Name: Date:

HANDS-ON LAB

Investigating Behavior

BACKGROUND

Most human behavior is learned. Because humans have complex nervous systems and well-developed brains, we can change our responses to the environment as the need arises. Practicing new skills makes them easier to retain. The human brain can sort through hundreds of stimuli coming into it every second and respond to the ones that are important while ignoring stimuli that are considered unimportant. Sometimes, however, messages from the environment are not interpreted accurately. The cause may be the unusual nature of the stimulus or its poor quality, interference from other stimuli, or factors affecting the brain itself, such as a disease. Whatever the cause, when the brain fails to accurately receive signals from the environment, communication breaks down. In this investigation, you will study how practice affects behavior.

MATERIALS

- choose materials to match experimental design

PREDICT

How does practice affect behavior?

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PROCEDURE

1. You will work in pairs for this investigation.
2. Design an experiment to test how practice affects behavior. First, choose a behavior. For example, dropping a meter stick and timing how long it takes your partner to catch it is one task you could measure.
3. Write a hypothesis to explain how practice affects the behavior.

   _____

   _____

   _____

   _____

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   _____

4. Identify your independent and dependent variables, control, and constants below.

   Independent variable: _____

   Dependent variable: _____

   Control: _____

   Constants: _____

5. Write out your experimental design below and get your teacher's approval before you begin. Be sure to include time for repeated trials.

6. Draw a table in your Evidence Notebook to organize and record your results.

7. Conduct your experiment. Be sure that both you and your partner switch roles so each person completes the experiment.

ANALYZE

1. Choose an appropriate graph to represent your data. Draw your graph in your Evidence Notebook.

2. How did your response change with practice?

3. What kind of stimulus caused your response, a visual (sight), auditory (sound), or tactile (touch) one? Explain.

4. Suppose you repeated the behavior twice as many times as you did. Predict how the results would compare to your first 10 trials.

5. Describe another skill that could be affected by practice.