

Light and shadow *Dynamics first* Equipment

List

- long-filament bulbs & sockets
- white board or large sheet of paper with markers
- meter sticks
- flashlights
- power strips
- frosted bulbs
- acetates (red and green)

Special Instructions

Equipment preparation:

The flashlights should have small bulbs that can serve as point sources of light. (Maglights work well.) If flashlights are not used, the following can substitute:

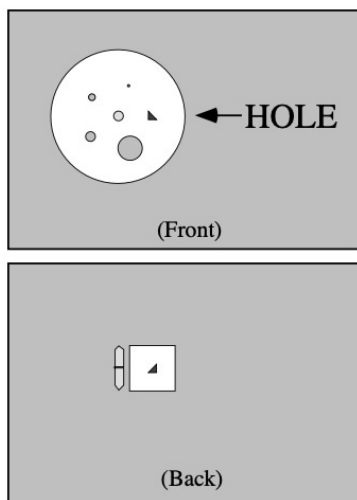
- small bulbs in sockets
- batteries
- connecting wire

Instructions to make masks:

Cut a square hole (~2-3 cm) near center of cardboard, Cut a circle (~10 cm diameter) from a manilla file folder. Make each of the following holes in the manilla circle (each about half a radius from the center):

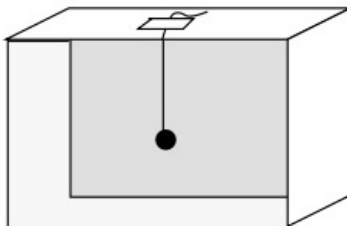
- pinhole
- round circle ~0.3 cm diameter (use small hole punch)
- round circle ~0.6 cm diameter (use standard-size hole punch)
- round circle ~1.0 cm diameter (use utility knife)
- small triangular hole (use utility knife)

Fasten the manilla circle to the cardboard with a paper fastener so the square hole in the cardboard lines up with only one of the five apertures at a time.



Instructions to make "shadow box" (1 per group)

- cardboard box with bottom interior surface covered with white paper)
- 1 small bead (~0.5 cm diameter) - can be made of clay
- 1 piece of thread, to suspend bead



Equipment to be handed out by instructor during tutorial:

- frosted bulbs in sockets (be sure bulbs are well-frosted)

- 1 red acetate piece per group
- 1 green acetate piece per group

Note: Each group will need access to an electrical outlet.