NAME _____ DATE _____

Lens Demonstration

An eye with a lens takes in more light than one without a lens. A lens bends light coming into the eye to form a miniature image on the retina at the back of the eye.

If our eyes were lens-less like the "pinhole" eyes of the nautilus, then our head would need to be one meter across in order to take in the same amount of information.

Instructions

You will need a magnifying glass and a piece of paper.

Part 1

You will need to be in a room with overhead light(s) switched on.

1. Place the paper on a table, floor, or other flat surface.
2. Hold the magnifying glass a few inches above the paper. Move it up and down and tilt it to focus. You should be able to form a focused, miniature image of the overhead lights on the paper.

Part 2

You will need to be in a room with a well-lit window.

1. Hold the paper upright or against a wall, out of direct sunlight.
2. Hold the magnifying glass a few inches in front of the paper. Move it forward and back and tilt it to focus. You should be able to form a focused, miniature image of the window scene on the paper.

Questions

What do you notice about the orientation of the image?

How does this experiment relate to the eye?

(Adapted from http://ssrsbstaff.ednet.ns.ca/jcroft2/lens.htm)