

The Science of Seeing

Grades 5–8 • Science

ADMIT ONE

NAME _____

DATE _____

CLASS _____

How your eyes work. Your eyes collect light, but your **brain** creates the picture you see! Light travels through your eye and gets turned into electrical signals that your brain interprets.

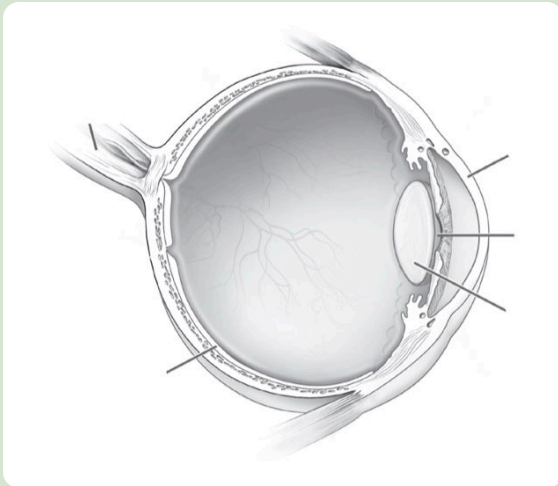
PART 1

O1

Label the Eye

Use the **Word Bank** to label the parts of the eye diagram below.

Word Bank: Cornea • Pupil • Lens • Retina • Optic Nerve



1. _____
(clear front part, bends light)
2. _____
(black circle, controls light amount)
3. _____
(focuses light onto back of eye)
4. _____
(light-sensitive layer with rods and cones)
5. _____
(carries signals to brain — location of your blind spot!)

PART 2

O2

The Blind Spot Experiment

Use the Blind Spot Test Card your teacher gave you. Follow these steps:

1. Close your LEFT eye
2. Look at the + with your RIGHT eye
3. Slowly move the card closer to your face
4. The dot should disappear!

Why does this happen? Circle the correct answer:

- A) The dot moves off the card B) Your optic nerve has no light receptors (blind spot)
C) You blinked

PART 3

03

Two Types of Illusions

Eye-based illusions: Trick the cells in your eye (like afterimages that tire out your cones)

Brain-based illusions: Trick how your brain interprets what it sees (like size illusions)

PART 4

04

Match the Illusion!

Draw a line from each illusion to where it happens:

Color Afterimage ●

Size Illusion ●

Blind Spot ●

● **EYE (retina)**

● **BRAIN (visual cortex)**

MINI MUSEUM CONNECTION

The **stereoscope** in the Mini Museum tricks your brain! It shows each eye a slightly different picture. Your brain combines them into one 3D image.

Try the Perception Lab: minimuseumproject.org/exhibitions/seeing-is-deceiving/illusions

minimuseumproject.org/exhibitions/seeing-is-deceiving

PART 5

05

What I Learned

Fill in the blanks:

My eyes collect _____, but my _____ creates the picture I see.

The blind spot is where the _____ connects to my eye.

Optical illusions work by tricking either my _____ or my _____.

SHARE WITH YOUR FAMILY

Try the blind spot experiment with your family! Can they find their blind spot too?

Fun fact to share: Your blind spot is wide enough to hide about ten full moons side by side in the sky — but you never notice it because your brain fills it in!