Ready, Set, Neuro!

Kinesiology Lab Days

Facilitator Instructions

NOTE: This document contains the information pertaining to the necessary preparation for this KIN Lab Days workshop and the different delivery methods. Please feel free to adapt it to your class's particular needs.

Purpose

Students will gain an understanding of response time by investigating…

- Examine the stages of motor learning
- Investigate what makes a task automatic
- Gain an understanding of the role of response time by investigating:
    - Reaction Time & Movement Time
    - Hick's Law
    - Fitt's Law

Equipment

Participants will require…

- PC or laptop (experiments 2 and 3 are not compatible with mobile phones/tablets)
- Pen or pencil
- Calculator
- Recording sheet (provided)
- Stopwatch
- 12 feet of walk space

Format

Each topic will follow a similar format…

- Introduction of concept
- Interactive experiment

- Expected results
- Discussion questions (instructor can choose to discuss the concept after the experiment or provide the questions as homework for students)

Delivery

One PowerPoint presentation with Presenter Notes has been provided to give instructors the ability to present the materials.

Setup

This presentation can be done **in-person** or **online**.

Experiments 1-3:

- Each student should have a computer set up with a reliable internet connection and the appropriate websites opened during each experiment.
- The provided worksheets should either be printed or opened on the electronic device so that they are able to markup the sheet with their results and save for future use.

In-person: If it is not possible for all students to have access to a computer, have only the students with access to a computer contribute their answers to represent the class.

Online: Students will be instructed to perform the activities at specific times during the online session.

Experiment 4:

- Students can partner up and will require stopwatches as they will be timed walking a distance of 10 metres.
- The provided worksheets should either be printed or opened on the electronic device so that they are able to markup the sheet with their results

In-person: If it is not possible for all students to complete both part 1 and 2, have only some of the students perform the experiment and contribute their answers to represent the class.

Online: Students will be instructed to perform the activities at specific times during the online session.

Resources Provided

Main documents:

- **Facilitator instructions** – outlines options for how to run the workshop depending on your class's preferences and structure (e.g., in-person or online).
- **PowerPoint presentation** – the presentation file you will be presenting or screen-sharing with your students.
- **Presenter notes** – contains all presentation information, experiment instructions, and answers to the discussion questions.
- **Recording sheet** – for students to record their results.
- **Excel data collection file** – to be shared as a collaborative file with students during the presentation; contains tables and graphs that will automatically update as data is inputted.

Additional documents:

- **Blank discussion questions** – for if instructor decides to use the discussion questions as homework for students.

Free Resources & Knowledge

Neuroscience: https://en.wikipedia.org/wiki/Neuroscience
Nervous system: https://en.wikipedia.org/wiki/Nervous_system
Electromyography: https://en.wikipedia.org/wiki/Electromyography