



Weight and Mass



Weight is the force that acts on all objects because of gravity. **Mass** is how heavy something is without gravity.

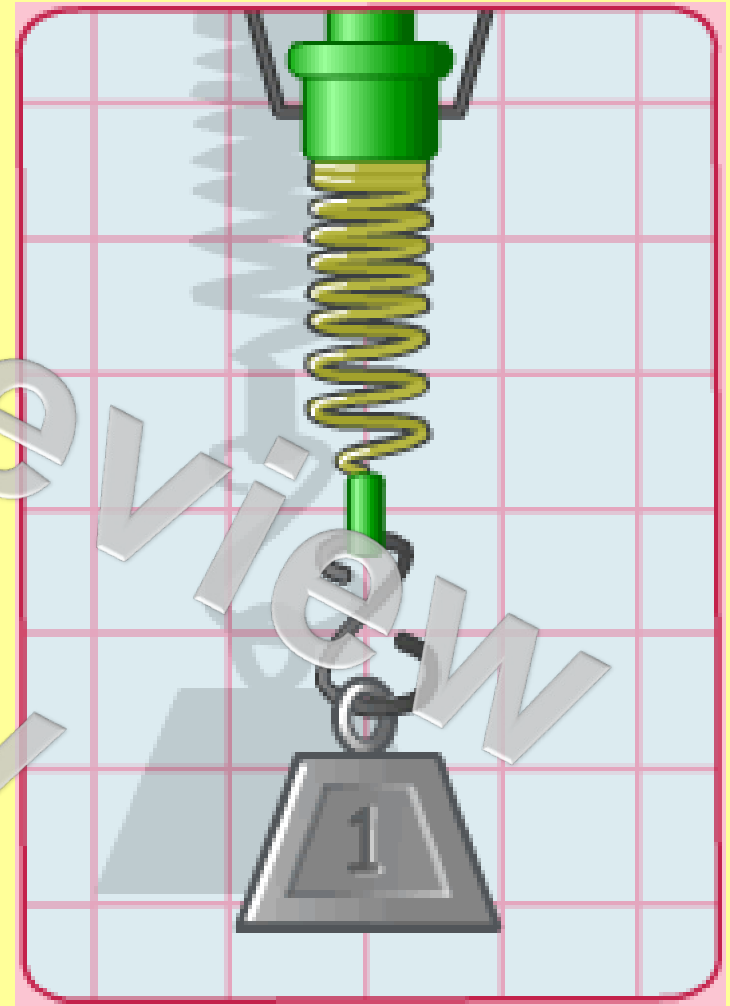


The mass of an object is how much matter it contains. It is measured in grams (g) or kilograms (kg). Mass is NOT a force.



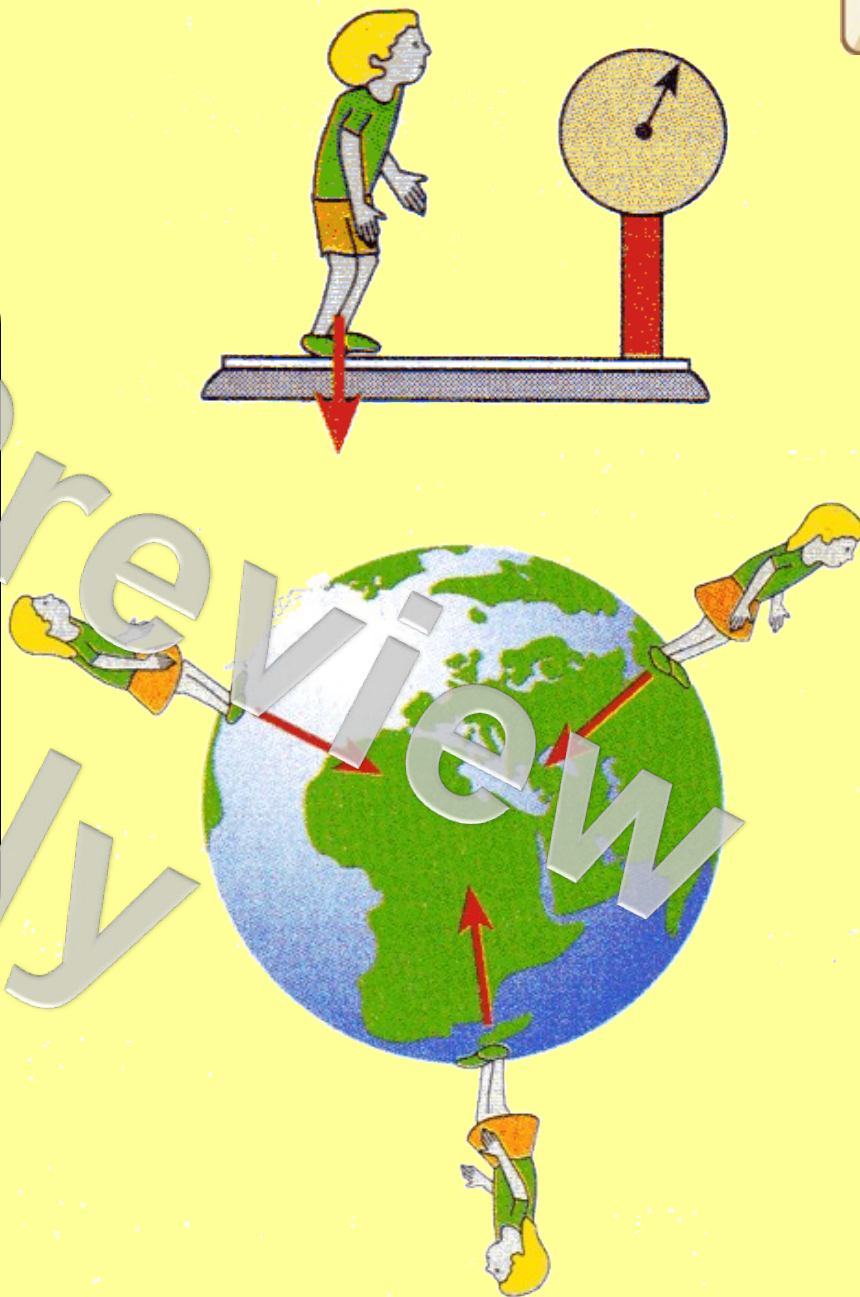


The weight of an object is the force caused by gravity pulling down on the mass of an object. It is measured in Newtons (N).





The girl has a certain weight. The girl would have the same weight at any point over the Earth's surface.





However the weight of the girl on the moon would be different. This is because the moon's gravity is not as strong. The mass of the girl stays the same.

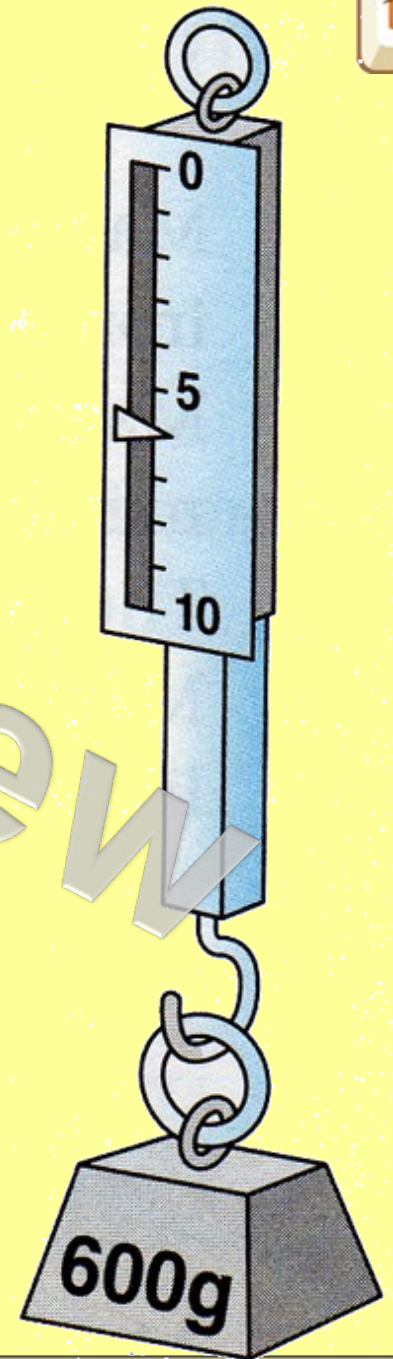


In other words,
weight is a force. It
is caused by gravity
pulling on a mass.
The bigger the mass,
the more it is pulled
by gravity.



Measuring Weight

Weight can be measured using a forcemeter (Newton meter). A forcemeter has a spring inside that stretches when an object is hung on it. All forcemeters have a scale on them so you can read the weight of the object.

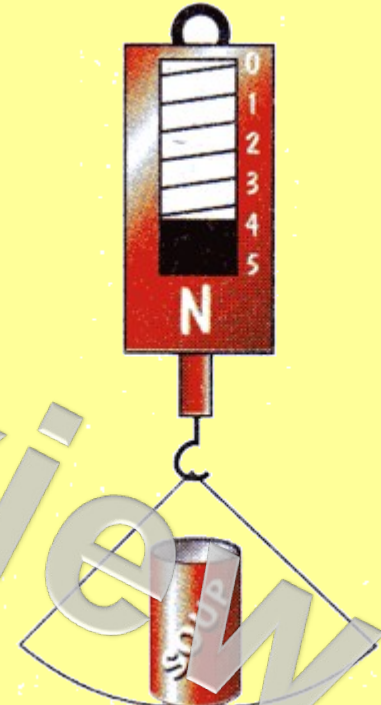
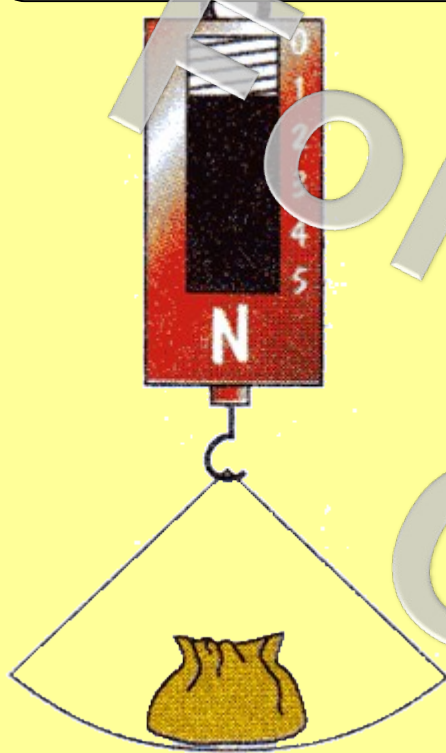




The bag of sweets is 1N.

Two bags of sweets is 2N.

The can of soup is 4N.



The scale on a forcemeter is measured in Newtons (named after Isaac Newton)
One Newton is the same as 100g.