

### Lesson – Sense perception: There’s more to seeing than meets the eye?

#### Knowledge framework:

Scope

Perspective

Methods and tools

Ethics

<b>Context/purpose</b>	An introductory lesson to become aware of the nature and power of sense perception, especially <i>the visual</i> as central to the empirical method of producing and justifying knowledge.
<b>Links to areas of knowledge and optional themes</b>	AOKs – all AOKs and themes that produce and justify knowledge empirically. There are also obvious links to the knowledge framework element of <i>perspective</i> .
<b>Essential understandings</b>	That sense perception goes beyond the snapshot model where you open your eyes and instantly you enjoy a sharply detailed picture of the world. That the principles of perception such as <i>context, simplicity, meaning-making, change blindness, inattention</i> and others, influence our observations, often without our awareness.
<b>Knowledge questions</b>	<p>How essential is sense perception to the AOKs: natural sciences, human sciences, art, maths, and history, and to the optional themes?</p> <p>How is perception the same and/or different in the AOKs above? Is it more important in relation to some AOKs, disciplines, or themes than others?</p> <p>What kinds of knowledge or systems of knowledge do not rely on the empirical method?</p> <p>Is there knowledge independent of perception?</p> <p>Is all perception theory-laden? What does ‘theory-laden’ mean?</p> <p>What can be meant by ‘science makes the invisible visible’?</p> <p>What can be meant by ‘sight is the great validator’?</p> <p>Why is it that in many courts in the world, eyewitness testimony is admissible but hearsay is not?</p> <p>To what extent is it true that the artist makes an advantage out of the subjective nature of perception, while the scientist regards it as an obstacle to be overcome?</p> <p>If moral principles affect our decision-making and actions, how might these principals affect our perceptions?</p>

<p><b>Activity 1</b></p>	<p>Give out a blank piece of paper and ask students to write what they see in their classroom for five minutes without further explanation.</p> <p>(Students will find this exercise more difficult than it at first seems.)</p> <p>After the exercise is over, write a reflection on the activity. Discuss the quote <i>What you see is all there is</i> and the consequences of this statement for discovery and probability.</p> <p>Make slips of paper or cards with a sense perception/seeing quote on each card and pass the cards around. Call on half a dozen students to explain what is on their cards. Have copies of all the quotes to hand out as the class ends.</p>
<p><b>Discussion questions</b></p>	<p>What can the following mean?</p> <p>There's more to seeing than meets the eye.</p> <p>You can observe a lot by just watching. (Yogi Berra)</p> <p>Everyone has two eyes, but no one has the same view. (Wael Harakeh)</p> <p>What you see is all there is. (Daniel Kahneman)</p> <p>To see the world in a grain of sand. (William Blake)</p> <p>There is no immaculate perception. (Reuben Abel)</p> <p>We don't see things as they are, we see them as we are. (Anaïs Nin)</p> <p>The question is not what you look at, but what you see. (Henry David Thoreau)</p> <p>Seeing is believing; believing is seeing.</p> <p>Faith is seeing light with your heart when your eyes see only darkness. (Old prayer)</p> <p>Do you see blue the way I do?</p> <p>You have to know what to look for in foreign countries. (Immanuel Kant)</p> <p>The greatest wisdom is seeing through appearances. (Buddha)</p> <p>We have eyes to see with, we have ears to hear with, so why then do we err? (Sue Bastian)</p> <p>Knowledge is the true organ of sight, not the eyes? (Panchatantra)</p>
<p><b>Resources</b></p>	<p>Bains, S. (2007) 'Mixed feelings', Wired Magazine, April.</p> <p>Bloomer, C. (1976) <i>Principles of visual perception</i>. Van Nostrand Reinhold.</p> <p>Gladwell, M. (2005) <i>Blink</i>. Allen Lane.</p> <p>Groopman, J. (2007) <i>How doctors think</i>. Houghton Mifflin.</p>

Keller, H. (2003) *The story of my life*. Simon & Schuster.  
New York Times. (21 Aug. 2007) 'Sleights of Mind'.  
Noë, Alva. (2005) *Action in perception*. Alva: MIT Press.

**Optical Illusions Pictures**



**Wider connections**

How do we enjoy such rich visual experiences when our actual direct contact with the world in the form of images on the retina is so limited?

Optical illusions and visual puzzles can be found on many websites.

What might be meant by the following: There were once three umpires calling balls and strikes.

Umpire 1: I call them as I see them.

Umpire 2: I call them as they are.

Umpire 3: Until I call them, they ain't nothing.

To explore the question further, search online for *What the Dog Perhaps Hears*, a poem by Lisa Mueller.

# Theory of Knowledge

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Credits for Sense Perception: There's More to Seeing Than Meets the Eye?

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