

Name: _____ Date: _____

How Much Do I Weigh? Extension Activity – Worksheet

Weight is the force created on any object as a result of Earth’s gravity pulling on the object. Mass is a measure of how much “stuff” there is in an object. The mass of an object never changes. For example, a person with a mass of 100 kilograms on earth will still have a mass of 100 kilograms on the moon. However, a person with a weight of 100 pounds on Earth will weigh much less on the moon (about 1/6 as much) because the force of gravity is not as strong on the moon as it is on the Earth.

Directions

1. Weigh yourself, or estimate what you weigh.
2. Record your *weight* in the chart below (note: for this activity, your *mass* will be the same as your *weight on Earth*).
3. Figure out your weight and mass at each planet/moon.

To calculate your weight, use:

$$\text{mass} \times \text{gravity} = \text{weight}$$

4. Where do you weigh the most? Where do you weigh the least?

Planet/Moon	Gravity	Mass	Weight
Earth	1		
Mercury	0.38		
Venus	0.90		
Earth's Moon	0.17		
Mars	0.38		
Jupiter	2.36		
Saturn	0.92		
Uranus	0.89		
Neptune	1.13		
Pluto	0.07		