



PLTW Virtual Learning

7 & 8 Medical Detectives

Lesson 4, Part 4

April 9, 2020



7 & 8 Grade Medical Detectives Lesson: April 9, 2020

Objective/Learning Target:

Students will learn the parts of the eye and be able to recognize the various parts.

Warm-Ups:



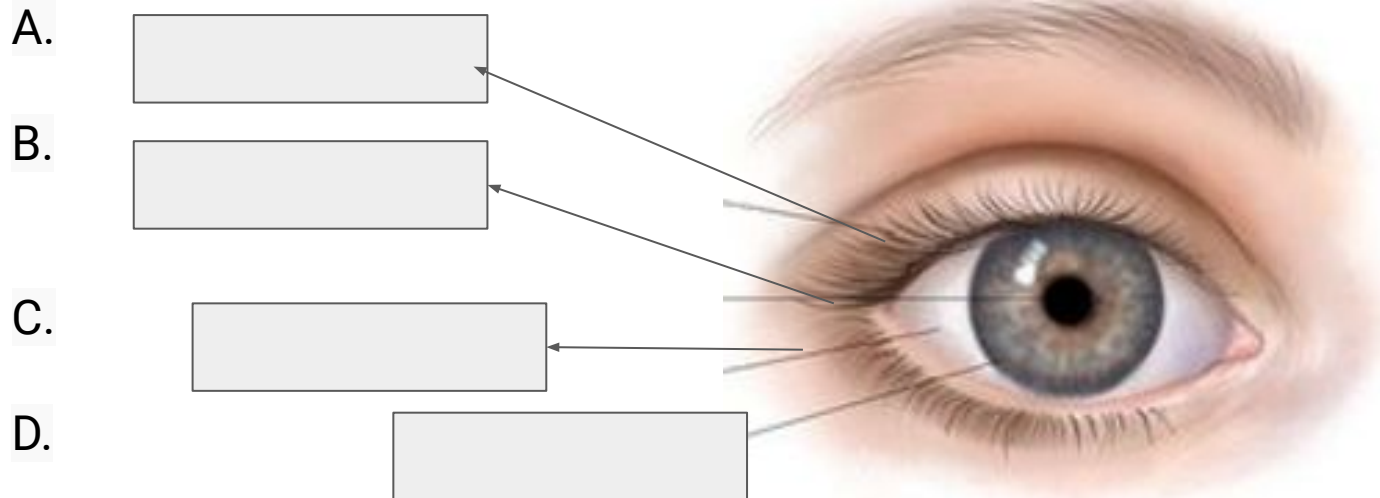
Quickwrite:

Over the last three lessons you have learned about farsightedness and nearsightedness, color blindness, the dominant eye, and you've even tested your own eyes. For the next 2 minutes, time yourself, take this information you've learned and write:

1. What you have learned that you didn't know before.
2. Your take away from these three lessons. What information did you share with others?

Warm-Ups: Do You Know the Parts of Your Eye When Looking at it?

Below is a picture of a human eye. How many parts of the eye do you already know and can label without any assistance?



Lesson Introduction/Background Information:

-- The eye is one of the most complex organisms in our bodies and is made up of many different parts that work together in unison to give us vision.

-- The eye is intricately connected with the nervous system, which sends the information to the brain, where the information is taken and turned in to the proper color, detail and depth, allowing us to see our surroundings and environment.

Watch the video, [How Human Eye Works](#), to learn more about how the eye works.

Answers to Warm-up exercise: A. eyelid B. Pupil C.Sclera D. Iris

Practice:

Let's learn the parts of the eye and what they do.

The following are different parts of the eye and what they do. Review these carefully and determine the correct answer for each part of the eye on the diagram.

Iris - The colored part of the eye. It's job is to regulate the amount of light entering into the eye through the pupil.

Sclera - The white outer coating of the eye.

Retina - The light-sensitive tissue lining the back of the eyeball. It's responsible for sending electrical impulses through the optic nerve to the brain.

Optic nerve - More than a million nerve fibers bundled together that carry the visual messages from the retina to the brain.

Practice:

Continued:

Macula - The small sensitive area of the retina needed for central vision.

Vitreous humor - The clear gel that fills the inside of the eye, giving it its shape.

Lens - The clear part of the eye behind the iris that helps to focus light on the retina. It allows the eye to focus on both far and near objects.

Pupil - The opening at the center of the iris. The iris adjusts the size of the pupil and controls the amount of light that can enter the eye.

Cornea - The clear dome covering the front of your eye. It's job is to help your eye focus light so things look sharp and clear.

Fovea - The center of the macula where your vision is the sharpest.

Practice:

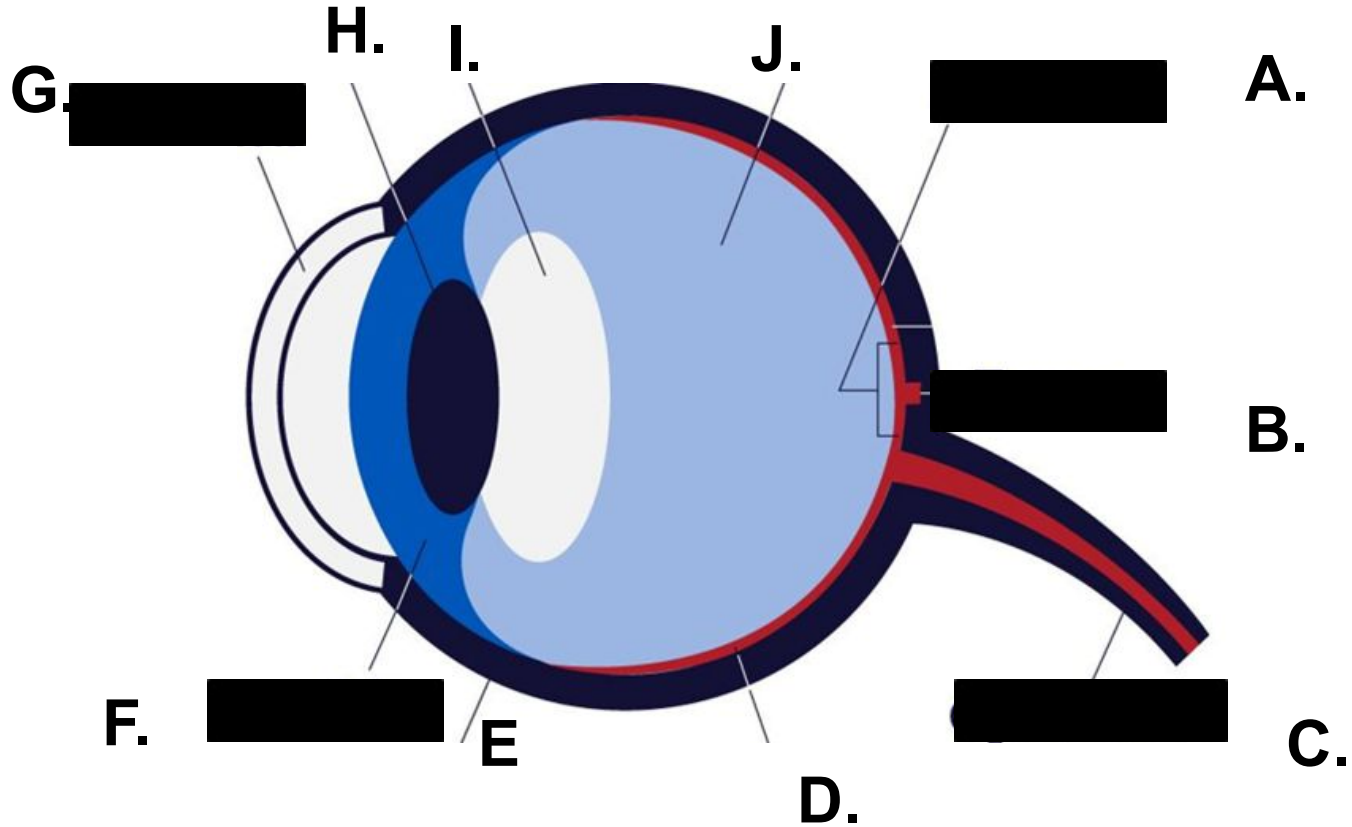
Instructions:

Now that you have reviewed the different parts of the eye and know what they do and are responsible for, you are ready to complete the diagram on the next slide.

On a piece of paper please letter it A. through J. You will write down your answer to each one of the parts of the eye beside the letter. Be sure and try to spell it correctly and write neatly so someone else can check your work for you when finished.



Practice: Labeling the Parts of the Eye.



Self-Assessment:

--Once you have written your answers down on a piece of paper, have someone other than yourself, check your answers and mark any that are incorrect.

--Now go back and review your answers correcting any that were not correct. Be sure and review the definitions of the parts of the eye to help you.

--Check your answers on the next slide and see if they are all correct.

--Any parts of the eye that were missed, review the definition, where it is and what it is used for on the diagram.

Self-Assessment:

Answers to the eye diagram:

A. Macula

B. Fovea

C. Optic Nerve

D. Retina

E. Sclera

F. Iris

G. Cornea

H. Pupil

I. Lens

J. Vitreous Humor

Extend Your Learning/Continued Practice:

Check out these videos to learn more about your eyes.

Ask a Scientist:-- [Eye Myths and Facts](#)

Ask a Scientist -- [What do your eyes do when you're sleeping?](#)

Ask a Scientist -- [Learn more about optical illusions](#)