**Purpose**:

The purpose of this investigation is to use the Gravity Force Lab PhET Simulation to investigate what the gravitational force between two objects depends on and experimentally determine the Universal Gravitational constant, G.

**PreLab and Beginning Observations**



Open the Gravity Force PhET Simulation.

<https://phet.colorado.edu/en/simulations>

**Part 1 – Qualitative Observations**

What variables can you change in the simulation?

|  |
| --- |
| Type your answers here |

Change each variable and record what happens to the gravitational force as you change it. Discuss how the change in each variable affects the force of gravity. Be specific with your language (i.e. use terms like increase, decrease, or remains constant).

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| --- |
| Type your discussion here |

**Part 2 – Quantitative Measurements**

In this section of the lab, you will develop your own method for determining the equation for the universal law of gravity as well as the gravitational constant G in using the simulation and logger.

**Procedure**

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| --- |
| Type your procedure here. Make sure that you discuss the range of each variable that is changed and what values are held constant. |

**Analysis**

Insert your graphs here

**Conclusion**

|  |
| --- |
| Type your conclusion here make sure to refer to your graphs as evidence to support your conclusions. |