

Self-Determination Lesson Plans
Unit 1: The Eye and Sight
Lesson 2: How does an eye work?

Unit Goal:

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

Lesson objective(s):

Student will describe the function of all major structures of the eye and the sequence of events that occur to result in seeing.

Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	Previously we talked about the five different senses, how we get information about our environment and the parts of the body that make use of that sense. We talked about the eye in more detail and learned that it has many different parts, both inside and outside.	The five senses: hearing, smelling, tasting, touching, seeing
Introduction	Each of the parts of the eye has a special job. Do you know what are the special jobs of any of the parts? All these parts working together create the sense that we call "seeing".	
Stating the Goal	When we finish our lesson today, you we be able to tell me what each part does and how.	
Instruction 1	People use different words to talk about using the eye to get information. Three words that you will hear are: seeing, sight and vision. They all mean the same thing.	Seeing Sight Vision

Step	Actions	Vocabulary
Instruction 2	<p>The first thing that is needed in order for seeing to happen is a light source. It can be the sun, the moon, a light bulb or a candle.</p> <p>The light source sends out light rays and the rays bounce off something.</p>	<p>Light source Light rays</p>
Instruction 3	<p>Use model, picture, drawing or tactile diagram of the eye to demonstrate pathway of light:</p> <ul style="list-style-type: none"> • Light rays bounce off object and go toward the eye • Through cornea - like window that lets light in but protects inside of the eye • Iris and pupil - controls amount of light that goes inside the eye. Too much light can hurt the eye • Lens - Focuses light • Interior chamber - like a big room, lets light go through • Retina - receives light; is covered with cells (rods and cones) that transfer the light to electrical impulses and sends them to the optic nerve • Optic nerve - carries information to the brain • Visual Cortex - part of the brain that processes electronic information into information that shows us what we see <p>(It may be fun to practice this several times with the student picking different objects to "see". You could draw a picture of the object together or make up a story about why you need are looking at that particular object.)</p>	<p>Cornea Iris Pupil Lens Interior chamber Retina (rods and cones) Optic nerve Visual cortex</p>
Check for Understanding	<p>"Show me how we would see _____."</p> <p>Using model, picture, drawing or tactile diagram, have student demonstrate the pathway that an image takes along the visual pathway, from the observed object to the visual cortex.</p>	
Closure	<p>"Now we've learned about each part of the eye and the special job each of those parts have to help us see things. Next time we will talk about different kinds of eyes and how each one is special and unique from one another."</p>	

Rationale:

An understanding of the mechanics of visual perception will allow the student to better understand the nature of his or her own visual condition.

Note: Amount of detail presented to the student may vary according to age and/or level of comprehension. For some students, a more simplified version of the visual pathway may be more appropriate. Other students may benefit and enjoy learning about additional structures.

Resources and materials:

- Eye poster:
 - <https://www.amazon.com/Eye-Anatomical-Chart-Company/dp/1587791269>
 - http://www.allposters.com/-sp/The-Eye-Educational-Chart-Poster-Posters_i8927150_.htm
 - <https://www.exetereye.co.uk/the-eye/eye-anatomy/>
- Eye model:
 - <https://anatomywarehouse.com/giant-eye-anatomy-model-11-parts-a-100506>
 - https://www.a3bs.com/eye-models,pg_30.html
- Black line drawing of eye
- Tactile diagram of the eye
- Markers, crayons
- Websites to explore:
 - http://www.ivyroses.com/HumanBody/Eye/Anatomy_Eye.php
 - <https://www.youtube.com/watch?v=syaQgmx5i0> - Animated short that describes structures and function of the eye
 - <http://kidshealth.org/kid/htbw/eyes.html> - Article about the eye. Includes audio version of the article.