

Human Cognition

Investigation 2 - PostLab Quiz - Teacher Key

Scoring guidance: Accept scientifically accurate answers stated in the student's own words. The points below identify the essential ideas.

- 1.** Students should recognize that body regions differ in sensory sensitivity. Areas with greater receptor density and greater sensory-cortex representation can distinguish finer differences in touch; sensory information is therefore not detected and processed equally from all body regions.
- 2.** Both begin with a stimulus detected by sensory receptors, involve neural processing, and produce an automatic motor response without requiring a conscious decision first. The knee-jerk reflex is processed primarily through spinal-cord pathways; the pupillary light reflex involves brainstem pathways.
- 3. No.** Automatic does not mean unprocessed. Sensory input is still received and processed through neural pathways before a response is produced; conscious awareness is not required for that processing to begin.
- 4. C.** The nervous system can process different kinds of information through different pathways and produce different kinds of responses.
- 5.** The immediate withdrawal illustrates rapid, automatic processing that produces a protective response. Recognizing what happened and deciding to act differently illustrates additional, more complex processing involving conscious interpretation and decision-making. Both fit the broader pattern of receiving information, processing it, and producing a response.

Connection forward: Question 5 prepares students for the Information Processing Model and the more complex information-processing ideas developed in the next *Investigation*.