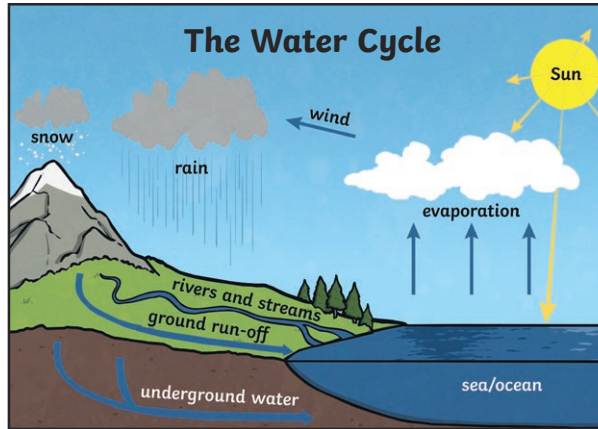


Key Vocabulary

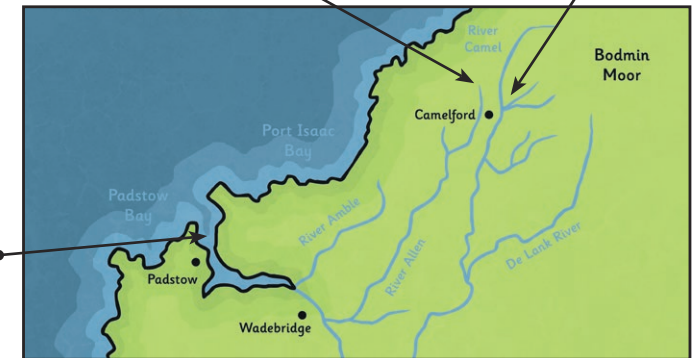
| | |
|----------------------------|--|
| channel | The course in the ground that a river or water flows through. |
| dam | A barrier built to hold back water. |
| deposition/ deposit | When rocks and other materials that have been eroded are dropped off further along the river. |
| discharge | The amount of water flowing along a river per second. |
| erosion | Rocks and other river materials are picked up by the water and moved to another place along the river. |
| mouth | The point where a river joins the sea. |
| source | The place where a river begins. |
| tidal bore | A strong tide from the coast that pushes the river against the current causing waves along the river. |
| tributaries | Rivers that join up with another river. |
| valley | A long ditch in the earth's surface between ranges of hills or mountains. |



Rivers in England, at their **mouth**, will flow into either the: North Sea, Irish Sea, English **Channel** or Atlantic Ocean.

Some rivers join up with other rivers (**tributaries**). The point where they meet is called a confluence.

The **source** of most rivers is on high ground or in the mountains.



The Course of a River

The Upper Course

Rain falling on high ground collects in **channels** and flows downwards forming a stream. Streams run downhill and join other streams, increasing in size and speed, forming a river. The river here flows quickly and the channel has steep sides and runs through **valleys**. Features include - waterfalls and rapids.

The Middle Course

Fast flowing water causes **erosion** making the river deeper and wider. Features include - meanders.



The Lower Course

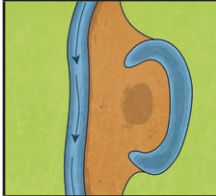
Rivers flow with less force due to being on flat land. The river **deposits** the eroded material that it has carried. Riverbanks have shallower sides. Features include - floodplains, deltas and estuaries.

Meander - a curve in the river



Eroded materials are carried by the river and released, building up the land on the inside of the bend where the water flows more slowly.

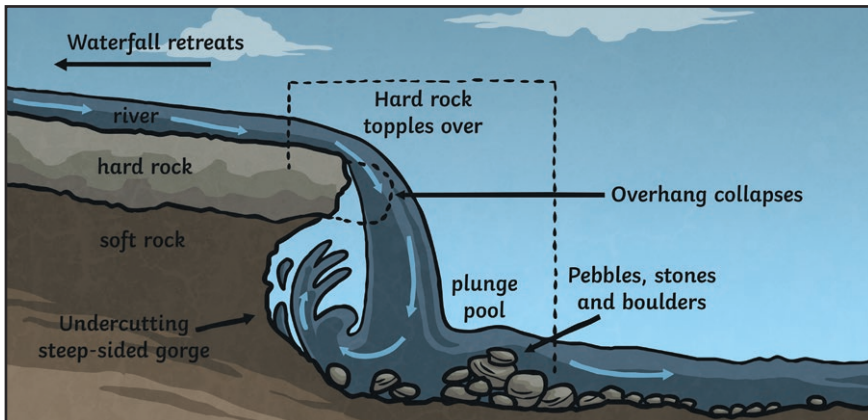
Oxbow lakes - a U-shaped lake



As meanders grow, two meanders can merge together through **erosion**. The water takes this newer, shorter course. The river **deposits** eroded materials which block off the old part of the river forming an oxbow lake.

How Do We Use Rivers?

| | | |
|--------------------------------|---|---|
| Leisure e.g. fishing | + | Controlled population of fish |
| | - | May leave litter and pollute the water |
| Industry e.g. factories | + | Sections of rivers maintained |
| | - | Chemicals pollute the water and habitats |
| Tourism e.g. walking routes | + | Conservation and education about local wildlife |
| | - | Too many people near wildlife habitats |



Dams

Dams are built to hold water back, usually in a reservoir.

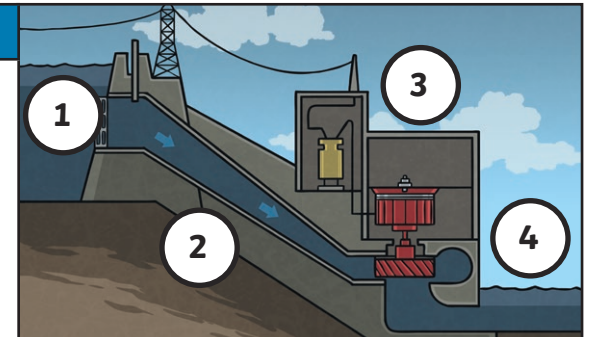
Dams might be built to:

- control the flow of a river to prevent flooding.
- generate power



Hydroelectric Power

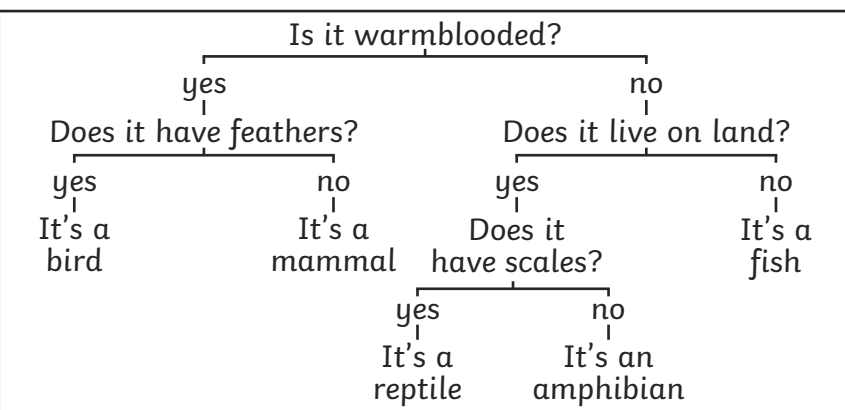
1. Water is held behind a **dam**.
2. When needed, some of the water is released and flows through a pipe (penstock).
3. The falling water turns a water wheel (turbine) which is linked to a generator which produces electricity.
4. The water continues into the river on the other side of the **dam**.



Key Vocabulary

| | |
|------------------------|--|
| characteristics | Special qualities or appearances that make an individual or group of things different to others. |
| classify | To sort things into different groups. |
| taxonomist | A scientist who classifies different living things into categories. |
| key | A key is a series of questions about the characteristics of living things. A key is used to identify a living thing or decide which group it belongs to by answering 'yes' or 'no' questions. |

Scientists, called Taxonomists, sort and group living things according to their similarities and differences.



Classification

In 1735, Swedish Scientist Carl Linnaeus first published a system for **classifying** all living things. An adapted version of this system is still used today: The Linnaeus System.

Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.

Domain: Eukarya

jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox

Kingdom: Animalia

jackal, clownfish, cat, dog, ladybird, rabbit, fox

Phylum: Chordata

jackal, clownfish, cat, dog, rabbit, fox

Class: Mammalia

jackal, cat, dog, rabbit, fox

Order: Carnivora

jackal, cat, dog, fox

Family: Canidae

jackal, dog, fox

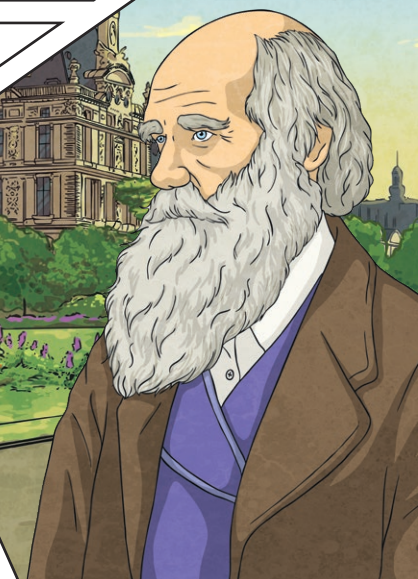
Genus: Canis

jackal, dog

Species: Lupus

dog

Each group allows scientists to observe and understand the **characteristics** of living things more clearly. They group similar things together then split the groups again and again based on their differences.



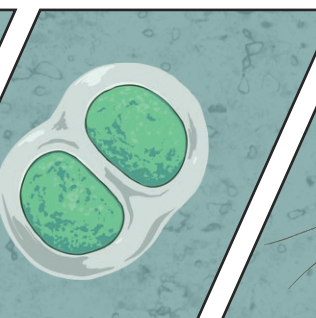
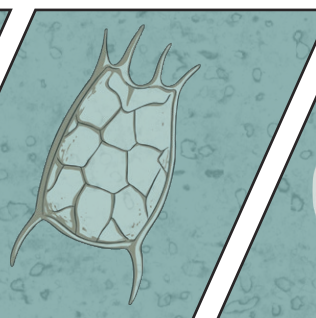
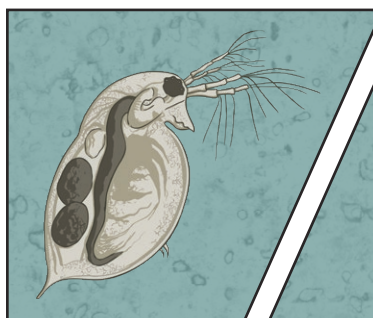
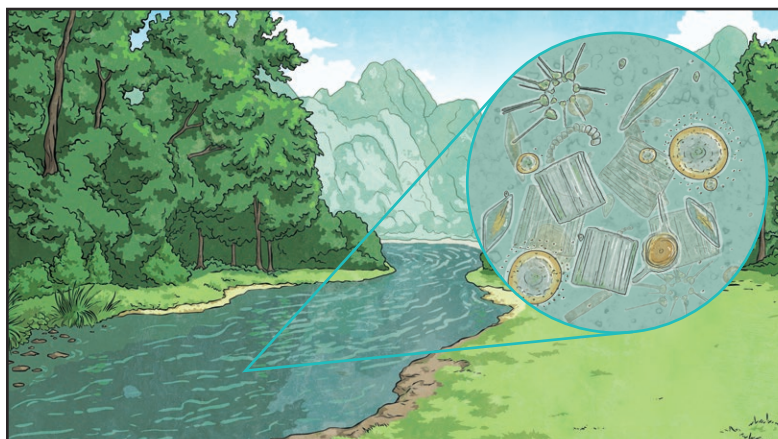
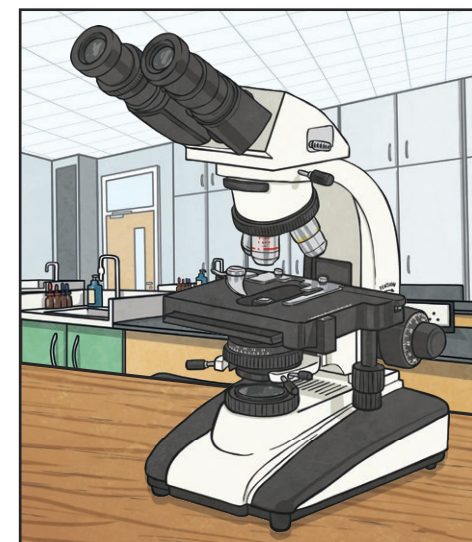
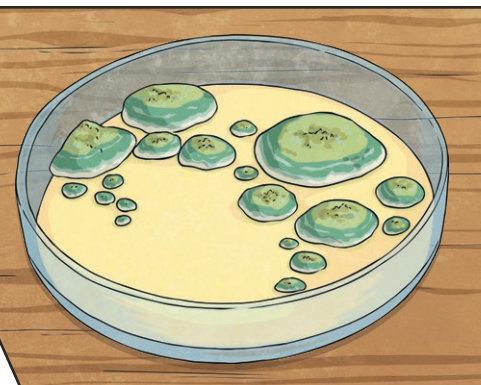
Key Vocabulary

| | |
|----------------------|---|
| bacteria | A single-celled microorganism . |
| microorganism | An organism that can only be seen using a microscope , e.g. bacteria , mould and yeast. |
| microscope | A piece of equipment that is used to view very tiny (microscopic) things by magnifying their appearance. |
| species | A group of animals that can reproduce to produce fertile offspring. |

Microorganisms

Microorganisms are viruses, **bacteria**, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also **microorganisms**.

Microorganisms are very tiny living things that can only be seen using a **microscope**. They can be found in and on our bodies, in the air, in water and on objects around us.



| Helpful Microbes | Harmful Microbes |
|---------------------------------|---|
| Bacteria – cheese | Bacteria – salmonella is a bacterium that can lead to food poisoning |
| Yeast – wine | Virus – chicken pox and flu are examples of viral diseases |
| Bacteria – yoghurt | Fungi – athlete's foot |
| Yeast – bread dough | Bacteria – plaque |
| Penicillium fungi - antibiotics | Fungi - mould |

Key Vocabulary

| | |
|---------------------------------------|---|
| fraud | A crime where someone tricks somebody else to get an unfair or unlawful gain or advantage. |
| online communication | A way in which we interact with other people using technology over the Internet. |
| padlock | If there is a padlock icon next to the URL, this means the website is secure and can be trusted. |
| personal information | Any data that can be used to identify an specific person, such as their full name, birthday, address or school. |
| privacy | Being able to choose how much information or data is shared with other people. |
| secure | If a website is secure , it is considered safe to use and input data into. |
| stereotype | A well-known idea or image of a group of people, which is held by a number of people. |
| website | A collection of web pages grouped together. |
| Uniform Resource Locator (URL) | The unique web address for individual web pages. This is the address given to find web pages on a web browser, for example www.twinkl.co.uk . |

What Information Is Safe to Share Online?

These examples are safe to share online:

- favourite subject at school
- what your hobby is
- how many brothers and sisters you have
- what you did at the weekend
- your friends (without names)
- your teachers (without names)
- your favourite TV show

However, only talk to people online who you know and trust.

What does SMART stand for?

Safe

Meeting

Accepting

Reliable

Tell

What Is Cyberbullying?

Cyberbullying (also known as online bullying) is any form of bullying that takes place online and causes harm or distress to a person or group of people.

Think about how hurtful your words could be when writing something online.

If you think you might have written something mean, you should say sorry and remove the comment if you can.

Remember, if you see anything online that makes you feel upset or uncomfortable:

Report - Report via the online site that you experienced it on, then tell a trusted adult about it and ask for help.

Save - Keep evidence; take screenshots.

Block - Block the person or group of people responsible.

Bullying vs Cyberbullying

Bullying:

The bully can see if the person gets upset or angry.

Cyberbullying:

The bully cannot see the effect on the person and this means they are less likely to feel guilty. Other people can't see that the victim is hurt, and they are less likely to intervene.

How Can You Tell a Website Is Secure?

Look at the **URL**. Does it read http or https at the beginning? The 's' stands for **secure**!

Some browsers will also show a **padlock** to show that the site is **secure**.



There are also many logos used to show that a site is **secure**, ask an adult if you're not sure which logos are real.



But remember, anyone can copy and paste a logo to make it look like the real thing!