

### Core Knowledge—Forces

A force is a **push** or a **pull**.

When an object moves on a surface, the texture of the surface and the object affect how it moves. This opposite force is called **friction**. Friction causes things to slow down or stop.



The grip on our shoes stops us slipping. Ice-skates on an ice-rink will move for a long time because there is very little friction. The rougher the surfaces, the greater the friction.

For some forces to act, there must be **contact** e.g. a hand opening a door, the wind pushing the trees. Some forces can act at a **distance** e.g. magnetism.

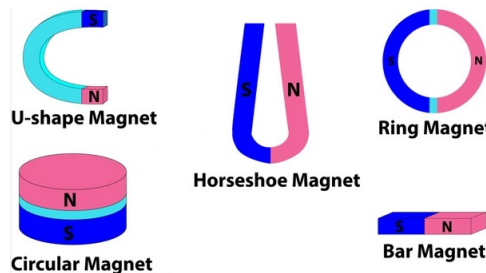
### Core Knowledge – Magnetic forces

**Magnetic forces** can act at a distance. A magnet does not need to touch the object that it attracts.

**Magnetic materials** ( materials that are attracted to magnets) are **always** made of metal, but not all metals are **magnetic**.

Iron is **magnetic**, so any metal with iron in it will be **attracted** to a **magnet**. Nickel and cobalt are also **magnetic**. Steel contains iron, so a steel paperclip will be **attracted** to a magnet too.

Everyday materials can be grouped together based on whether they are magnetic or not.



### Scientific Enquiry



Making observations and taking measurements.



Engaging in practical enquiry to answer questions.

### Game

[Year 3 Forces - Key Knowledge Friction - Teaching resource](#)

### Key Vocabulary

Vocabulary	Definition
push	A force that moves an object away from something.
pull	A force that moves an object towards something.
twist	A turning force that makes something move in a circle
Contact force	A force that takes place when two objects are touching. E.g. friction.
Non-contact force	A force that does not need the objects to be touching for it to take place. E.g. magnetism

### Core Knowledge—Magnetic poles

The strongest parts of a magnet are the **poles**.

Magnets have two poles – a **north pole** and a **south pole**.

When two of the same poles are placed close together, they **repel** (push apart) each other. When two different poles are close, they **attract** (pull together) each other.

