

Key Vocabulary	Definition
source	Where a river begins, usually in high ground
meander	A winding curve or bend in a river
waterfall	Waterfalls form where water rushes down steep hillsides in upland areas and erodes the rock
erosion	Erosion occurs when the fastest currents in the river carve intensely into the banks
deposition	Rocks and sediments eroded from one part of the river are deposited in another part
tributary	When one stream meets another and they join together, the smaller stream is known as a tributary
confluence	The point where 2 rivers meet
ox bow lake	Ox bow lakes are created when the meander is so deep that it cuts off a piece of the meander
delta	Often found at the mouth of large rivers
mouth	The part of a river where the river flows into another river, lake, reservoir, the sea or ocean
floodplain	A flat, low-lying area of land next to a river that often gets flooded when the river overflows its banks

River Thames near the QEII bridge in Dartford



## Key Knowledge

Rivers carry water and nutrients to areas all around the earth. They play a very important part in the water cycle, acting as drainage channels for surface water. Rivers provide excellent transport links for towns and cities.

The River Thames flows from Gloucestershire (south-west England) into London and Kent. It is the longest river that flows entirely within England.

The River Darent is a tributary that flows into the River Thames at Dartford.

## River Features



## Previously learnt vocabulary

river, water, sea, ocean, ocean names, UK

# LKS2 Term 5 and 6: Rolling on the River

Key Vocabulary	Definition
water cycle	The process in which water is constantly recycled
Celsius	Scale used to measure temperature
changing state	The physical process where matter moves from one state to another
melting point	The exact temperature at which a solid turns into a liquid (ice melts into water at 0°C)
freezing point	The exact temperature at which a liquid turns into a solid (liquid water turns into ice at 0°C)
evaporation/evaporate	The process of a liquid heating up and changing to a gas
condensation/condense	The process of a gas cooling down and changing into a liquid
reversible	A change in a material that can be undone to get the original material back e.g. freezing water into ice, or melting chocolate
irreversible	A change in a material that cannot be undone e.g. baking a cake, or cooking an egg

## Key Knowledge

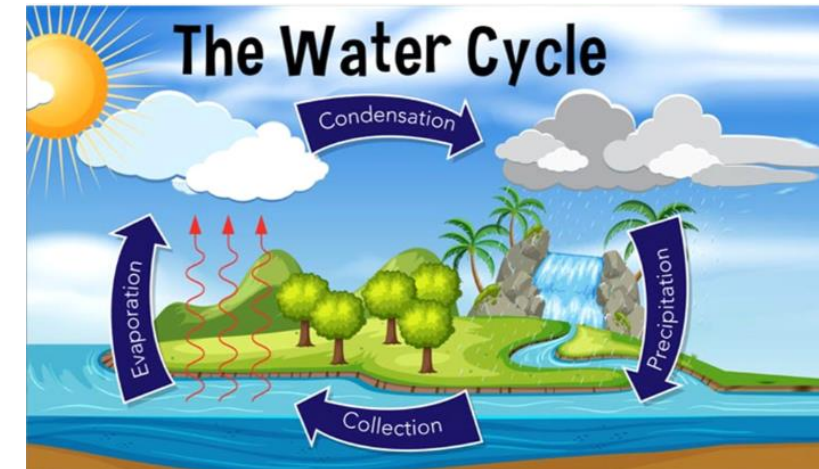
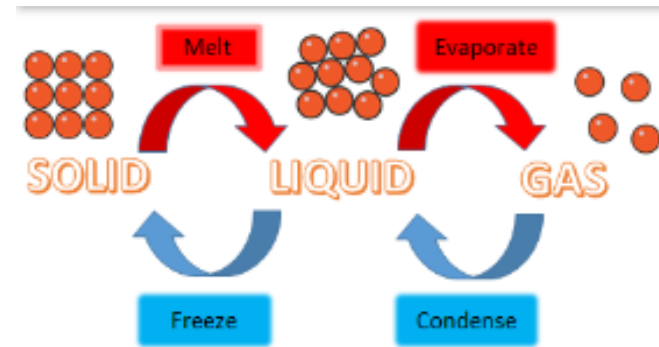
Matter is anything that takes up space and has weight. Everything around you (people, rocks, air etc.) is made of matter. The 3 main states of matter are solids, liquids and gases.

Solids stay the same shape and can be held in your hands. Examples - wood, metal, rock, ice

Liquids flow and can be poured. They change shape to their container. Examples - water, juice, oil

Gases are often invisible and always fill their container and their shape and volume can change. Examples - oxygen, hydrogen, carbon dioxide, helium

Water cannot be made; it is constantly recycled through the water cycle. Water in seas, oceans, rivers and lakes is heated by the Sun and evaporates, changing from liquid to a gas (water vapour) that rises into the air. The water vapour condenses as it cools and changes back into tiny drops of water, forming clouds. The clouds get blown over high ground, where the water falls back to Earth as rain, snow, sleet or hail called precipitation. The rainwater runs off the land into rivers and streams and travels back to the sea. The cycle then starts again.



## Previously learnt vocabulary

materials, properties of materials e.g. flexible, waterproof etc. air, water, pollution

# LKS2 Term 5 and 6: Rolling on the River

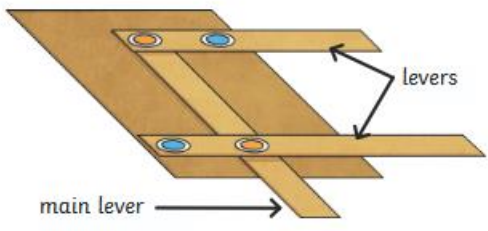
Key Vocabulary	Definition
mechanism/ mechanical systems	something that uses related components which act together to create a movement
motion	movement from one place to another
pivot	to turn on a central point
pneumatic system	a mechanism that uses squashed air to cause a movement

**Key Knowledge**

An engineer is a person who designs, builds and maintains machines, structures, systems and processes to solve problems. They use science, maths and creative thinking to make the world look better.

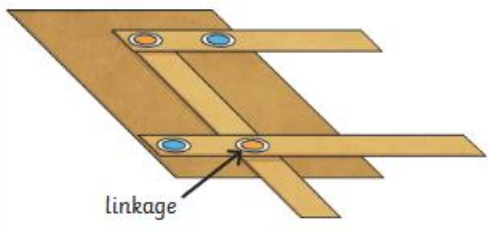
**Lever**

The simplest type of **mechanism**. A lever is a stiff bar which moves around a **pivot**.



**Linkage**

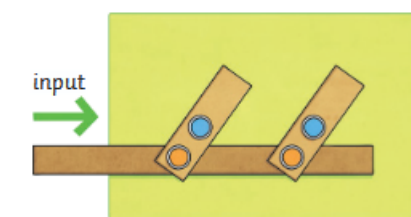
The part of the **mechanism** used to join one or more levers to produce the type of movement required.



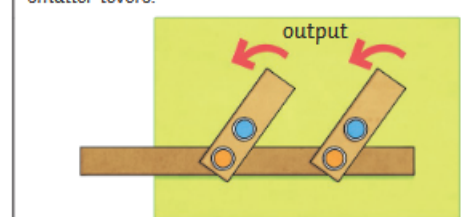
**Exploring Mechanical Systems**

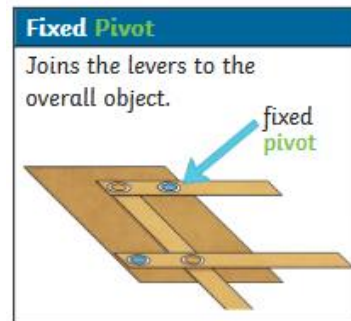
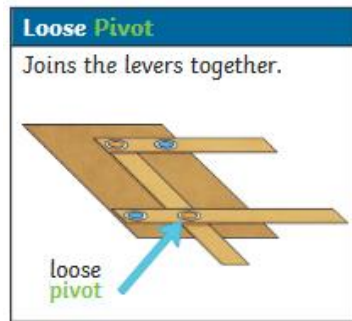
Many **mechanisms** take one type of **input motion**, and **output** it as a different type of **motion**.  
In lever and linkage **mechanisms**:




**Input** - The movement of the main lever by the user.



**Output** - The movement that is made by the smaller levers.





The Design Process																					
Design Brief	Design Criteria	Generating Ideas	Prototype	Make the Product	Evaluation																
<p>A planning document that explains <b>what</b> the project is, <b>how</b> it will be achieved and the <b>time frame</b> that it needs to be made in.</p>	<p>Tells you what a product must do to be successful.</p>	<p>Exploring different products and thinking about how they could be adapted. Creating an annotated sketch of your idea.</p>	<p>The first example of what the real thing will look like. It is used for testing, development and evaluation.</p>	<p>Using the annotated sketches and prototypes to help create your product.</p>	<p>Checking that the product meets the design criteria and has achieved its purpose.</p>																
<p><b>Design Brief</b></p> <p>Write the design brief of 'Rolling on the River'. We want to help you get the most out of your time on the river. We want you to think about the things you can do on the river and how you can make it more fun.</p> <p><b>Designing the project</b></p> <p>Think about the things you want to do on the river. Write down your ideas. Think about the things you need to do to make your ideas happen. Write down the things you need to do to make your ideas happen. Write down the things you need to do to make your ideas happen.</p>	<table border="1"> <thead> <tr> <th>Priority</th> <th>Design Criteria</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Priority	Design Criteria										<table border="1"> <thead> <tr> <th>Design Object</th> <th>Evaluation</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Design Object	Evaluation						
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Previously learnt vocabulary

making, design, moving picture