

Self-Determination Lesson Plans

Unit 1: The Eye and Sight

Lesson 3: Everyone Has Different Eyes - Animals

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 identify how the eyes of at least four different animals function, how they are similar to one another and how they are different.

Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	"Today we're going to learn more about eyes. Can you show me the parts of the eye and tell me what they do?" (Student uses materials to name parts and describe visual pathway)	
Introduction	<p>"What are some things that have eyes?" (Student names animals or bugs that have eyes.)</p> <p>"Have you noticed anything that is different about different animals' eyes?" (Student names differences. May include size, color, position, etc.)</p> <p>Let's look at a few different animals and learn about some other ways that each animal's eyes are unique."</p>	
Stating the Goal	"After our lesson today, you will be able to tell how the eyes of animals are different and why they are different."	
Instruction 1	Collect pictures of several animals and also (if possible) of that animal's eye. You can present these in a booklet form or as separate sheets of paper. Look at the pictures and let the child identify the animal. Talk about the animal's environment and behavior. Talk about how each animal's eyes are different because they are used in different ways.	Environment Behavior

Step	Actions	Vocabulary
Instruction 2	Obtain one of the books about animal eyes (see "Resources" below). Read book together and discuss the information.	
Instruction 3	Explore websites that provide information about animal eyes (see "Resources"). Discuss each animal, its behavior, environment and eyes in more detail.	
Some examples of animal eyes	<p>Box jellyfish has 24 eyes.</p> <p>Camels have three eyelids.</p> <p>Squid have eyes 27 centimeters across.</p> <p>Dogs can't distinguish between red and green.</p> <p>Goats have square pupils.</p> <p>Owls can't move their eyes, that is why they swivel their head at almost 360 degrees.</p> <p>Worms don't have any eyes.</p> <p>Chameleons can move each eye in different directions at the same time.</p> <p>Rattlesnakes can see infrared heat signatures of other animals.</p>	
Check for Understanding	<ul style="list-style-type: none"> • Child writes the names of four different animals and what is special about the eyes of each one. • Child draws pictures of four animals and also a picture of their eyes, showing what is special about each. • Play game with cards: Name or picture of animal on one set of cards, picture of or description of eyes on other set of cards. Child matches. 	
Closure	There are all different kinds of eyes in the world. They come in all shapes, sizes and colors and they do different things. It is natural that the eyes of different animals are different. One eye is not better than the other; each is good for its purpose. Next time, we'll talk about how people's eyes can be different too.	

Rationale:

By studying the eyes of animals, which show great variation, the student will understand that diversity in eyes is common and normal. This understanding will enable the student to approach the concept of differences among human eyes as completely natural phenomena. This, in turn, will reduce feelings of being "different" from others due to having a visual impairment.

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:

Books

- *Eye to Eye: How Animals See the World* by Steve Jenkins
- *Animal Eyes* by Mary Howland
- *Animal Eyes* by Daisy Griffin

Web

- "Animal Eyes" <https://www.aao.org/museum/exhibition-detail/remarkable-women-american-women-in-ophthalmology-c>
- Museum of the Eye <https://www.aao.org/museum-of-the-eye>
- Photography website with close-up photos of various animal eyes
<http://www.surenmanvelyan.com/eyes/animal-eyes/>
- "Seeing Through Animal Eyes" https://nautil.us/seeing-through-animal-eyes-509263/?_sp=1cfc0cbe-6a68-4c1b-8a86-6b4f0402dc39.1718829250851
- "Eye Shapes of Animals Hint at Differences of Our Lifestyles". National Public Radio. Includes transcript and audio.
<http://www.npr.org/sections/health-shots/2015/08/07/430149677/eye-shapes-of-the-animal-world-hint-at-differences-in-our-lifestyles>
- Lists of Animal Eye Facts
 - <https://discoveryeye.org/32-facts-about-animal-eyes/>
 - <https://www.nhm.ac.uk/discover/amazing-eyes-vision-champions.html>