



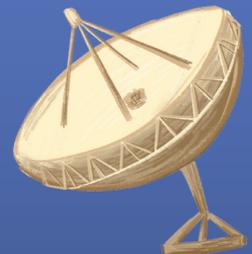
Make A Telescope



AS A GIRL, SALLY RIDE RECEIVED A TELESCOPE AS A GIFT AND USED IT TO LEARN MORE ABOUT SPACE. IN THIS ACTIVITY, YOU WILL USE ENGINEERING SKILLS TO BUILD YOUR OWN. WHAT ASTRONOMICAL DISCOVERIES WILL YOU MAKE?

CAUTION: Never look directly at the sun.

- 1 Take one paper towel tube and cut it lengthwise, on one side only. Curl one side of the cut edge over the other side, so that this tube slides snugly inside the other paper towel tube. Hold it at this size, take it out of the second tube, and tape it along its edge, so it keeps that size. Place most of it inside the other tube.



YOUR FIELD KIT CHECKLIST

- ✓ **TWO PAPER TOWEL TUBES**
- ✓ **LENSES FROM OLD EYEGASSES OR MAGNIFYING GLASSES**

2 Tape one lens to the outside of the larger end of your tubes. If your lens is from eyeglasses, it will have a convex and a concave side. The middle of the convex side bends outward, while the concave side bends inward. Tape the lens so that the convex side faces the outside of the tube and the concave side faces the inside. This lens is called the objective lens.

3 Tape the other lens to the outside of the inner tube. This is the eyepiece lens. Tape this lens with the convex side to the inside and the concave to the outside. Look through your telescope and adjust your lenses so you can see.

Try!
Looking through the smaller end of the telescope, aim your telescope at a faraway object. Try moving the inner tube back and forth inside the larger one. What do you notice about the image? Does it move the image closer or farther away? Aim your telescope at the moon. What do you notice?