We will be measuring the force applied to a cart attached to a string and pulley system where the weight is hanging off the edge of a table and pulling on a cart. A sensor will be placed in the cart to take readings of the force being applied to the cart.

Newtons 2nd law states that , which means that acceleration is related to the mass and force being applied to an object. Because we are using a hanging object we will be using this formula which has been reworked from the previous, .

We will be using a computer program to interface with the PASCO 850 to read the sensor that is placed on the cart to measure the force being applied from the mass at the other end of the pulley to create graphs in the program. Once we have an idea of how the graphs are created we can begin to speculate how forces and masses will affect the graph and we can make theoretical guesses and see if the experiment matches the guess.