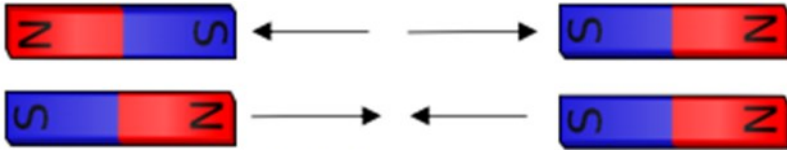


Year 3: Forces and magnets

Key Learning

Magnets are objects that pull or push things with an invisible force called **magnetism**



The strongest parts of a magnet are the **magnetic poles**. Magnets have two poles, a **north pole** and a **south pole**.

If two poles are the same they will repel each other.

If two poles are different they will attract each other.

| Magnetic | Non-magnetic |
|--|---|
| | |
| <p>These objects contain iron, nickel or cobalt. Not all metals are magnetic.</p> | <p>These objects do not contain iron, nickel or cobalt.</p> |

A force is a push or a pull.

A force can cause something:

| Pushes | |
|--------|---|
| | <ul style="list-style-type: none"> to speed up to slow down to change shape to change direction |

Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

The driving **force** pushes the bicycle, making it move.

Friction pushes on the bicycle, slowing it down.

| | | | |
|-------|--------|------|------|
| | Gravel | | Road |
| Grass | | Sand | |

| Pulls | |
|-------|--|
| | |

Sticky Vocabulary

| | |
|------------|--|
| force | A force is a push or pull on an object. |
| magnet | An object that pulls or pushes something with an invisible force. |
| magnetic | Metal that will attract another magnetic objects |
| repel | When the same magnetic poles are brought together they will push away from each other. |
| attract | When opposite magnetic poles are brought together they will pull together. |
| poles | The strongest part of a magnet. |
| north pole | The north pole will attract the south pole. |
| south pole | The south pole will attract the north pole. |
| metal | A hard type of material. |
| iron | A strong, heavy metal that is magnetic. |
| steel | A strong metal that is magnetic. |