Dexterity!

Hand tests and dexterity assessments are given to humans for a variety of reasons ranging from career placement to diagnosis for surgical needs and/or physical therapy. In this activity we will invent a dexterity test for purposes of analyzing data that is acquired by taking two measures from each subject.

For purposes of this experiment we imagine the need to measure the dexterity of both hands of our prospective employee or patient. We are concerned that the measure of the dexterity of the hand that is measured second might be confounded because an individual may become more skillful by taking the dexterity test with the hand measured first – that is, he or she may learn how to more efficiently perform the task by doing it even once.

Our treatments will be the order the hands are tested: Dominant (writing) hand tested first, or Non-dominant hand tested first. You will be randomly assigned to a treatment by your instructor.

The task for each hand involves extracting a number of toothpicks and breaking them, one at a time. The experimental procedure will be discussed and agreed upon (democracy!) and demonstrated by your presumably very dexterous instructor. To break a toothpick, place the ends of the toothpick on your first and middle fingers and break it with your thumb. You may only use one hand to do this!

The measure of dexterity is the time it takes to break all the toothpicks. Record this time to the nearest second. (Using your smart phone stopwatch and recording to the hundredth of a second just shows your sense of humor.)

We are interested in any learning that might take place as indicated by the difference between the times needed to complete the two dexterity tests.

Name _______________________ (Needed in case you are an outlier.)

Your Assigned Treatment: Dominant hand first Non-dominant hand first

Time for dominant hand: ____________________________

Time for non-dominant hand: _________________________

Difference: (Second hand – First hand): _______________ (This could be a negative #)