

6th Grade Mass Vs Weight | 2009

Background Information:

Mass is the measure of the amount of matter (stuff) in an object.

Weight is a measure of the gravitational force pulling on an object.

Mass is always constant for an object and does not change, no matter where the object is in the universe.

Weight varies depending on where the object is in relation to the Earth or other large body in the universe. For example the weight of an object on the moon is one sixth of its weight on Earth. This is because the moon's gravitational force is one-sixth that of the Earth.

Table #1

Item	Mass on Earth (g)	Mass on Moon(g)	Weight on Earth (N)	Weight on Moon (N)
Large Book	2 kg			
Small Rock	5 Kg			
Kayak	50 Kg			
Bucket of Water	10 kg			
Pet Snake	15 Kg			
500 g Weight	.500 Kg			

Analysis: On a separate sheet of graph paper construct a graph with mass in grams (Kg) on the x axis and weight in newtons (N) on the y-axis.

1. Plot the points for the Earth data on the graph.
2. Draw a trend line for the Earth points plotted.
3. Using a different color plot the points for the moon data on your graph.
4. Again using a new color draw a trend line for the moon points plotted.