

Science

Forces

Year 3
Forces and Magnets



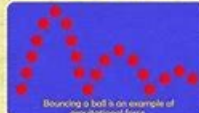
Science2112

What is force?

A force is that which can cause an object with mass to change its velocity (which includes to begin moving from a state of rest), i.e., to accelerate, or which can cause a flexible object to deform. Force can also be described by intuitive concepts such as a push or pull. A force has both magnitude and direction, making it a vector quantity.

Examples of Force

If you were a ball sitting on a field and someone kicked you, a force would have acted on you. As a result, you would go bouncing down the field. There are often many forces at work. Physicists might not study them all at the same time, but even if you were standing in one place, you would have many forces acting on you. Those forces would include gravity, the force of air particles hitting your body from all directions (as well as from wind), and the force being exerted by the ground (called the normal force).



Bouncing a ball is an example of gravitational force.



A spaceship's takeoff is an example of force at work.



A game of "Tug of war" is an example of physical force between two objects.

