

## YOU NEED:

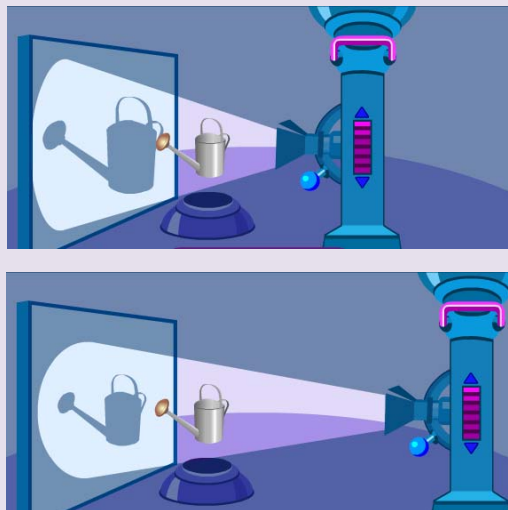
- Source of light
- Screen or empty wall

## PROCEEDING:

Put your fingers between the light and the screen. Make shadows. Can you make the shadow of a rabbit?

Move your hand toward the screen and away from the screen and notice how the shadow changes size. The shadow gets large when your hand approaches the light. Notice the sharp edges of the shadow. Replace your hand with a cardboard cutout.

You can try to do the same with some object instead of your fingers.



## WHY DOES IT HAPPEN?

Moving a light source closer to an object can make its shadow grow larger while moving the light source away can have the opposite effect. The size of a shadow depends not only on the size of the object casting the shadow but also on the position of the light source and screen.

Light travels in straight lines. The straight lines go from the point of light to the edge of the object and continue to the screen. So when the object is close to the light it makes a large shadow. The shadow has sharp edges because the light source is small.

### *Credits*

<http://www.exploratorium.edu/>