

Oh, Seuss!™ off to Great Places

A New View for You!

activity 2

“Yertle the Turtle” climbs up on his friends ‘Til their shells start to creak and their knees start to bend And they’re very unhappy! Don’t like it at all! They must all pile up just so he will be tall! It’s not fair! It’s not smart! And what if they upend? Make a periscope, duh! Use your head, not your friends!

So, join us today—you can find and then seek, A new world from up high, through a periscope peek!

Try It!

“Then Yertle the Turtle was perched up so high, He could see forty miles from his throne in the sky! ...I’m king of the butterflies! King of the air! Ah, me! What a throne! What a wonderful chair! I’m Yertle the Turtle! Oh, marvelous me! For I am the ruler of all that I see!” – Dr. Seuss




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Did you know?

 Dr. Seuss’s books have been translated into 15 languages and are read by children around the world.

 The periscope, created by Johann Gutenberg, was originally developed to help people to see over the heads of others in a crowd.

 Periscopes work using mirrors placed opposite each other at angles to reflect images through a rectangular tube.

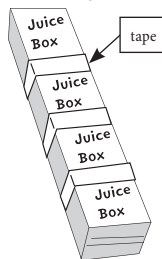


Although Yertle the Turtle was the king of the pond, he decided that he wanted to make his kingdom bigger by seeing more. Yertle found that he could see more by standing on a stack of other turtles. Because this technique wasn’t very successful for Yertle, we thought that you might like to see more of your own kingdom by creating a periscope instead of standing on your friends or family.

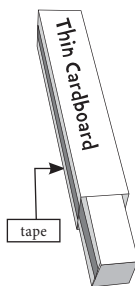


To start your periscope, you’ll create a long, narrow, rectangular tube.

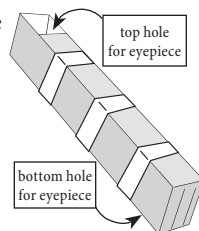
To do this with juice boxes, cut the bottoms and tops off of each juice box (saving one top and one bottom) and tape all of the boxes together into a long tube. Once they are all together, tape a top and a bottom onto the ends of your rectangle tube.



To make a rectangular tube with thin cardboard, fold one piece of your cardboard into four equal sections, each about one inch wide. Fold the sections into a tube, and tape them together. Cut out two squares of cardboard to make a top and bottom for your rectangular tube. (If you create two rectangular tubes, you can fit one inside the other, so that they will slide up and down.)

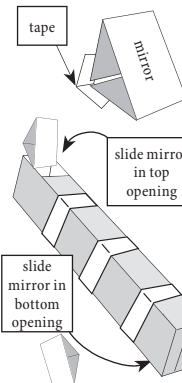


To create the eyepiece for your periscope, cut a one inch square from the side at the bottom edge of your rectangular tube. Then cut another one inch square on the side at the other end of your rectangular tube. Make sure that your second cut-out is on the opposite side of your rectangular tube and at the other end.



The key to making your periscope work is to create two mirrored sections that fit into the bottom and the top of your rectangular tube.

First, cut a piece of thin cardboard one inch wide by three (or so) inches long. Fold the cardboard into a right triangle and glue one of the mirrors or pieces of mylar (or transparency on black paper) to the long side of your triangle. Slide the mirrored triangle into the bottom opening on your tube.



Repeat this step again—make a cardboard triangle and attach the mirror. Slide mirrored triangle into the top slot in your rectangular tube.

The mirror on the bottom of your periscope should be facing up, and the mirror at the top of your periscope should be facing down. After you slide your mirrored triangles in, you may want to tape them down.

Hold your periscope up and look through it. What do you see? Can you see things that are higher up than you usually see? Try looking to the side around a corner. Hide behind a desk and see what you can find as you look through your periscope.

If you are having trouble seeing, adjust the mirrors in your periscope. Try changing the angle of the mirrors.

Mop up these Resources

By Dr. Seuss:
The 500 Hats of Bartholomew Cubbins

By Albert Gary Smith:
Easy to Make Periscope

www.planetscience.com



What you’ll need

2 small rectangular mirrors or mirrored paper or mylar (Try Michael’s or use gift wrapping or an old shiny balloon. If you can’t find any of these, you can use a thin clear piece of plastic on black paper)

Tape

Scissors

Several small juice boxes

OR

2 pieces of thin cardboard (8½” x 11” cardstock or from a cereal box)



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