations each school day and school night.

Prediction: _____

_____

_____

Solar and Lunar Log	
Week:	**Observations**
Day 1	
Day 2	
Day 3	
Day 4	
Day 5	

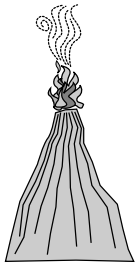
Conclusions

1. **Describe** what you noticed when you observed the position of the sun. **Record** your observations.

2. **Describe** what you saw happening to the moon. **Record** your observations.

New Question

1. If you were in India during first recess, would you look toward the same direction to see the sun? Why or why not?



Name _____

ACTIVITY

Modeling the Moon's Phases

What did you **observe** about the moon as it moved around you?

Draw what you see of the white part of the moon as it reaches each piece of white paper. Use the boxes below.

A	**B**	**C**	**D**
E	**F**	**G**	**H**

Do your drawings look like your partner's drawings? How are they alike? How are they different?

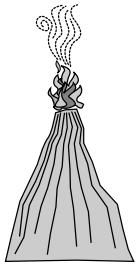
Name _____

Conclusions

1. Did the moon really change shape? Why or why not?

Asking New Questions

1. Why are we able to see only part of the moon at certain times?



Name _____

ACTIVITY

Making a Model Solar System

Which planet is closest to the sun?

Which planet is farthest away from the sun?

Which two planets are closest to each other?

The four planets closest to the sun are called the inner planets. What are the names of the inner planets?

The five planets farthest from the sun are called the outer planets. What are the names of the outer planets?

Name _____

Conclusions

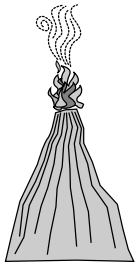
1. Which planet is about halfway between the sun and Pluto?

2. Compared to the outer planets, how far from the sun is Earth?

Asking New Questions

1. Which planet goes around the sun the fastest?

2. Which planet takes the longest time to orbit the sun?



Name _____

ACTIVITY

Making a Shoe Box Constellation

Draw what you saw when you held the box up to a bright light. **Write** the name of the constellation under your drawing.

Draw what you saw when you held your partner's box up to a bright light. **Write** the name of your partner's constellation under your drawing.

Name _____

Conclusions

1. Which constellation did you pick?

2. Name some of the constellations that your classmates picked.

Asking New Questions

1. How is the light from the stars different from the light of the moon?

2. Why can't we see the constellations during the daytime?