Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Science Virtual Learning

MPI Physics

Gravity 1: The Force of Gravity

April 13, 2020

Lesson: MPI Gravity 1 – The Force of Gravity
April 13, 2020

Objective: To understand what causes gravity, and develop an equation to calculate it

- The following video discusses the causes of gravity, and develops an equation used to calculate its force
- https://youtu.be/Mo5Jv3WOi6c

Video: The Force of Gravity

A 150-kg astronaut is floating 30.0 m from the space shuttle, which has a mass of 2.03*10^6 kg.

a) How much gravitational force does the shuttle exert on the astronaut?

b) What is the resulting acceleration of the astronaut?

Video: https://youtu.be/Nt7AjDJSv3I

Gravity 1 - Example

Homework 1

A 70.0 kg person is standing 2.00 m from a second person, and claims to feel a 0.500 N force of gravitational attraction toward that person. How much mass would the second person have to have for that to be true?

- Try to solve the problem yourself, then watch the solution video:
- https://youtu.be/8-WBxLPNkBk

That’s it!