

Year 4 – Autumn Term

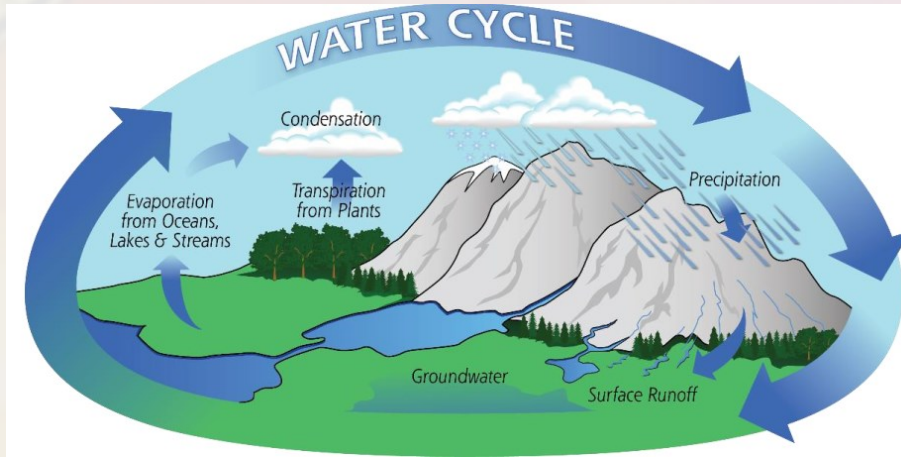
White Water Adventure

Knowledge Organiser

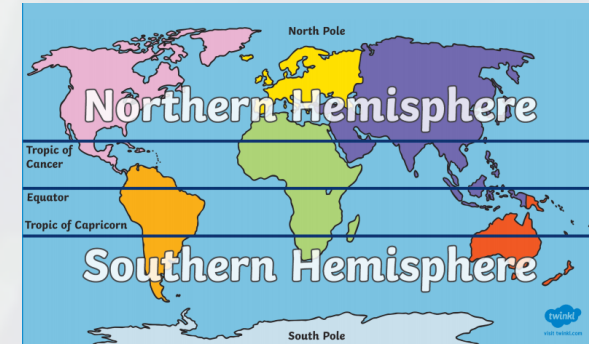


The Water Cycle

The **water cycle** follows the journey of water from oceans to clouds to rain to streams to rivers and back to the oceans. The water cycle involves the scientific processes of evaporation and condensation which is also known as the hydrologic cycle (hydro is Greek for water).



Tropic of Cancer and the Tropic of Capricorn



Vocabulary

Water cycle	The journey of water from oceans to clouds to rivers and streams and back to the ocean.
Evaporation	The change of a state of matter– from liquid to gas
Condensation	The change of a state of matter– from gas to liquid
Precipitation	Forms of water that fall through the sky e.g. rain, sleet snow etc
Transpiration	The process of water movement through a plant
Rivers	A large stream of flowing water that usually ends at the sea
Source	The beginning (original) part of a river
Mouth	Where a river meets the sea
Estuary	The tidal mouth of a large river
Tropic of Cancer	Sometimes referred to as the Northern Tropic,
Tropic of Capricorn	Sometimes known referred to as the Southern Tropic
Latitude	The distance North or South of the Earth's equator
Longitude	The distance of a place East or West of Greenwich meridian
4 figure, grid reference	Contains 2, 2-digit numbers. The first two numbers are called the easting, which is the number you would look for at the bottom of the map. The second two digit number is called the northing and represent the numbers you would look for on the side of the map.
Climate change	A change in global or regional climate patterns
Valley	A low area of land between hills or mountains, typically with a river or stream flowing through it
Mountains	A large land form that rises above the surrounding land

Rivers and Mountains of the World

Knowledge of the location of: UK, Russia, Italy, Switzerland, France and Spain.



Art Knowledge

Claude Monet

Claude Monet was a French painter who was one of the greatest painters of the impressionist times. He was born in 1840 on the 14th November in Paris, France. His family owned a grocery business and naturally, they expected their clever son to work for them as he became older. Monet had other ideas and he chose to follow his dreams of becoming an artist. He often painted outside, creating colourful and bright pictures using the petit tache method.



Claude Monet



The Water Lily Pond—1899

Impressionist Painting

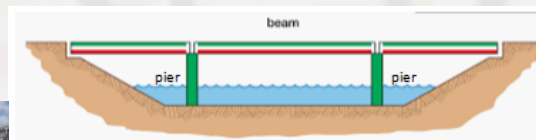
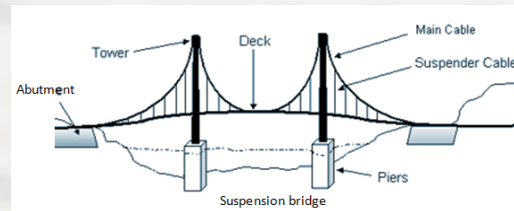
Impressionism is a type of art that was started by a group of French painters who decided to discard the old ways of doing art. Lines were replaced by rounded shapes or tiny dots. Dark shadows became colourful and bright. These painters often enjoyed painting outside.

Design and Technology Knowledge

Evaluation

There are many different types of bridges, we are going to focus on the suspension bridge, beam bridge and arch bridge.

James Finley invented Suspension Bridges in the Western World, these are effective because they are less rigid meaning they can withstand Earthquakes. They are also incredibly strong due to the steel ropes hung from a tower at each end of the bridge. Isambard Kingdom Brunel, famous architect and engineer, used this idea to design suspension bridges in the UK - a famous one being the Clifton Suspension Bridge which was built in 1831.



Arch bridge

Vocabulary

Petit-tache	An art technique developed by French impressionist painters which translates to a 'little touch'.
Claude Monet	A founder of French impressionist painting
Impressionist	Someone who designs things before making them
Watercolours	Paints which can be thinned by water to give a transparent effect
architect	A person who designs buildings, bridges and other structures

Design and Make

There are lots of different materials that can be joined together to make a bridge. Glue and reinforcing card triangles can hold joints together. A hammer and nails can be used to join sections of wood together to create a framework for the bridge. A junior hacksaw can be used to cut wood. This is called sawing. When sawing, bench hooks help us to be safe.



Junior Hacksaw



Bench Hook



Hammer and nails

Evaluate

When evaluating a product, it is important to evaluate it against your design criteria. This helps us to see what went well, what went wrong and why. This helps us to say how it could be improved next

Vocabulary

Suspension Bridge	A bridge in which the weight of the deck is supported by vertical cables suspended from further cables that run between towers and are anchored in abutments at each end	deck	The surface of a bridge
Arch Bridge	A bridge with abutments at each end shaped as a curved arch	struts	A piece of wood or metal which holds the weight of other pieces in a structure
Beam Bridge	The simplest structural form for a bridge, it is supported by an abutment or pier at each end	abutment	The structure at the end of a bridge's span
		towers	A support on a bridge
		cables	Provide support and structure