In the Blink of an Eye

Have you ever heard that you cannot catch a dollar bill that is dropped between your fingers? You may or may not be able to catch the dollar depending on your reaction time. Your reaction time is the time lag between when your eyes register an event and when, in this case your fingers, move accordingly. Is this something that we can directly measure? Is it possible to time another person’s reaction time? Well, you can’t do it with a stopwatch, because then we would have to contend with your reaction time as well as the person being tested. This means that we will have to measure something else and calculate the reaction time based off of this information.

Objective: The students will know how to apply the kinematics equations and be able to calculate their own reaction time.

Procedure: 1. Position a meter stick, with one end between the test subject’s fingers.

1. Drop the meter stick. Whenever the subject sees the meter stick start to fall, he/she should try to catch it.
2. Record how far the meter stick dropped before it was caught.
3. Repeat until you get 50 trials.

Data/Analysis: 1. Solve for your reaction time for the average of the trials. Show one sample calculation and include the time in your table.

1. Mathematically show me how often you could catch a dollar bill that is dropped between your fingers. There are two ways to show me this. Think about your reaction time and what it means, that may help you think of a way to prove this to me.