## 3AB Human Biological Science

## Reaction Time Investigation

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_/ 20

Reaction time should not be confused with reflex time, because reacting to a stimulus involves processing of auditory or visual stimuli in the brain. A reflex action is “processed” in the spinal cord. Of course stimuli are not truly “processed” at a conscious level, but rather at an automatic and involuntary level.

A reaction time to a stimulus can vary between people, especially under certain conditions (intoxication, fatigue, stress etc).

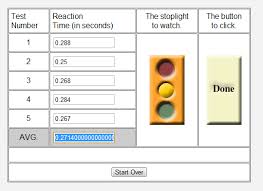
You are to conduct an experiment into the influence of a factor of your choice and its effect on reaction time. You may choose a factor such as

* Gender
* Age
* Caffeine consumption (coffee, tea or cola)
* Physical fatigue
* Dominant vs non-preferred hand
* Distractions such as listening to music

The factor you choose must be practical enough to complete during class time. (no not alcohol!)

**Task 1:** **Research** the factors affecting reaction times and write a ½ page report on what you have found out. You must include your references. (this will be used to write the introduction to your report)

**Task 2:** **Investigation and report:** In a group of no more than 3 people, determine your experimental factor and design your experiment. Draw up a results table to enter your data. This must be able to be completed in one lesson. Write an individual report on this investigation. Bring this to your assessment.

In order to determine a person’s reaction time, a Reaction Timer is available on <https://faculty.washington.edu/chudler/java/redgreen.html>

#Note: Participants should not practise using the Reaction Timer before they start trials.For consistency, participants will test their reaction times by completing **5 trials of 5 tests each**.

**Task 3:** **Assessment.** Using your report you will complete an in-class assessment based on your investigation and the theory on which it is based.