

Homemade Periscope

Materials

1. Half gallon juice carton
2. 2 small mirrors
3. paper
4. scissors
5. tape
6. marker

Directions

1. A periscope will allow you to see things that are too tall for you to reach and even spy on your little brother or sister! It uses two mirrors to reflect images from the top of the carton to the eyepiece at the bottom. It's easy to build and fun to use!
2. Wash out the juice carton.
3. Cut a rectangular eyepiece about 1 inch tall and as wide as the carton just above the triangular lid.
4. Cut another rectangular hole out on the opposite side and opposite end of the carton.
5. Put your box to the side and pick up the two mirrors. Hold them, one on top of the other, the length of the carton away from each other. Turn the mirrors so that you can look into one and see the other. Have an adult help you with this step.
6. Draw a line on the top and bottom of the carton that shows the length and angle of your mirrors. Draw this line on both sides. Make sure the mirrors are facing the windows you cut out earlier.
7. Use your scissors to cut a small slit (the width of the mirror) on both sides to place the mirror through.
8. Slide the mirror through the slits and tape it into place.
9. Look through the bottom of your periscope. You should see a reflection of what's outside the top! Double check by waving your hand in front of the top hole.



<http://pbskids.org/zoom/activities/sci/periscope.html>

Questions

1. How does a periscope work?
2. What other things use mirrors and reflections?