

Teachers, please copy both sides of this page for your students to take home.

SPACE ODYSSEY

Dear Students and Parents,

We hope you enjoyed your recent day of science exploration and investigation with Pacific Science Center's *Space Odyssey* van. The Science On Wheels program, which began operating in 1974, is an interactive outreach program that travels to schools across the state of Washington.

The *Space Odyssey* van provides students with hands-on science and astronomy experiences. Students participate in a lively assembly, explore an interactive exhibit area and receive a 45-minute hands-on lesson. Our goal is to foster an interest in science, technology and mathematics.

We encourage you to talk about our visit and investigate the activities below. They require few materials and are easy to do. Remember: your child and his or her friends will become our next astronomers. We hope you enjoy doing these activities together!

~Science On Wheels Teachers

Materials

- flashlight
- disposable plastic cup
- scissors

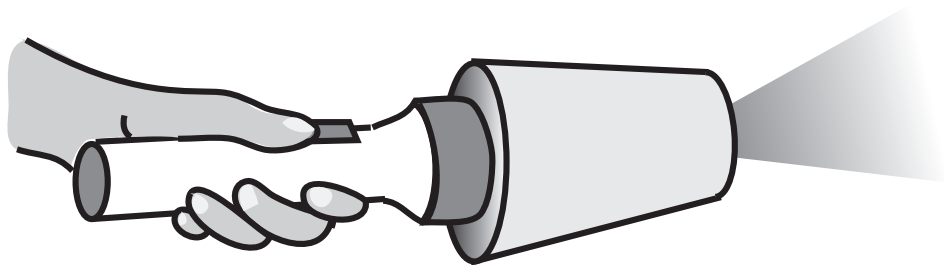
Where Do The Stars Go?

Doing the following activity should help reveal that the stars do not go anywhere unusual. They are still in the sky even during the day, but the light from the sun is so bright it blocks out the light from all the other stars.

Procedure

Note: a room that can be well darkened works best for this activity.

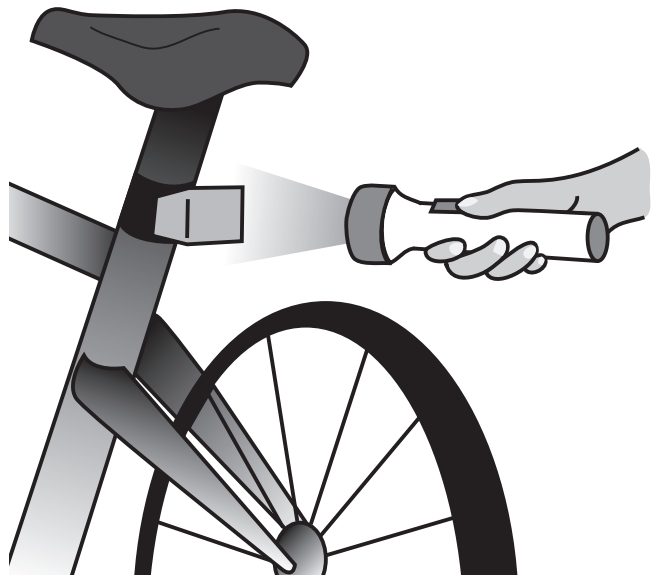
- Use the scissors to make a 1/2 cm (1/4 inch) hole in the bottom of the cup. Turn the cup upside down and hold the flashlight inside of it. You may want to experiment with a good distance to hold the flashlight inside the cup based on the size of the cup and the power of the flashlight, should it be close to the hole, further away?
- The flashlight in the cup represents a star, and the light in the room represents the sun's light.
- Turn on the "star" and shine it to the ceiling. You should not be able to see the light.
- Turn off the room lights and shine the "star" on the ceiling again. You should see the light now, as the "sun" is no longer shining.



Reflection Connection



We can see the planets and the moon because the sun's light bounces off them and reaches our eyes. It's a lot like seeing yourself in a mirror. On Earth, lots of items act like the planets and the moon in that they do not make their own light but bounce or reflect light.



Materials

- bicycle reflector
- mirror
- aluminum foil
- flashlight

Procedure

- Take your flashlight and bike reflector into a dark room, like the garage. Shine the flashlight onto the bicycle reflector. What do you notice? Can you see the reflector better when the light is shining on it or when the light is not shining on it?
- Try other items such as a mirror and aluminum foil. Do they reflect the light similarly to the way the bicycle reflector did?
- What other objects can you find around the house that reflect light like this?
- Do you think we would be able to see the moon without the sun?

Did You Miss The Last Eclipse?

Materials

- coin
- a partner

When the moon travels between the Earth and the sun, blocking out our view of the sun's light, we see what is called a solar eclipse. When the Earth travels between the moon and the sun, casting the earth's shadow on the moon, we see a lunar eclipse. Try the following experiment to see how this happens.

Procedure

- Have your partner stand 7.5 meters (25 feet) away from you.
- Close one eye and look at your partner with the open eye. Hold the coin at arm's length in front of you.
- Move the coin closer to your open eye until it is right in front of your eye.
- What happens to your view of your partner as the coin gets closer to your eye? The coin is smaller than your partner just as the moon is smaller than the Earth. Yet the moon is able to block the view of the sun in a small area of the Earth, creating a solar eclipse for that area.

