

Launch Lab: You, Robot?

Answer Key

Answers to Analysis Questions

- The following table lists the senses that are impaired and how each impairment affects the ability to process sensory information.

Procedure step	Senses impaired	Effects of impairment on integrating and processing sensory information
Step 3	no senses impaired	serves as the control test and provides baseline data
Step 4	sight and hearing	subject is now not able to receive auditory information from partner about task, and cannot see if task is being done accurately
Step 5	touch and pressure	now subject can receive visual and audio input, but cannot receive sensory input from touch and pressure receptors in the skin
Step 6	touch, pressure, and spatial	processing of sensory information is impaired because the extension of the fingers makes it difficult for the brain to recognize where these structures are in space
Step 7	touch, pressure, spatial, and different muscle receptors	sensory information is now being received about a different task – using pliers rather than fingers

- The following chart describes the effect on the ability to perform a simple motor output task.

Procedure step	Senses impaired	Effects of impairment on ability to perform a simple motor output task
Step 3	no senses impaired	serves as the control test and provides baseline data
Step 4	sight and hearing	motor output not affected greatly because the task is learned already, and not much visual or auditory information is required
Step 5	touch and pressure	motor output is affected because of the lack of sensory input from touch and pressure receptors in the skin; it would take time for the nervous system to adapt to this impairment
Step 6	touch, pressure, and spatial	motor output is affected; the extension of the fingers makes it difficult for the brain to recognize where these structures are in space; it would take time for the nervous system to adapt to this impairment
Step 7	touch, pressure, spatial, and different muscle receptors	motor output is affected; using the pliers would require retraining the nervous system and the muscle system – this is a completely different task than that done using fingers

- Your impression of the nervous system's role will depend on the degree of success or failure that you had in completing the task.