Gravity Webquest

**Student Objectives:**

*Students will be able to* describe gravity and its differing effects on objects/activities on Earth and in Space through the use of interactive online readings and simulations.

*Students will* *be able to* explain that objects with differing masses fall at a constant speed *unless* a force is exerted on the object through the use of interactive online readings and simulations.

Directions:

Go to the **KirkScience.com** and click on “Gravity Webquest”

Click on the websites, complete the simulations, and answer the following questions about Gravity.

Click on Website #1: http://helios.gsfc.nasa.gov/qa\_gp\_gr.html

Answer the following questions:

1) What is a “G”? How fast does it travel (In meters per second squared)?

2) What is the speed of gravity?

3) What causes gravity on earth?

4) According to Einstein’s Theory of General Relativity, what is gravity?

5) What happens to gravity as mass increases?

Click on website #2: http://teacher.scholastic.com/activities/explorations/space/level1/MoonOlympics.htm

Complete the Moon Olympics and explain the difference that each sport or “event”

would have on the Moon compared with Earth. (There are five events.)

Weightlifting:

Diving:

Golf:

Skateboard Half-Pipe:

Parachuting:

Click on website #3: http://www.pbs.org/wgbh/nova/galileo/experiments.html

Click on the link that says ***Galileo’s Experiments*** (in the center of the webpage, the font is small) and answer the following questions about Falling Objects.

1. What will happen when she drops the two cannonballs of different masses?
2. Was your prediction above correct? If not, what did happen?
3. Read the explanation as to why the two cannonballs of different masses drop the way they do. Summarize this in 1-2 sentences.

Now click on the ***projectiles simulation***. Answer the following questions:

1. What will happen when she drops one of the cannonballs and pushes the other one away from the tower?
2. Was your prediction above correct? If no, what did happen?
3. Read the explanation as to why the two cannonballs that were dropped differently drop the way they do. Summarize it in 1-2 sentences below