Unit 2: How We See Things

Introduction Lesson

Lemon Bay High School
English 2

Mr. Hertz
Goals of Lesson

• Identify the human senses and learn how they work at a basic level.
• Learn how our senses help us perceive the environment around us.
• Practice Metacognition.
• Understand how an author develops ideas over the course of a text.
• Respond to questions posed in the text in order to engage deeper in the material.
Introductory Writing Prompt

• Please take out a piece of paper and a pen or a pencil. Write your name, the date, class period, and title at the top.

“Coming to Our Senses”

Please answer the following questions using complete sentences:
• Tell me what you know about the perception.
• What are the “human” senses and what do they do for us?
• What registers the senses?
• What do we do with our senses?

• Time for student responses. Instructor writes notes on the board and students take notes.
SCIENCE OF VISION
Uncovering one of the most complex constructs in the natural world

Seeing in three dimensions
Each eye sees a slightly different image, allowing the brain to perceive depth. Our eyes are able to produce two-dimensional images, but with some clever processing, the brain is able to build these into a three-dimensional visual. Our eyes are positioned about 256 millimeters (two inches) apart, as in each eye the world is slightly different. The brain compares the two images, noticing the differences to create the illusion of depth.

Protection
The cornea protects the eye from damage. It is the frontmost layer of the eye, which is transparent and helps to focus light. The lens also helps to focus light. The lens is a flexible, transparent gel-like tissue that changes shape to focus light on the retina. The iris and pupil control the amount of light entering the eye. The retina is the light-sensitive layer at the back of the eye that converts light into electrical signals, which are then sent to the brain via the optic nerve.

Vision problems
The most common problem with our eyesight is:
- **Near-sightedness (myopia)**: If we are near-sighted, we see clear images for near objects, but distant objects are blurry. This occurs when the eye is too long or the cornea is too round. The light is focused in front of the retina, causing blurriness.
- **Far-sightedness (hyperopia)**: If we are far-sighted, we see clear images for distant objects, but near objects are blurry. This occurs when the eye is too short or the cornea is too flat. The light is focused behind the retina, causing blurriness.
- **Astigmatism**: If the eye is not perfectly spherical, the light that enters the eye is not focused properly, causing a blur in one or more areas of vision.

Colour blindness
It is a condition in which a person is unable to distinguish certain colors. It is inherited and can be caused by a defect in the genes that control the production of color-detecting pigments in the eye. There are several types of color blindness, ranging from mild to severe.
Quick Test of Your Senses: Your Eyes (Vision)

- From this point on it must be completely silent.
- You are to watch the video and quickly write the answer to the question on your paper.
- I will pause the video so we can share answers.
- Then we will see the answer.

- If you have seen this video before, please remain silent. Ruining this test for everyone else will result in a zero grade on this assignment.

**Directions:** Count how many times you see these kids pass the basketball to each other. Remember—Pay Attention. Keep Track and Count!
Critical Vocabulary for the Reading

• **Acuity**—perceptive awareness
• **Stimuli**—Things that cause a response or a reaction.
• **Propensity**—Tendency to behave in a certain way.
• **Transcend**—To go beyond, rise above
• **Logarithmic**—capable of being raised by repeated multiplication of itself. Exponential.
• **Parapsychology**—The study of unexplainable or supernatural mental phenomena.
• **Precarious**—unsafe or insecure situation
The Reading: “Coming to Our Senses”

• As a class we will read the essay “Coming to Our Senses” by Neil deGrasse Tyson.
• We will be reading out loud as a class. All students will read at least one paragraph.
• Be respectful and supportive of those reading.
• If you have a question during the reading, silently raise your hand and we will try to answer it after the reader is finished with their section.
• We will read through line 39 and then stop and answer a question posed by the author.
Question for Thought and Discussion (3 and 3)

• You have just finished reading the first part of the text. Now take a moment to think about and answer the following question. You will have 3 min. to write a response.

“What, if anything, lies beyond our senses?”

• We will have 3 min. to discuss answers as a class. The instructor will write responses on the board. Please take notes.
Completing The Reading

• At this point we will complete the reading as a class.
• The same rules for reading apply
  • We will be reading out loud as a class. All students will read at least one paragraph.
  • Be respectful and supportive of those reading.
  • If you have a question during the reading, silently raise your hand and we will try to answer it after the reader is finished with their section.
• Upon completion of the reading your instructor will hand out a graphic organizer.
Graphic Organizer: Development of Ideas

• Method of Instruction: “I do, we do, you do.”

• **Directions:** Please use the supplied graphic organizer to help identify the main idea of each section of the text. This graphic organizer is designed to help you understand how the author develops ideas throughout their essay.

1. Hertz will model lines 1-35.
2. The whole class will do 39-65 together.
3. In pairs, you will complete the final three sections on your own.
Final Lesson Questions for Thought

• Please take out your lesson notes and responses. Please draw a line under your last response and write a new heading: “Final Questions for Thought”. You will answer the following questions using complete sentences.

1. How well do you understand how human senses work or don’t work? Please explain your answer with examples from the lesson.

2. How well do you understand the concept of Metacognition? Please write what you think it means and how it applies to your own learning.

3. What does it mean when you are asked to find “The Main Idea” of a text or section of a text? Provide one example from the lesson to help answer your question.

4. What does it mean when you are asked to provide “Supporting Details” from a text? Why do we need supporting details?

• Please make sure all of your work is stapled together, and then turn it in.