

Forces and Magnets

Knowledge

What is a force?

A force is simply a push or a pull that makes something move. Forces act in pairs that oppose each other. Forces cause objects to move, change their speed or change their shape.



push



pull

Magnets

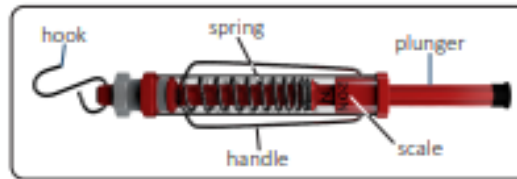
Magnets have two ends called poles. The red end is the north pole and the blue end is the south pole.



Important jobs and people

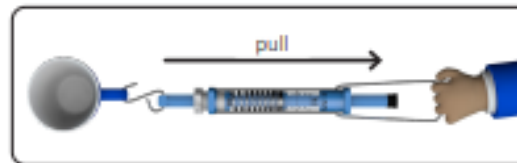
Force meters

A force meter is a piece of scientific equipment that measures force. It can also be called a newton meter or a spring balance. Forces are measured in newtons (N). A force meter has a handle, hook, plunger, spring and scale.



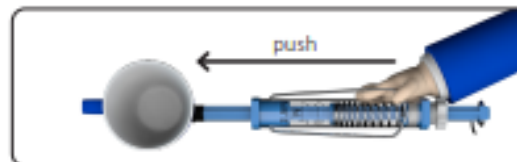
Measuring a pulling force

Attach the object to the force meter's hook. Pull the force meter gently by the handle. When the object starts to move, read the pulling force on the force meter's scale in newtons.



Measuring a pushing force

Place the force meter's plunger on the object. Push the force meter gently against the object until it starts to move. Read the pushing force on the force meter's scale in newtons.



Vocabulary

Glossary

attraction	When one object moves towards another object.
aurora	A natural phenomenon characterised by coloured lights in the sky near the North and South Poles.
bar magnet	A rectangular magnet.
magnetic	Attracted to or acting as a magnet.
navigational compass	An instrument used for finding directions.
repulsion	When one object pushes another object away.

Magnetic fields

The invisible forces we can feel when magnets are close together are caused by their magnetic fields. Magnetic fields are invisible but can be shown as lines on a diagram.

