



Vocabulary

force	pushes or pulls
contact force	a push or a pull between two objects that are touching
non-contact force	a push or a pull between two objects that are not touching
repel	push away
attract	pull towards each other
material	what an object is made out of

Forces will change the motion of an object. They will make it start to move, speed up, slow it down or even make it stop.

Contact Forces: Pushes and Pulls



The hand pushes against the car making it move.



The hand pulls on the cart handle making it move.

Non-Contact Forces

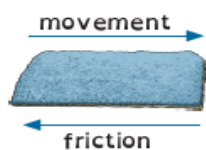
A magnet is an object that creates an invisible magnetic force. This force can pull some materials, such as iron and steel, towards the magnet without touching.



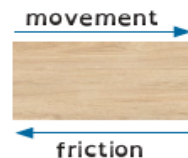
Friction

Friction is contact force that slows moving objects down.

Depending on the surface of the two objects, there may be more or less friction.



Rough materials or surfaces cause objects to slow down more quickly. There is more friction.



Smooth materials or surfaces cause objects to slow down slowly. There is less friction.

Friction can be helpful to reduced the risk of sliding or skidding.



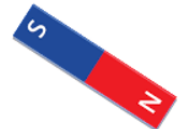
Friction can be unhelpful as it can make things harder to move.

Poles

The poles of a magnet are the two points where the magnetic force is strongest (the north pole and the south pole).



u - shaped magnet



bar magnet

Whether two magnets attract or repel depends on which poles are facing each other.