

Fairgrounds



Carousel



Ferris Wheel



Year 5 Knowledge Organiser

All the fun of the fair.

Key Facts

139m	Kingada Ka – The highest rollercoaster in the world.
60m	Colossos – The highest wooden rollercoaster in the world. It can be found in Germany.
Over a mile and 235ft	The length and height of 'The Big One' at Blackpool Pleasure Beach.
1896	Blackpool Pleasure Beach was founded by Alderman William George Bean.
1915	The 30 horses on the carousel have been at Great Yarmouth Pleasure Beach for over 100 years.
149mph	Formula Rossa – The fastest rollercoaster in the world. It can be found in the UAE in a park called Ferrari World

Key Vocabulary

force	the pulling or pushing effect that something has on something else
friction	the resistance of motion when one object rubs against another
gravity	the force which pulls everything towards the centre of the Earth
resistance	a force which slows down a moving object or vehicle
repel	When a magnetic pole repels another magnetic pole, it gives out a force that pushes the other pole away
attract	If one object attracts another object, it causes the second object to move towards it
gear	a part of a machine that causes another part to move because of teeth which connect the two moving parts
Lever	a basic tool used to lift or pry things open motion the activity of changing position or moving from one place to another
Pulley	a simple machine that makes lifting something easier. A pulley has a wheel or set of wheels with grooves that a rope or chain can be pulled over

Forces

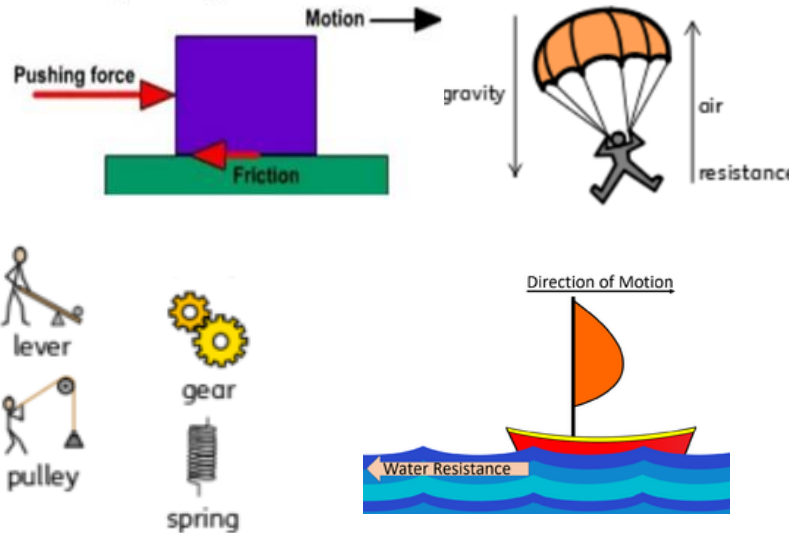
DID YOU KNOW?

LAW'S OF MOTION

First Law
Every body remains in a state of rest or uniform motion unless acted upon by a net external force.

Second Law
The amount of acceleration of a body is proportional to the acting force and inversely proportional to the mass of the body.
 $F = ma$

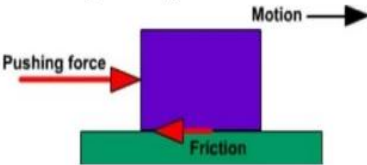

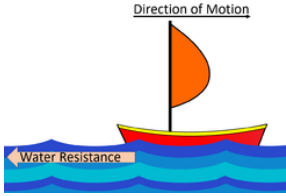




Third Law
For every action there is an equal but opposite reaction. If an object A exerts a force on object B, then object B will exert an equal but opposite force on object A.



- The Magic Kingdom at Walt Disney World, Florida has been the world's most popular theme park for the past ten consecutive years.
 - The Eco Rollercoaster in North Wales operates using kinetic energy produced by the public walking up and down the stairs.
 - Fairgrounds evolved from travelling fairs, which often included menageries of exotic animals.
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- Isaac Newton(1643-1727) was an English mathematician, physicist, astronomer and author who is widely recognised as one of the most influential scientists of all time

- Lots of fairground rides are based around Newton's three laws of motion.
- Frederick Savage, Victorian Fairground Manufacturer of King's Lynn

Physics – Forces

<p>What are forces?</p>	<ul style="list-style-type: none"> • Forces are pushes and pulls. • These forces change the motion of an object. • They will make it start to move or speed up, slow it down or even make it stop. • For example, when a cyclist pushes down on the pedals of a bike, it begins to move. The harder the cyclist pedals, the faster the bike moves. • When the cyclist pulls the brakes, the bike slows down and eventually stops. • Friction is a force - it is the resistance of motion when one object rubs against another. • Other forces that create resistance of motion include water resistance and air resistance. 
<p>What is gravity and air resistance?</p>	<ul style="list-style-type: none"> • Gravity is the force that pulls objects to the centre of the Earth. • Air resistance pushes up on the parachute, opposing the force of gravity . This makes the parachute land more slowly 
<p>What is water resistance?</p>	<ul style="list-style-type: none"> • Water resistance is the friction that is created between water and an object that is moving through it. • Some objects can move through water with less resistance if they are streamlined. 
<p>What are examples of mechanisms?</p>	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  <p>lever</p> </div> <div style="margin-right: 20px;">  <p>pulley</p> </div> <div style="margin-right: 20px;">  <p>gear</p> </div> <div style="margin-right: 20px;">  <p>spring</p> </div> <div> <ul style="list-style-type: none"> • Levers allow us to do heavy work with less effort . For example, trying to pick up a large heavy box is difficult, however if a lever is used it becomes much easier to move it. • Pulleys also allow us to do heavy work - objects are attached to ropes and pulley wheels, and so instead of lifting heavy object upwards, we can pull on the pulley rope downwards. • Gears are toothed wheels. Their ‘teeth’ can fit into each other so that when the first wheel turns, so does the next one. This allows forces to move across a surface. • Springs can be stretched by pulling them or squashed by pushing them. The greater the force pulling or pushing the spring, the greater the force the spring uses to move back to its normal shape. </div> </div>