Anderson Shelters
Year 6

Prior Knowledge

How to build a freestanding structure that stands on its own foundation or base without attachment to anything else
Freestanding structures can be large like a tower or small like a chair.
Structures are more stable when the have a wider base.
There are different types of structures: Natural, Shell, Framed, Freestanding.
How to strengthen and stiffen materials to build a stable structure.

Technical Knowledge

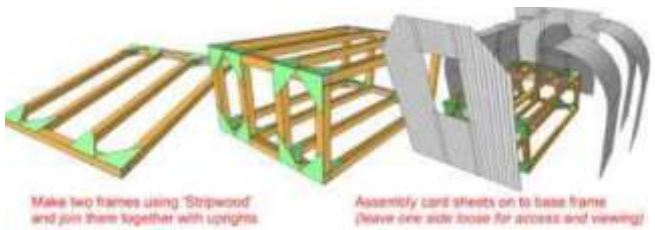
The Anderson shelter was designed in 1938 by William Paterson and Oscar Carl Kerrison in response to a request from the government to help save lives. It was named after Sir John Anderson, who was responsible for preparing Britain
for air raids, just before the start of World War 2.
A bench hook or a clamp can be used to secure wood before cutting it with a saw.
It is easier to saw the wood if you make a couple of grooves in a downward motion before sawing back and forth.

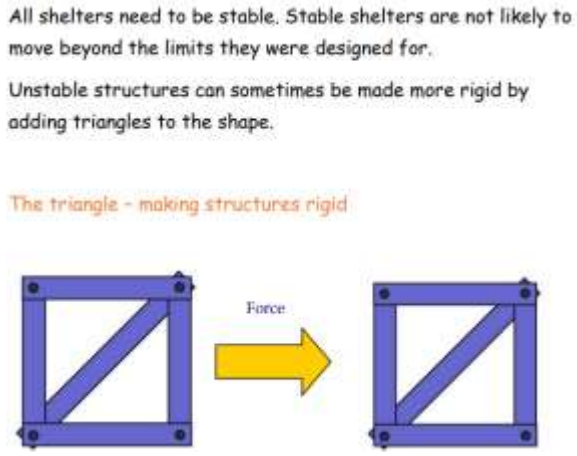
What will I be able to do after I make my Anderson Shelter?

Design: Create a bird's eye view sketch to show the plan and layout of a victory garden.
Make: Attach hinges for the door.
Choose and use materials by their properties and appropriate for the shelter e.g. rigid, pliable, waterproof.
Reinforcement to ensure the structure is selfsustaining and can support its own weight.
Join wooden strips or dowel to create a frame.
Evaluate: Consider the strengths of my structure and how to improve it

Key Vocabulary	Definition
Bird's eye	An image of the design from above.
Clamp	A piece of equipment that can be attached to the table and holds the wood in place.
Cross-section	An image of the design if it was looked at from the side.
Triangulation	Formation of or division into triangles to make a structure strong and stable.
Hinge	a movable joint or mechanism on which a door, gate, or lid swings as it opens and closes or which connects linked objects.
Joint	a point at which parts of an artificial structure are joined.

Image / diagram





Health and Safety

Saw - Measure carefully and mark where you are going to cut. Clamp the wood securely and make sure your fingers are clear of the blade before cutting.

Glue gun - Allow time for the glue to cool before handling your product. Always work with an adult when you are using the glue gun.

Key Facts

- jouer – to play
- faire – to do
- je joue – I play
- je ne joue pas – I don't play
- je fais – I do
- je ne fais pas – I don't do
- je porte – I wear

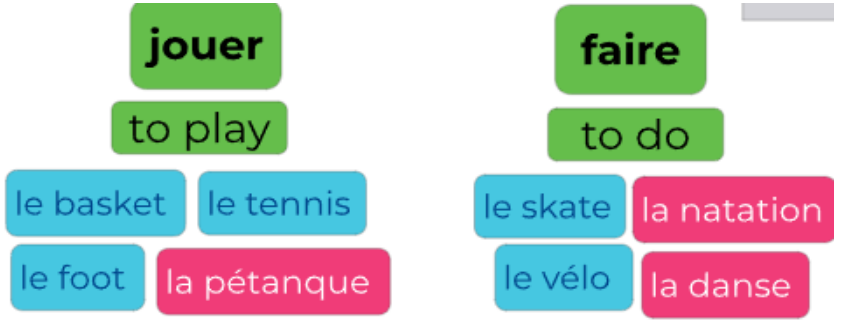
Prior Knowledge

Je fais du sport. Year 6

Key Vocabulary	Definition
froid	cold
chaud	hot
beau	beautiful
il fait	it does
neiger	snow
pleuvoir	rain
il neige	it snows / it is snowing
il pleut	it rains / it is raining
vent	wind
il y a du vent	there is some wind
quand	when

Image / diagram

Important People / Places



Key Facts

One of the most important impacts of conflict on Geography is the altering of political boundaries to create new countries or regions which usually occurs after the conflict has ended and which frequently leads to further conflict as the decisions are disputed.
South Oxhey was built as a result of the Blitz in London.

Prior Knowledge

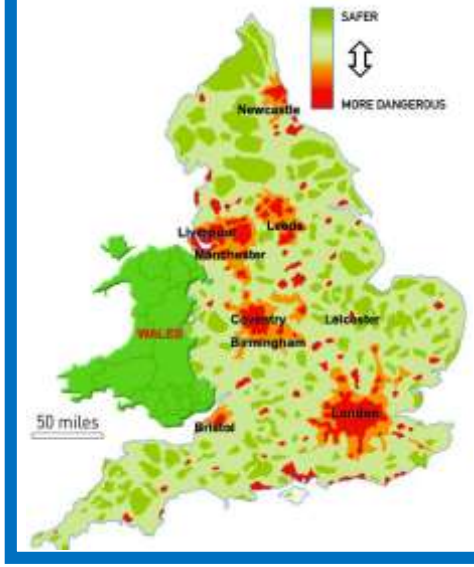
There are seven continents in the world, the UK is part of Europe.
Locating the UK on a political map.
South Oxhey was created for victims of the Blitz.
The origins of South Oxhey.

In conjunction with History; WW11

Key Vocabulary	Definition
Allies	Countries (including Britain, France, the Soviet Union and the USA) who fought the Axis Powers.
Axis	Germany, Japan, Italy and other countries that fought against the Allies.
Supply routes	The path food and other products take on their journey
Rationing	Control how much of something is taken
Evacuees	People sent from one place to another to keep them safe
Rural	Remote and countryside areas

Image / diagram

Important People / Places



World War II Y6

Key Facts

- 1st September 1939 Germany invaded Poland. Britain and France gave notice telling Germany to withdraw. When it did not, Neville Chamberlain declared war on the 3rd September 1939
- France and the UK were the original Allied powers. They were later joined by the Soviet Union and the USA in 1941
- People expected cities to be bombed by the German Luftwaffe (air force). This put children in danger, so many were sent to live in the countryside until war was over
- Rationing was introduced to stop shortages of food, clothing and petrol and lasted through the war and into the late 1940s whilst Britain recovered.
- Part of Hitler's plan was to rid his nation of undesirable people in his eyes. The Jews were a huge part of this. His troops rounded up as many as they could and sent them to concentration Camps where they were forced to work, and eventually millions were killed in gas chambers. We refer to this as The Holocaust. Travellers, people with physical impairments and objectors were also sent to their deaths.
- The Battle of Britain July-October 1940 was when Britian successfully held off the German air force and attacks by the Nazis. The head quarters for masterminding this battle is in Uxbridge.
- D-Day / Normandy Landings were a series of landing operations by the Allies in boats to claim back Europe and evacuate men from the beaches of France. This is the start of the end of World War II – 6th June 1944
- With the German army facing defeat, Hitler committed suicide in his war bunker on the 7th May 1945

Prior Knowledge

Europe is one of the seven continents. We are part of Europe as an island, but the rest of Europe is one land mass.
Children know that South Oxhey was created for the victims of the Blitz in London and that's why it dates from the 1950s.

Key Vocabulary	Definition
Allies	Countries (including Britain, France, the Soviet Union and the USA) who fought the Axis Powers.
Anderson shelter	A small shelter made from corrugated steel to protect people in air-raids.
Axis	Germany, Japan, Italy and other countries that fought against the Allies.
Blackout	A wartime ban on streetlights and other lights at night, to reduce the risk of bombing by enemy planes.
Blitz	A prolonged period of German air raids on Britain. From the German 'blitzkrieg' which means 'lightning war'.
Evacuation	Moving people from dangerous areas to safer places e.g. from big cities to the countryside to avoid bombing.
Holocaust	The mass murder of around 6 million Jewish people by the Nazis, as well as other persecuted groups
Nazi	Short for National Socialist Party (in Germany). Name given to supporters of Hitler
Ration book	Controlling the supply of food, clothes, petrol and other products to reduce shortages
swastika	The emblem of the Nazi party

Image / diagram

Important People / Places

- Neville Chamberlain – Prime Minister of Britain at the outbreak of war
- Winston Churchill – Prime Minister of Britain who saw the country through the war
- Adolf Hitler – Chancellor of Germany 1933-1945 and leader of the German Socialist Party – referred to as the 'Fuhrer'
- Mussolini – Leader of Italy – sided with Hitler
- Josef Stalin – Leader of the Soviet Union
- Franklin Roosevelt – President of USA 1933 - 1945
- Germany – the aggressive nation who invaded Austria and then Poland
- Poland – the invasion of Poland led to the outbreak of WWII

Key Facts

- The heart pumps blood to the lungs to get oxygen. It then pumps this oxygenated blood around the body.
- Arteries carry oxygenated blood away from the heart.
- Veins carry deoxygenated blood toward the heart.
- Capillaries are the smallest blood vessels in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.
- Blood transports gases (mostly oxygen and carbon dioxide), nutrients (inc. water), waste products.
- Plasma is liquid. The other parts of blood are solid:
  - red blood cells carry oxygen through your body
  - white blood cells fight infection when you're ill
  - Platelets help you stop bleeding
- If you linked up all of the body's blood vessels, (arteries, veins & capillaries) they would measure over 60,000 miles!
- Regular exercise...

- strengthens muscles, including the heart
- improves circulation
- increases amount of oxygen around the body
- releases brain chemicals which help you feel calm & relaxed
- helps you sleep more easily
- strengthens bones and can help prevent us from getting ill

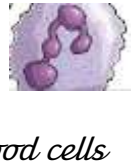
Prior Knowledge?

Animals need the right types and amount of nutrition which they get from what they eat.
Some animals, inc. humans have muscles and skeletons for support, protection and movement.
The digestive system consists of parts such as mouth, tongue, teeth, oesophagus, stomach and small & large intestine.
Humans change as they develop to old age.

ANIMALS inc. HUMANS

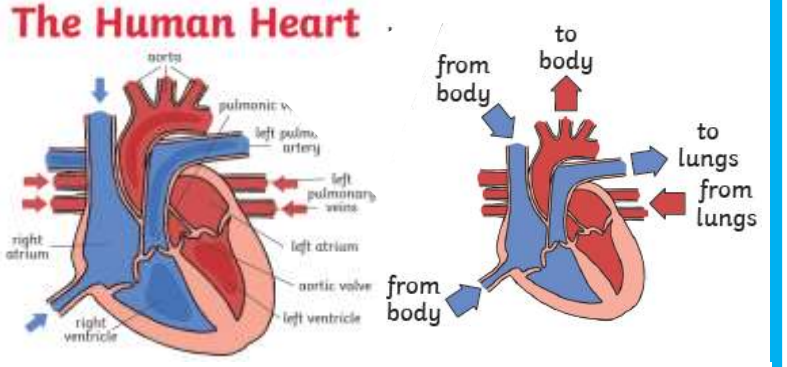
Images / diagrams

platelets



white blood cells

red blood cells



Blood isn't actually red/blue, we just show it like that on diagrams.

Key Vocabulary	Definition
Circulatory system	A system which includes the heart, veins, arteries and blood transporting substances around the body.
Heart	An organ which constantly pumps blood around the circulatory system.
Blood vessels	The tube-like structures that carry blood through the tissues and organs. They are called veins, arteries and capillaries.
Oxygenated blood	This is blood with more oxygen. It is pumped from the heart to the rest of the body.
Deoxygenated blood	This is blood where most of the oxygen had already been transferred to the rest of the body.
Drug	A substance containing natural or man-made chemicals hat has an effect on your body when it enters your system,
Alcohol	A grug produced from grains, fruits or vegetables when they are ut through a process called fermentation,
Nutrients	Substances that animals need to stay alive and healthy.
Lifestyle	The way in which a person ,lives.

Important People / Place / Events

William Harvey (1578-1657): recognised as the person who discovered & published the first accurate description of the human circulatory system.

ELECTRICITY

Key Facts

* There are recognised symbols and conventions used when representing circuits in a diagram e.g. straight lines for wires.

* When switches are open or when wires are removed from a circuit, it is no longer a closed circuit so bulbs, motors and buzzers will turn off as the circuit is not complete.

* When more batteries / cells are added or batteries are included with a higher voltage, the brightness of bulbs and volume of buzzers will increase.

* When more bulbs are added to a simple circuit, they will be dimmer than if there were just one bulb (because the electricity is shared between the bulbs)
More voltage would be needed to make them brighter.
[This also applies to motors which would spin more slowly and buzzers which would be quieter.]

* Shortening wires in a circuit would mean the electrons have less resistance to flow through.

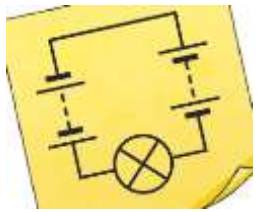
Prior Knowledge?

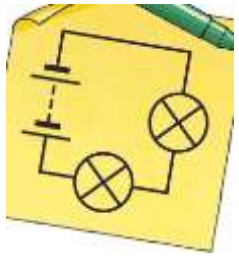
I can identify common electrical appliances.
I can build simple series circuits and identifying and naming its parts.
I know that a switch opens & closes a circuit.
I can identify whether a circuit will work or not.
I know some common conductors and insulators.

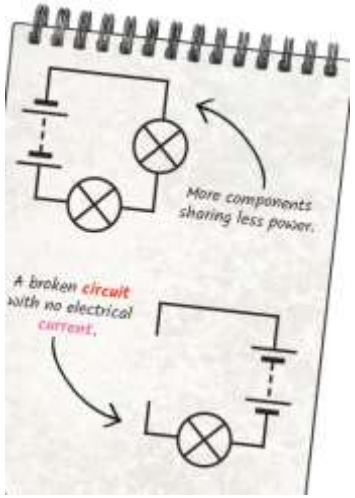
Key Vocabulary

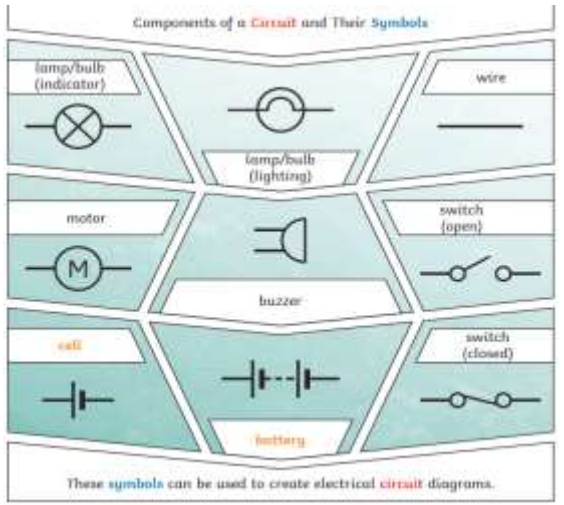
Key Vocabulary	Definition
amps	How electric current is measured.
battery / cell	A device that stores chemical energy until it is needed. A cell is a single unit; a battery is a collection of cells.
circuit	A pathway that electricity can flow around. It includes a power supply and may include other components such as bulbs, switches, buzzers.
current	The flow of electrons measured in amps.
electrons	Very small particles that travel round an electrical circuit.
resistance	The difficulty that the electric current has when flowing around a circuit.
voltage	The force that makes the electric current move through the wires. The greater the voltage, the more current will flow.

Images / diagrams









Important People / Place / Events

Michael Faraday (1791-1867): discovered electromagnetic induction and is considered the father of electricity
Alessandro Volta (1745-1827): invented the first electric battery
Thomas Edison (1847-1931): developed the first practical light bulb
William Watson (1715-1787): gave us the concept of electrical circuits (closed paths around which charge flows) and identified the difference between conductors and insulators
Benjamin Franklin (1706-1790): first gave the terms positive and negative as we still use today

Purple Mash Computing Scheme: Knowledge Organiser

Year 6
Networks

Key Learning

- To understand what a computer network is and identify examples of networks at home, school and in the wider world.
- To understand the difference between the internet and the World Wide Web and explore the services they provide.
- To explore how the internet can be used for communication and collaboration, and how to do this safely and respectfully.
- To explore who is in charge of the internet and how rules and website blocking can affect people, society and online platforms.

Key Resources


2Connect


2Quiz

Key Images


Local Area Network


Wide Area Network


Router


Chrome


Safari


Firefox


Edge

Email
A method of sending messages over the internet.

Network
A group of connected computers and devices that can share information.

Internet
A global WAN that connects millions of computers and networks around the world.

Router
A device that connects networks together to allows them to communicate.

Internet Chat
Instant messaging in real-time.

Video Call
Seeing and hearing someone live on your screen.

LAN (Local Area Network)
A network in a small area like a home, school, or office.

WAN (Wide Area Network)
A network that covers a large area, like the internet.

Wi-Fi
A wireless way to connect devices to a network.

Web Browser
A program used to look at websites.

World Wide Web (WWW)
A service on the internet that includes websites and web pages.

Website
A collection of pages of information on the Web.

Year 6
Coding

Key Learning

- To understand ways to use cloning in 2Code.
- To explore the use of hotspots in 2Code.
- To understand the different options of generating user input in 2Code.
- To use flowcharts to test and debug a simulation.
- To use program design documentation to produce a program.
- To understand how 2Code can be used to make a text-based adventure game.

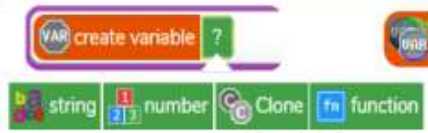
Key Resources

2Code

2Chart

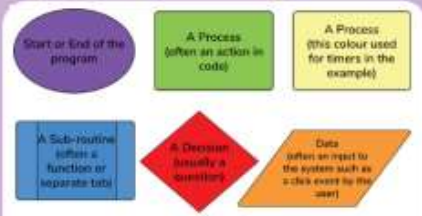
Key Images

Using clones



Variables

Using hotspots



Flowchart symbols

Functions

Abstraction
A way of decluttering and removing unnecessary details in order to code the main task of the program.

Action
A type of command which causes an object to alter its behaviour. Actions could be used to move an object or change an attribute.

Algorithm
A precise, step-by-step set of instructions used to solve a problem or achieve an objective.

Attribute
A detail about an object in a program that can be changed. For example, its name, scale or position.

Clone
A variable type that makes exact copies of an object.

Event
Something that happens in a program that causes a block of code to be run. Events include 'When Clicked', 'When Key' and 'When Swiped'.

Flowchart
A diagram that uses specifically shaped, labelled boxes and arrows to represent an algorithm.

Function
A named group of commands that a program can run when called by name, reducing the need to rewrite code repeatedly.

Hotspot
A type of object that can be used to make a specific area of the screen react to actions such as objects entering or leaving the area.

Initialize
Setting the starting value for a variable.