













Year 3 - Autumn 2

# The Iron Man

## Forces and Magnets

 pull	 push	 magnetic	 non-magnetic
 North pole	 South pole	 magnet	 iron
 attract	 repel	 tin	 force

## Key Vocabulary

<b>forces</b>	Pushes or pulls.
<b>friction</b>	A <b>force</b> that acts between two <b>surfaces</b> or objects that are moving, or trying to move, across each other.
<b>surface</b>	The top layer of something.

## Key Knowledge

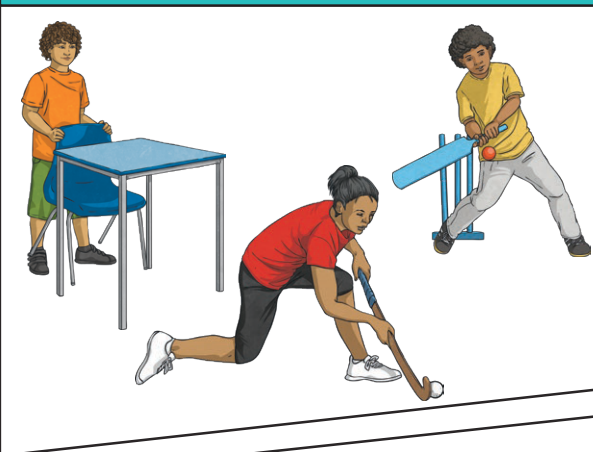
Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

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

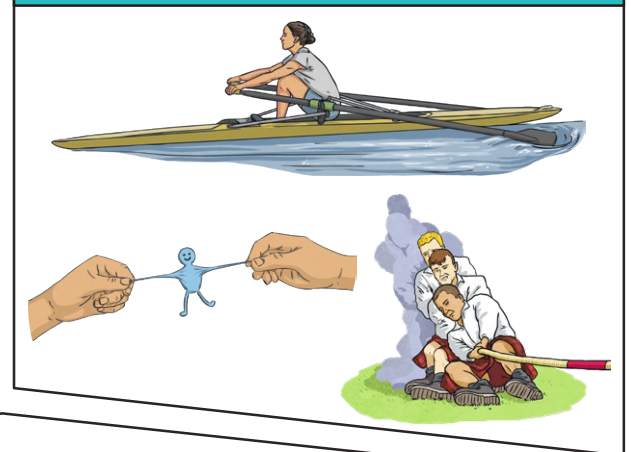
**Friction** pushes on the bicycle, slowing it down.



## Pushes

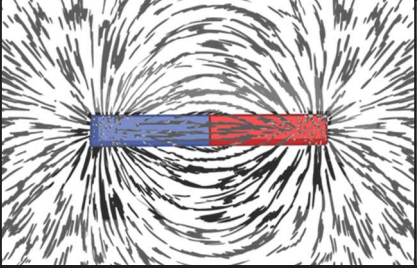

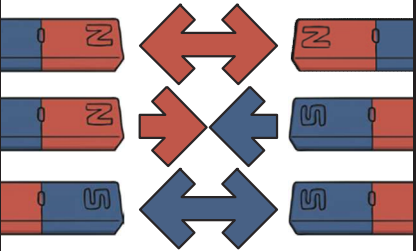


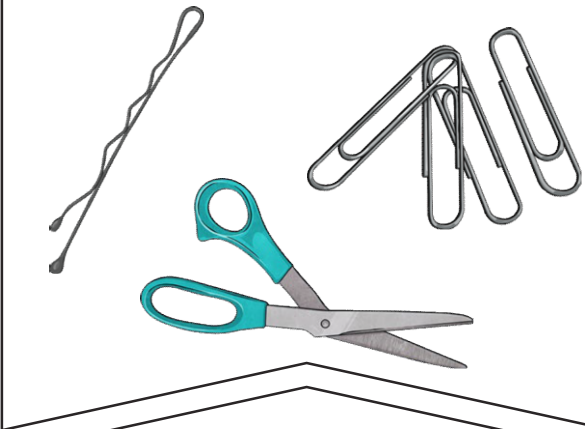
## Pulls

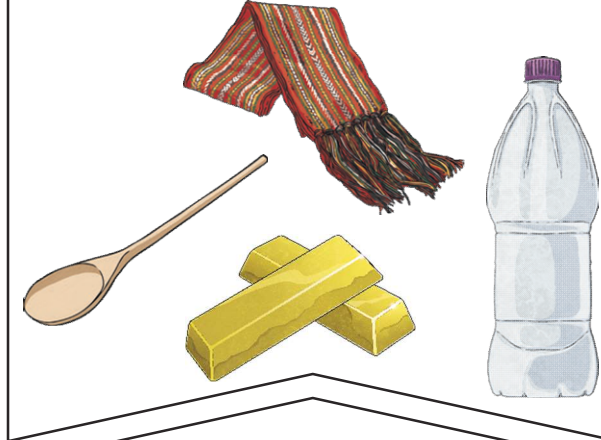


**Forces** will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.

Key Vocabulary	
<b>magnet</b>	An object which produces a <b>magnetic force</b> that pulls certain objects towards it.
<b>magnetic</b>	Objects which are <b>attracted</b> to a <b>magnet</b> are <b>magnetic</b> . Objects containing iron, nickel or cobalt metals are <b>magnetic</b> .
<b>magnetic field</b>	The area around a <b>magnet</b> where there is a <b>magnetic force</b> which will pull <b>magnetic</b> objects towards the <b>magnet</b> .
<b>poles</b>	North and south <b>poles</b> are found at different ends of a <b>magnet</b> .
<b>repel</b>	<b>Repulsion</b> is a <b>force</b> that pushes objects away. For example, when a north <b>pole</b> is placed near the north <b>pole</b> of another <b>magnet</b> , the two <b>poles repel</b> (push away from each other).
<b>attract</b>	<b>Attraction</b> is a <b>force</b> that pulls objects together. For example, when a north <b>pole</b> is placed near the south <b>pole</b> of another <b>magnet</b> , the two <b>poles attract</b> (pull together).

Key Knowledge		
	Like <b>poles repel</b> . Opposite <b>poles attract</b> .	
A <b>magnetic field</b> is invisible. You can see the <b>magnetic field</b> here though. This is what happens when iron filings are placed on top of a piece of paper with a <b>magnet</b> underneath.		The needle in a compass is a <b>magnet</b> . A compass always points north-south on Earth.

Magnetic ✓

These objects contain iron, nickel or cobalt. Not all metals are <b>magnetic</b> .

Non-magnetic ✗

These objects do not contain iron, nickel or cobalt.