

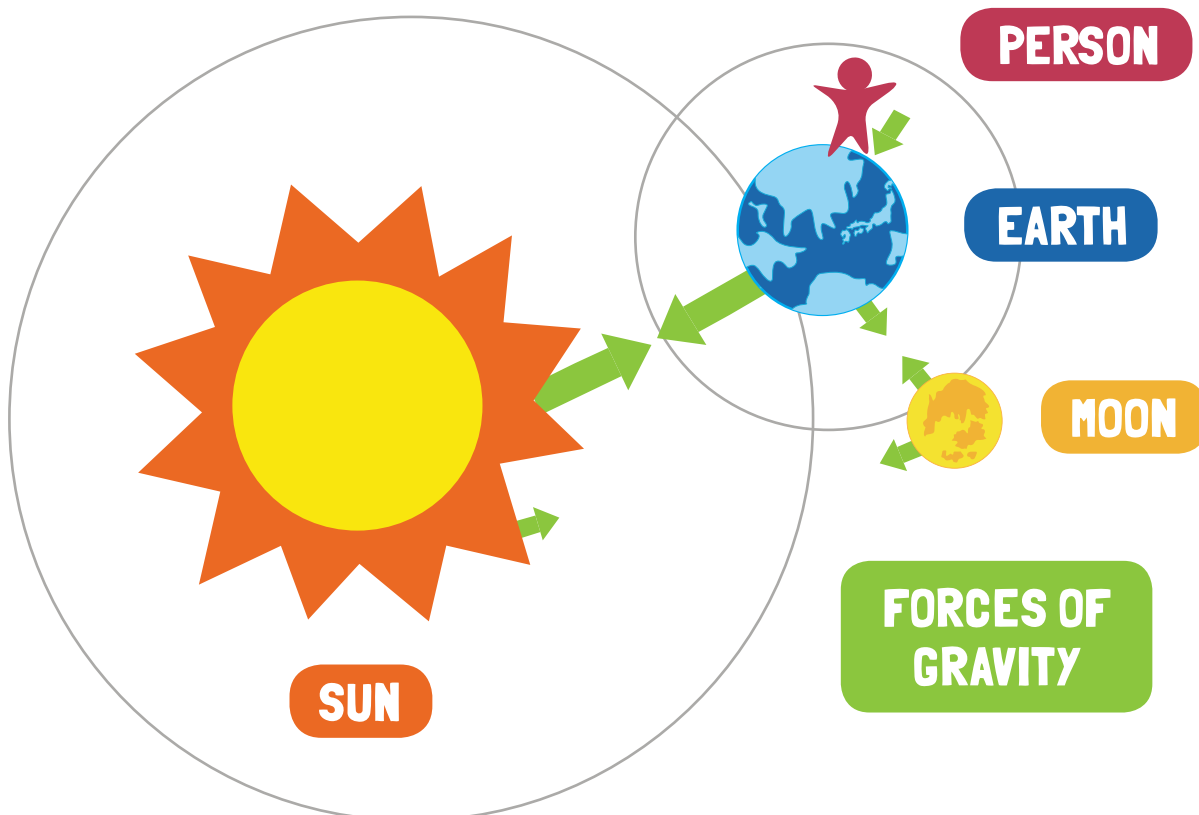


UNDERSTANDING THE PULL OF GRAVITY

Gravity is the force that causes things to drop to earth. It is also the force that keeps planets in their orbits. Every physical object has a gravitational pull, including you!

There are two major factors that determine the strength of an object's gravitational pull:

- 1 Its mass, which can also be thought of as how much matter it's made of or how easily it can be moved by a force. (The sun has a big gravitational pull because it is so massive; you have almost no gravitational pull because you are so small and not made up of as much stuff compared to the Earth and Sun.)
- 2 How close the things are together. Stars in other parts of the universe have almost no pull on us, but the Sun has a huge pull because it is close.



CALCULATE YOUR WEIGHT ON DIFFERENT PLANETS!

Your mass will always stay the same but your weight depends on gravity. You will weigh less on the moon because it is smaller (has less gravity) than you would on the sun.

Calculate your weight using a calculator on the planets and Earth's moon. Multiply the gravity of each celestial body by your Earth weight.



CELESTIAL BODIES	YOUR EARTH WEIGHT	PLANET'S GRAVITY	YOUR WEIGHT
MERCURY		0.378	
VENUS		0.907	
EARTH		1	
MOON		0.166	
MARS		0.377	
JUPITER		2.36	
SATURN		0.916	
URANUS		0.889	
NEPTUNE		1.12	
PLUTO		0.059	