

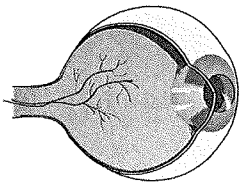
USE "Eye" Notes

to complete this  
assignment

# GROUP COPY

**NOTE TO THE EDUCATOR**

This chapter includes background information on the eye and the human visual system. The activity sheets can be xeroxed and handed out as references, or they can be used as overheads in a classroom discussion.



## HOW WE SEE

### THE EYE AND THE HUMAN VISUAL SYSTEM

There are many ways in which we experience and interpret the world around us. Have you ever thought what your world would be like if one of your five senses was lost or impaired? Consider not being able to smell a rose, or taste a sweet orange, or hear a dog bark, or see a beautiful sunset. Our senses fill our world with delightful sensations. Let's take a closer look at one incredible sense: vision.

Vision is a complex sense. The eyes inform a complex visual system that makes billions of calculations every second. In fact, seventy percent of the body's sense receptors are found in the eyes.

Important though our eyes are, there is another critical component needed to help us see — our brain. Without it, vision would not be possible for us. In fact, it's the brain that drives our visual system. In this chapter, you will learn about the eye's anatomy and how the human visual system works.

# 1

WHAT'S IN THIS CHAPTER?	key concepts	activity	activity
	Parts of the Eye How Do You see? How Does the Eye Focus?	Name the Parts	Draw Your Eye

\*DON'T WRITE ON! \*DON'T TAKE!

## key concept

parts  
of the eye

The **iris** is the colored part of your eye. It has two muscles that open and close your pupil.

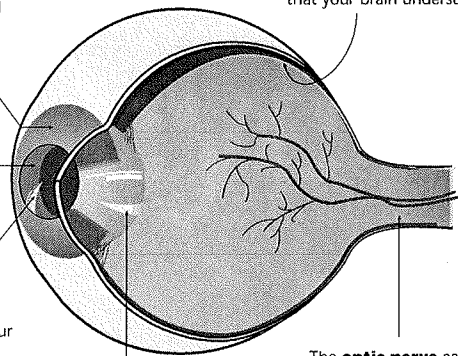
The **pupil** is the hole in the middle of your iris. It changes size to let more or less light into your eye.

The curved **cornea** bends light into your eye. It's tough and clear like a windshield and protects your eye from dust.

The **lens** is clear and flexible. It changes shape to focus light onto your retina.

The **retina** is the lining inside the back of your eye. Light-sensitive cells on the retina, called rods and cones, change light into messages that your brain understands.

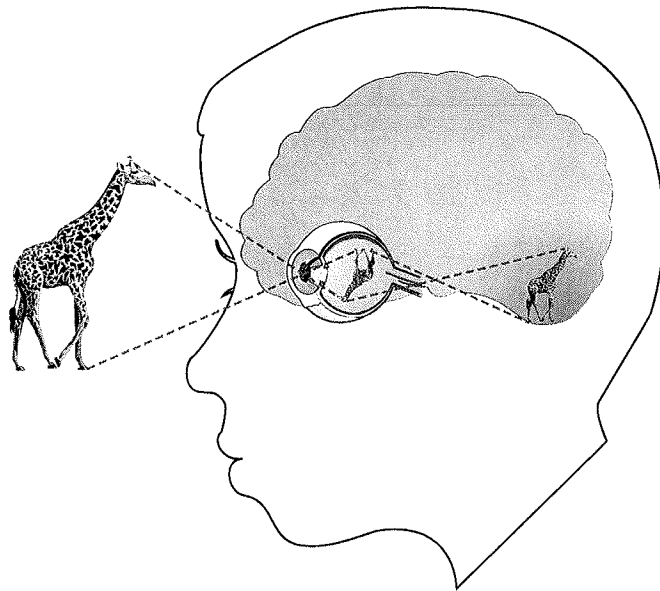
The **optic nerve** carries the messages from your retina to your brain.



## key concept

# how do you see?

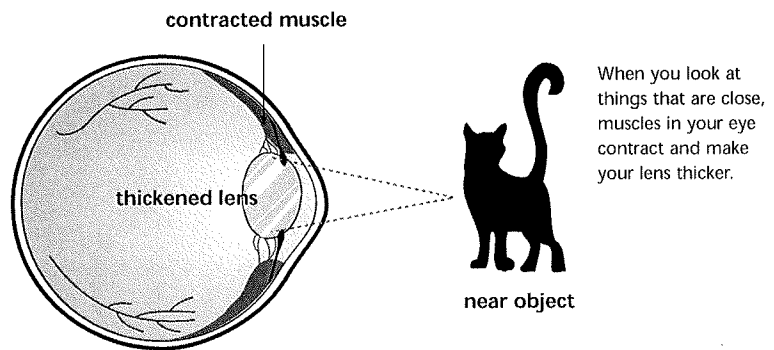
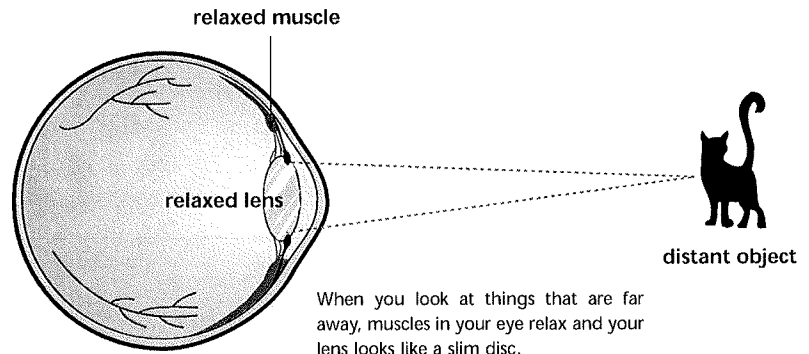
- First, light bounces off objects all around you and enters your eye.
- Then the light passes through your pupil and lens to the retina at the back of your eye.
- In the retina, the light makes an upside-down and backwards picture.
- The retina contains light-sensitive cells (called rods and cones) that change the picture into messages that your brain understands.
- The optic nerve carries these messages to your brain.
- Finally, your brain reads the messages and tells you what you're looking at.



# how does the eye focus?

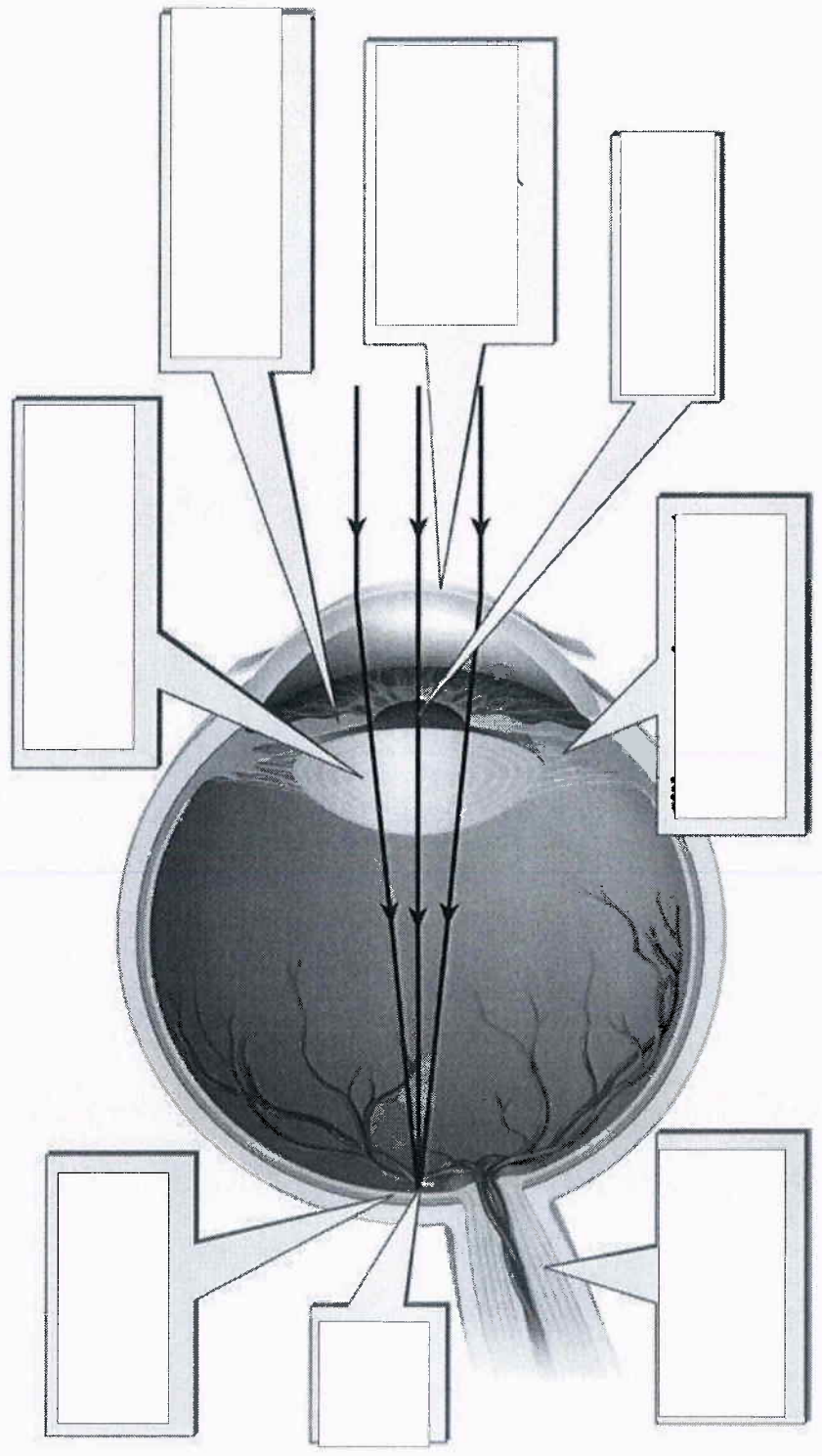
- You focus light with your cornea and lens.
- Your curved cornea bends light into your eye.
- Your lens changes shape to bring things into focus.

key concept



EYE LABELS!!!

### 11.4 The Eye and Vision

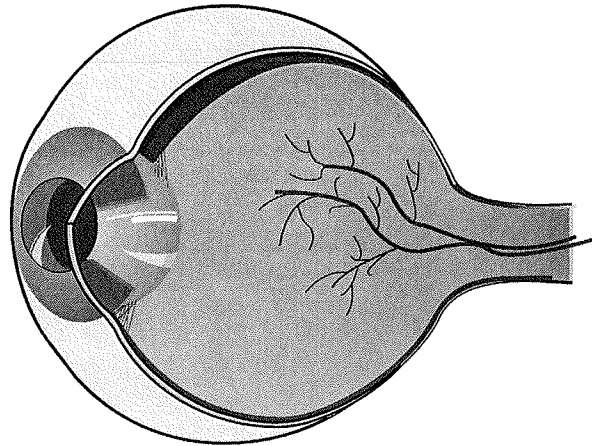


YOUR  
part #1

# name the parts

Can you name the parts of the eye? Color and identify the different parts of this eye cross section (answers on page 8).

Iris  
Retina  
Lens  
Pupil  
Cornea  
Optic Nerve



activity



## eye fact

When we ask, "What color are your eyes?", we are really asking, "What color are your irises?" What color are your's? What color irises' do your friends have?

activity

# draw your eye

Draw a picture of your eye (you might look in a mirror) and include these parts:

Pupil

Iris

Eyelashes

Eyebrow



# #1 How We See

5 interesting facts:

1)

2)

3)

4)

5)