Teacher Answer Key

Case Study

1. Helmholtz says the eye is not a camera that simply takes in whatever is in front of it. He calls it an active organ that processes and interprets visual information, so the eye is part of the work of making sense of a scene rather than a passive receiver of it.

2. If perception is an act of interpretation, then interpretation can go wrong -- and that is what an illusion is. Helmholtz puts the error in the brain rather than in the world, which is the same account this reading gives: illusions are perceptual errors that occur when our brains misinterpret sensory information.

Multiple Choice

1. D

2. A

3. B

Matching

1-D, 2-C, 3-A, 4-B

Fill-in-the-Blank

1) misinterpret, 2) Müller-Lyer, 3) Stroop

Short Answer (Sample Responses)

Q1: Optical illusions are caused by the physical properties of light and the structure of our eyes, while cognitive illusions are caused by our brains' tendency to apply cognitive shortcuts or heuristics when interpreting sensory information. Examples of optical illusions include the Müller-Lyer illusion and the Ponzo illusion, while examples of cognitive illusions include the Stroop effect and the framing effect.

Q2: Expectations can play a significant role in perception by influencing how we interpret sensory information. For example, if we expect to see a certain object in a particular location, we may be more likely to perceive it even if it is not actually there. This can lead to illusions, as our expectations can override our sensory input.

Q3: The Stroop effect is a cognitive illusion that demonstrates the limitations of automatic processing. In the Stroop task, participants are asked to name the color of ink used to write words that are incongruent with the meaning of the words. The Stroop effect shows that it is difficult to ignore the meaning of the word and to focus solely on the color of the ink, even when we are instructed to do so. This is

because reading is such an automatic process that it interferes with our ability to focus on the color of the ink.