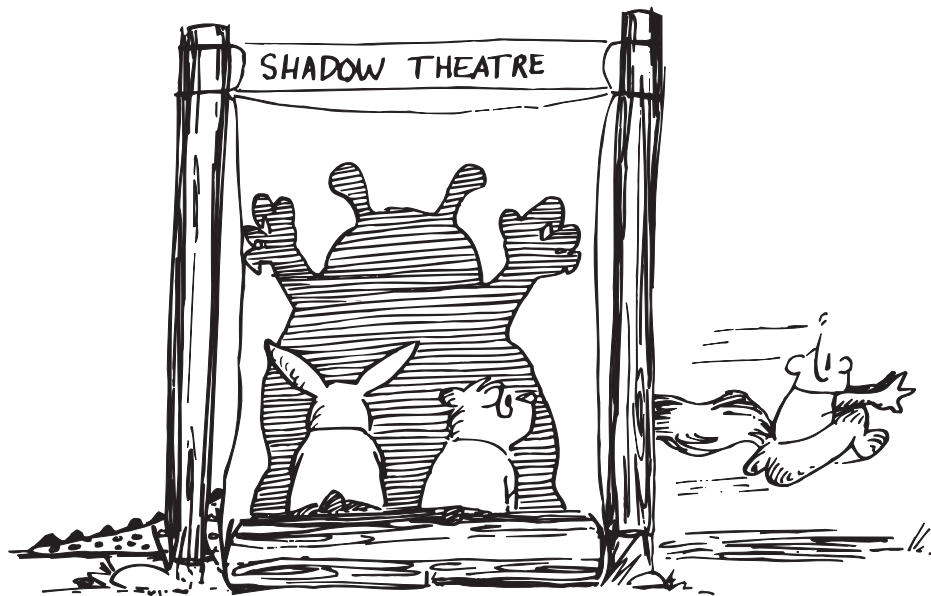


SHADOWS

Use shadows to experiment with the properties of light. You can also use shadows to create a lot of creepy creatures!



MATERIALS: Light source (e.g. 100 to 300 watt light bulb without a shade, slide projector, flashlight); screen (e.g. bed linens, sheets of white paper taped to a wall).

DOING IT:

1. Try the hand positions shown on the following page.
2. Where is the darkest part of a shadow? How does moving your hand closer to or further from the light source affect the size of the shadow?

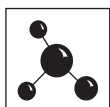
What's the largest shadow you can make? The smallest? The most distinct? How does the shadow formed when your hand is parallel to the light source compare to one made when your hand is held at right angles to the light source? What is the longest or widest shadow you can make?

3. What new shadow creatures can you create?
4. *Variation:* What am I? One person makes a shadow, while others guess what the shadow represents.

Light is a form of energy that travels at very high speeds. It can pass through air, water, glass, and many other materials. Some materials do not permit light to pass through. Light hitting an object made from such a material is blocked, while light that even slightly misses the object continues on. A shadow is formed in the shape of the object blocking the light. Shadows have many interesting properties. For example, the closer an object is to a light source, the larger and less distinct is its shadow. The larger a light source, the less distinct the shadow.

Topics: Light.

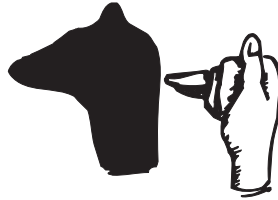
Does an empty, clear drinking glass cast a shadow? If you fill the glass with water, does it cast a shadow? What happens if you ripple the water with your finger? Do the ripples create shadows?



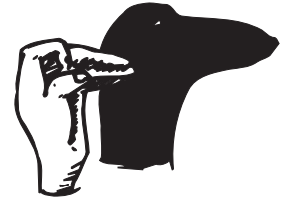
SHADOW CREATURES



GIRAFFE



HOUND



CAMEL



RABBIT



ANOTHER RABBIT!



GOAT



BEAR



DOG



WOLF



ELEPHANT



BIRD

