Forming Images in a Camera Obscura

In this lab, you will be making an optical device called a camera obscura. This is a simple model of how images are formed in the eye that will let us explore some basic features of your eye's optics.

You will need:

- a box
- electrical tape
- tracing paper
- black paper
- Xacto knife
- a nail or pin

What to do:

(1) Cut an opening in one side of the box, leaving a margin wide enough to accept some tape. Next, cut a piece of tracing paper to cover this opening completely.

(2) Put this in place using some electrical tape. I would recommend putting tape on the inside AND outside of the box, but this isn't crucial.

(over)
Finally, make a small visor for your box using some black construction paper. Wrap the paper around the box so that it sticks out from the screen face by a few inches. This is meant to provide some shade so you can see your images more clearly.

Now rotate the box all the way around so that the screen you just made is at the back.

Use your nail/pin/sharp thing to make a small hole in the center of the front face. The picture is NOT to scale! Make this hole as small as you can.

Now seal up the entire box with electrical tape. Make sure that any places where light could get in are covered up, especially the lid!