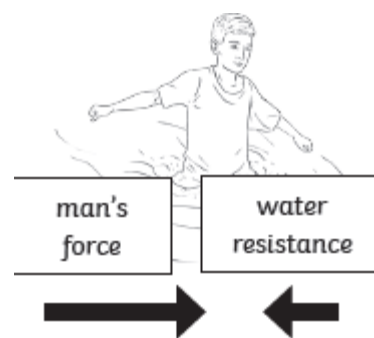
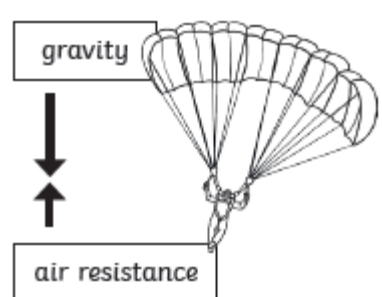
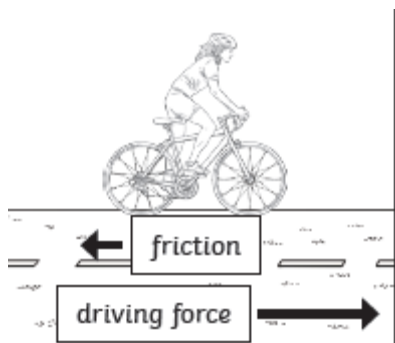
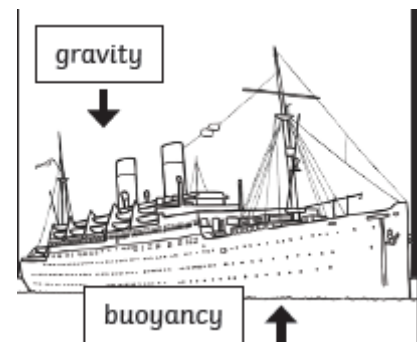
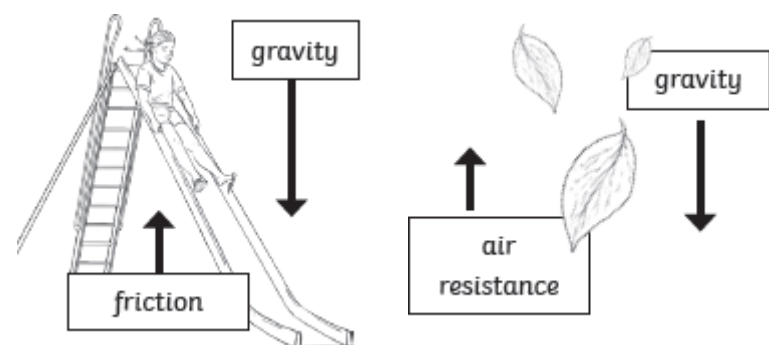


Working Scientifically

<b>Plan</b> different types of enquiry to answer questions	Take measurements with increasing <b>accuracy</b>	<b>Record</b> results using diagrams and tables	<b>Use</b> test results to make further predictions	<b>Report</b> and <b>present</b> findings	<b>Identify</b> scientific evidence
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What I should already know

- Objects move differently on different **surfaces** depending on the **texture**
- A **force** is a **push** or **pull**
- Most **forces** need **contact** between two objects
- **Magnetic forces** can act at a distance
- **Magnets** can **attract** or **repel** each other, or other materials
- **Magnets** have two poles which are the strongest parts – North & south
- If the poles are the same, the **magnets** will **repel** each other. Whilst if the poles are different, they will **attract** each other.



Pulley

Key Vocabulary

<b>air resistance</b>	<b>Force</b> that causes an object to slow down when it is moving through the air
<b>buoyancy</b>	The ability of objects to float in water or air
<b>force</b>	A <b>force</b> is a <b>push</b> or <b>pull</b> . To make an object move, a <b>force</b> must be applied to it.
<b>gears</b>	<b>Mechanism</b> used to change speed, <b>force</b> , or direction. They are wheels with teeth that slot together
<b>gravity</b>	<b>Force</b> that pulls objects towards <b>Earth</b> . On a rollercoaster, pulls the carriage faster on the downhill slopes and slows it down on the uphill parts of the ride
<b>mechanisms</b>	Part of a <b>machine</b> or a number of parts that work together to create movement
<b>Newtons</b>	The newton is the International System of Units derived unit of force. It is named after Isaac Newton in recognition of his work
<b>pulley</b>	A <b>mechanism</b> used to make lifting a load easier. Usually a rope looped around one or more wheels
<b>upthrust</b>	<b>Force</b> that <b>pushes</b> things up
<b>water resistance</b>	<b>Force</b> that slows things down when they're moving through water

What I will know by the end of the unit

That the <b>force of gravity</b> causes objects to fall towards <b>Earth</b>	<b>Forces</b> cause objects to move, stop, speed up, slow down or change direction <b>Gravity</b> pulls everything towards the <b>Earth</b> and acts at distance Isaac Newton demonstrated that <b>gravity</b> causes objects to fall to <b>Earth</b> Larger objects have greater <b>gravitational force</b>	
How <b>air resistance</b> , <b>water resistance</b> and <b>friction</b> act to slow down objects	<b>Friction</b> causes objects to slow down <b>Air resistance</b> and <b>water resistance</b> are types of <b>friction</b> When an object moves through the air, the air pushes back. This is <b>air resistance</b> <b>Air resistance</b> slows a falling object depending on the size of the <b>surface</b> – the greater the <b>surface</b> area, the more <b>air resistance</b> . Parachutes are slowed down by <b>air resistance</b> . <b>Water resistance</b> slows an object moving through water by causing <b>friction</b> Penguins have slim, bullet-shaped bodies which cause little <b>water resistance</b> Slippery substances like oil can reduce <b>friction</b>	
Show that some <b>mechanisms</b> help smaller <b>forces</b> have a greater effect	Simple <b>machines</b> work by turning small <b>forces</b> into larger ones <b>Gears, levers, cams</b> and <b>pulleys</b> can be used to help do this	

Investigate

Make a gyrocopter – how can you make it fall faster? Slower?  
Make a parachute – does the size of a parachute affect the speed an object falls?  
Will a flat piece of paper or a crumpled piece of paper fall faster? Why?

Useful links

- <https://www.dkfindout.com/us/science/forces-and-motion/what-is-force/>
- <https://www.bbc.com/bitesize/topics/znmmn39>
- <https://www.bbc.com/bitesize/articles/zxw6gdm>
- <https://kids.britannica.com/students/article/force/323538>
- <https://www.bbc.com/bitesize/articles/zxqrdxs>