

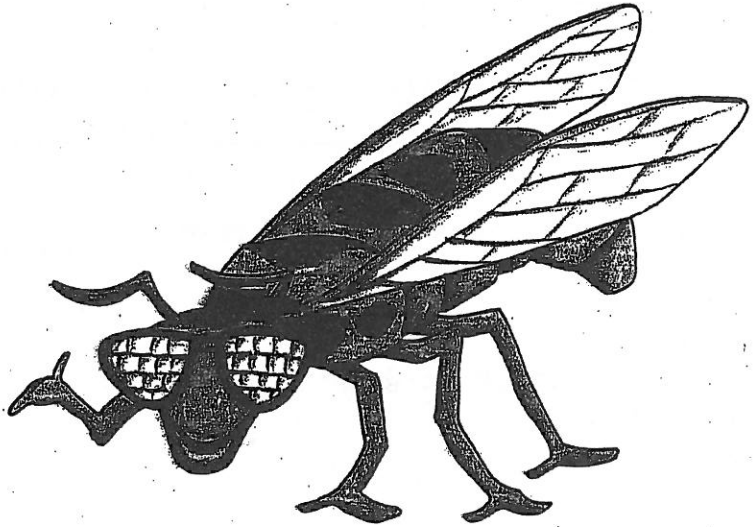
NAME _____

DATE _____

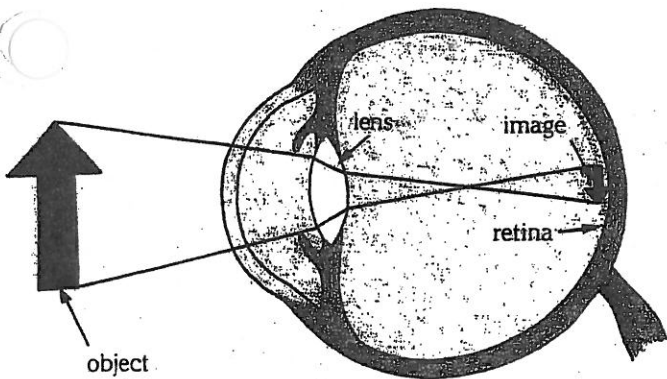
Period _____

Make a Spectacle of Yourself

You have convex lenses that you take with you everywhere you go: one in each eye. Behind the protective, transparent outer layer, called the *cornea*, light enters your eye through a small opening in the iris called the *pupil* (the small black space in the center of your eye), and then it is bent by the lens. The lens in your eye is held in place by small muscles, which cause it to flatten when you look at objects that are far away and bulge when you look at objects that are near. The bent light travels through a transparent, jellylike mass behind the lens until it is focused, upside down, on a light-sensitive layer at the back of your eye called the *retina*. The retina creates a signal that travels to your brain, allowing you to see. Your brain receives the upside-down signal and makes an adjustment so you see things right-side up.



You may wear eyeglasses or know someone who wears eyeglasses. The lenses in prescription eyeglasses are known as "corrective lenses," because they correct the person's vision. If you have perfect vision, images are focused clearly on the retinas of your eyes. Some people wear eyeglasses because they are farsighted, which means that their uncorrected eyes focus images behind their retinas. Their eyeglasses have convex lenses that bend the light rays more than the lenses in the person's eyes do, so the rays will fall on their retinas. Nearsighted people have eyes that focus images in front of their retinas. Eyeglasses for nearsighted people have concave lenses, which bend light rays outward so they focus further back, on their retinas. Some people have astigmatism, which is caused by uneven or unsmooth corneas. Eyeglasses for people with astigmatism are specially curved to correct their vision. To see the effect of different kinds of lenses, try this simple experiment.



How your eye sees an object.

7th grade lab pin / index card
period _____

Name _____
Date _____

1. What shape is the lens in the human eye?
2. Light enters your eye through the _____.
3. Describe the shape of the lens when you look at objects that are far away,
4. Describe the shape of the lens when you look at objects that are near.
5. Define the term retina.
6. Define the term "corrective lenses".
7. What does "farsighted" mean?
8. What does "nearsighted" mean?
9. Neatly draw the shape of the human eye lens.
10. Draw a sketch of how the pinhead looked to you.