

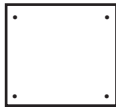
Name _____

Date _____


Camera Obscura and Projector

You used different parts to make a camera obscura and then turn it into a projector, including:

Lens 

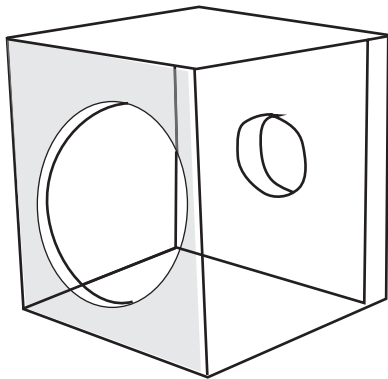
Back Screen 

LED 

LED stand 

Picture 

1. Camera Obscura

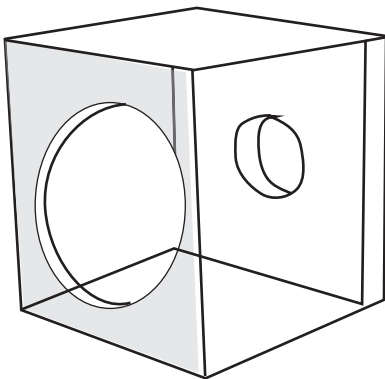


A *camera obscura* lets you see the image of an object in front of you on a screen at the back of the camera.

We have drawn a person in front of your camera obscura.

1. Draw and label the parts that make the camera obscura work.
2. Draw the image that you see.

2. Projector



A *projector* lets you project a picture from inside the camera onto a screen or surface in front of the camera.

We have drawn a screen in front of your projector.

1. Draw and label the parts that make the projector work.
2. Draw the image that you see.

The camera obscura or projector worked because you were able to control where light was reflected (bounced back), absorbed (trapped), or refracted (bent).

3. Give one example (in either a camera obscura or projector) of where light is:

Reflected: _____

Absorbed: _____

Refracted: _____

4. Eli wanted to improve his projector by drawing his picture on a different material. He bought permanent markers that will draw on any material. For each idea, tell whether you think he could project a clearer or brighter image by drawing his picture in this way. Tell why you think so.

- If he drew on a piece of clear plastic (like plastic wrap) with orange and yellow markers:

- If he drew on a piece of aluminum foil with orange and yellow markers:

- If he drew on a piece of thick blue paper with black markers:

5. How would you improve your projector? Think of one idea and tell why you think it would help you project a clearer, brighter image.

What's next? (A challenge....)

- Conduct an investigation to test Eli's ideas. Choose three or more materials that you would like to test. Design a procedure that will help you test whether using a different material can improve your projection. Conduct your investigation and report your findings.