

Name: _____

Period: _____

Gravity Force Simulation

Directions: Use the “Gravity Force Simulation” to explore gravity. Record some **observations** below:

Identify **two** ways you can change the amount of force (gravity) the objects experience. How could you **increase** gravitational force using each factor? How could you **decrease** gravitational force using each factor?

One factor is...
A second factor is...

Complete the chart for each scenario below.

Mass of 1	Location of 1	Mass of 2	Location of 2	Force (1 on 2)	Force (2 on 1)
25 kg	3 m	25 kg	7 m		
25 kg	1 m	25 kg	9 m		
100 kg	1 m	100 kg	9 m		
100 kg	1 m	1 kg	9 m		

Summarize: Determine whether each statement about gravity is true or false.

___ The force of gravity increases as objects move closer together.

___ The force of gravity increases as an object's mass increases.

___ If two objects have different masses, the more massive object pulls with a greater force.

Apply:

The earth's gravity is pulling on you. Are you pulling on the earth? Explain your reasoning.

Gravity is a force of attraction between objects based on their mass and their distance apart. Why aren't other objects, like your pencil, being pulled towards you? Explain your reasoning.