**Gravity Webquest        Integrated Science-8**                Name:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour\_\_\_\_\_\_

**Google Search: unt gravity webquest** Use this website to access the links on your paper instead of typing them all in.

1.      How does gravity work? (What ideas do you need to know?)

2.      What does gravity do? (list 3 things)

Both answers can be found here: <http://www.amnh.org/ology/astronomy#features/gravity?TB_iframe=true&height=500&width=600>

Go to “Fear of Physics”. Read the instructions and drop the ball from the top of the Empire State Building. Click on “show the ball’s trail”, then click “go”. Answer the next three questions. (3 -5)

<http://www.fearofphysics.com/Fall/fall.html>

3.      Write down how fast gravity accelerates objects.

4.      When will the ball hit the ground if dropped from 443 meters up?

5.      How fast in miles per hour will the ball be traveling when it hits the ground?

6.      Why do feathers fall so slowly?

Go to <http://www.physics4kids.com/files/motion_gravity.html>

7.       Does your answer to question #6 need to be corrected?  If so, do so after reading the page from physics4kids.

8.       What characteristic must every object have to exert a force of gravity on another object?

9.       How do the daily tidal patterns of the oceans relate to the force of gravity?

10.   The moon has mass, so it can exert a gravitational force on any other object with mass.  What second characteristic or property does the force of gravity between two objects depend on?

Go to:  <http://csep10.phys.utk.edu/astr161/lect/history/newtongrav.html>

11.   Using your own words, write a definition of Newton’s Law of Universal Gravitation.

12.   Write the formula for Newton’s Law of Universal Gravitation and label each variable.

Go to:  <http://www.exploratorium.edu/ronh/weight/>

13.   Enter your weight in pounds, to determine your weight on other planets and moons.

14.   Which planetary body did you weigh the most and least on?

15.   Read through the “What’s Going On?” section.

a.       Define mass.

b.      Define weight.

16.  In the “What’s Going On?” section, write a brief interpretation of Francis Thompson’s poem.