

See Your Pupil

Introduction

Look at a pinhole in a film can and see your pupil change size.



Look through a pinhole in the bottom of a film can at a light.

Material

- A black plastic film can
- A push pin

Assembly

Use the pushpin to make a pinhole in the bottom of the film can.

Rotate the pin to make a nicer hole.

Throw away the lid of the film can.

To Do and Notice

Look into the open end of the film can through the pinhole, at a light.

Notice the apparent size of the pinhole.

Notice how much of the distant light you can see.



Cover your other eye with your hand for 10 seconds or so.

Remove your hand.

Notice that the size of the pinhole appears to change.

What's Going On?

The size of the pinhole does not change when you open your eye. However the size of your pupil does. The circular region you see when you look through a pinhole at a distant object is determined by the size of your pupil.

Thus when the size of your pupil changes so does the size of the hole.

Etc.

This was discovered by teachers attending the Summer Teachers Institute.

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