

## Key Individuals

Stephen Hawking



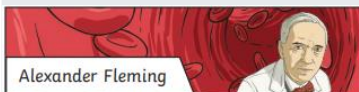
Marie Maynard Daly



Dr Daniel Hale Williams



Alexander Fleming



Stephen Hawking was an **astrophysicist** whose theories, including those concerning **black holes**, have changed the way we understand the universe.

Marie Maynard Daly is known for her work on how the heart and **circulatory system** are affected by sugar and **cholesterol**.

In 1893, Dr Daniel Hale Williams performed the world's first successful open-heart surgery, without blood transfusions, with unreliable **anaesthetic** and with no way of stopping the heart from beating while he operated!

Alexander Fleming is well known for discovering the world's first **antibiotic** that could be used to treat illnesses caused by bacteria. He called it **penicillin**.

Word	Definition
<b>Astrophysicist</b>	An <b>astrophysicist</b> is a scientist who studies the universe beyond Earth.
<b>Black Holes</b>	<b>Black holes</b> are areas of space where gravity is so strong that matter and radiation (including light) are pulled in and can't escape.
<b>Circulatory System</b>	The <b>circulatory system</b> is a system of blood vessels and the heart that moves blood throughout the body, delivering oxygen and nutrients to cells and removing waste products.
<b>Cholesterol</b>	<b>Cholesterol</b> is a type of fat that travels in blood.
<b>Anaesthetic</b>	The use of medicine to prevent discomfort during surgery or medical procedures.
<b>Antibiotic</b>	<b>Antibiotics</b> are medicines that treat bacterial infections in people and animals by killing bacteria or preventing them from growing and multiplying.
<b>Penicillin</b>	<b>Penicillin</b> is an antibiotic that kills bacteria or stops it from reproducing

### Effects of Cholesterol

Too much of one type of cholesterol in our diets can cause it to build up and block blood vessels, which can be very dangerous. This type of cholesterol was what interested Marie Maynard Daly. Her work has demonstrated that too many fatty and sugary foods can make the arteries narrower and can cause heart disease.

### How Penicillin was discovered

On his return from his holiday, Alexander Fleming noticed that mould had grown in one of the Petri dishes. The colonies of bacteria around the mould had been destroyed, whereas the bacteria in other Petri dishes were still alive. He originally called his discovery 'mould juice', but in March 1929 he officially named the substance penicillin, now a widely used antibiotic.

### Key Vocabulary

<b>Allies</b>	The United Kingdom, France and Poland, later joined by other countries, including the USSR (Soviet Union), the United States of America and China.
<b>atomic bomb</b>	A very high-energy bomb made of radioactive material.
<b>Axis</b>	The <b>Axis</b> Powers were originally Germany, Japan and Italy. Other countries joined them later.
<b>evacuation</b>	When people have to leave a dangerous area and move to a safer place.
<b>Nazi party</b>	A German political party with racist and anti-Jewish ideas, led by Adolf Hitler.
<b>persecution</b>	When a group of people are targeted and treated in a cruel or unfair way, such as changing laws to punish them or imprisoning them unfairly.
<b>rationing</b>	To limit how much of something people can have, such as food and fuel.

### How Did the Second World War Begin?

The leader of Germany, Adolf Hitler, had plans to take over other countries. In March 1938, Germany invaded and annexed Austria, which made other countries worried. On 30<sup>th</sup> September 1938, British, French, German and Italian leaders signed a treaty which allowed Hitler to annex the Sudetenland (an area of Czechoslovakia) if he agreed not to invade anywhere else. However, Hitler broke the agreement, first invading the rest of Czechoslovakia and then Poland on 1<sup>st</sup> September. The **Allies** (Britain, France and Poland) had made a pact to support each other, so Britain and France declared war on Germany.

### The Role of Women

Before the war, most women stayed at home and did not go out to work. Some women worked but their choice of job was limited, such as nursing or working as a shop assistant. However, when men went to war, women were needed to take on jobs such as making weapons, driving buses and trains or working in engineering or shipbuilding. Some joined the armed forces themselves. After the war, many women lost their jobs. However, their experiences led them to campaign for equal working rights and pay so that they could continue to lead more independent lives.

### Rationing

Supply ships were targeted by German bombers and it was necessary to conserve as much food as possible.

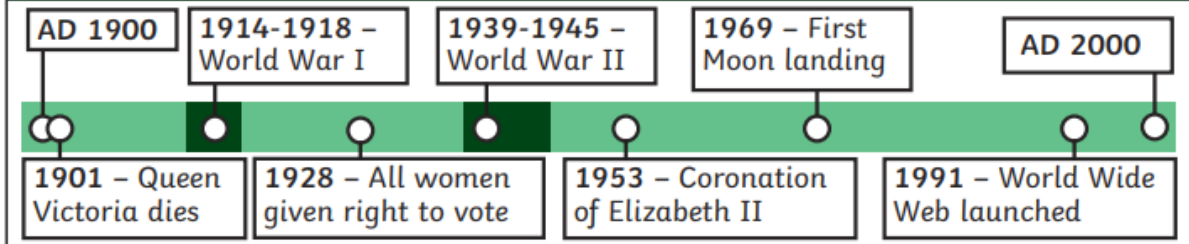


**A ration book**

**Rationing** meant that each person was only allowed a fixed amount of foods. Ration books were issued, with coupons that showed people how much of each item they were allowed. Shopkeepers would remove or stamp the coupons when they were used.

Key Events		
1939	1 <sup>st</sup> September	German troops invade Poland.
	3 <sup>rd</sup> September	Britain and France declare war on Germany.
1940	10 <sup>th</sup> May	The Battle of France begins.
	26 <sup>th</sup> May	Allied forces are evacuated from Dunkirk in France.
	10 <sup>th</sup> July	The Battle of Britain begins.
	7 <sup>th</sup> September	The Blitz begins.
1941	22 <sup>nd</sup> June	Germany invades the USSR (Soviet Union).
	7 <sup>th</sup> December	Japan bombs Pearl Harbor in the US.
1943	16 <sup>th</sup> and 17 <sup>th</sup> May	The Dambusters bombing raid is carried out.
1944	6 <sup>th</sup> June	The D-Day landings.
1945	7 <sup>th</sup> May	Germany surrenders to the Allies.
	6 <sup>th</sup> and 9 <sup>th</sup> August	The US drops atomic bombs on two cities in Japan.

Timeline



Evacuation

During the Second World War, over 3.5 million children, some of their teachers and helpers, mothers with very young children, pregnant women and people with disabilities were **evacuated** from the cities to the countryside. It was believed they would be safer here from bombing as cities were more likely to be bombed during the Blitz.



The Holocaust

The Holocaust was a period of time during the Second World War when millions of people were **persecuted** and killed in Europe. The majority of the people who suffered during the Holocaust were of Jewish heritage and faith. Other groups were targeted too, including members of the LGBTQ+ community and disabled people. It is thought that over 10 million people died during the Holocaust. This is known as genocide.



On 27<sup>th</sup> January each year, the Holocaust is commemorated on Holocaust Memorial Day.

## Print Knowledge Organiser

### Print Making Techniques

#### Lino Print

Lino print is a printmaking technique used regularly in Art and Design. A design is cut into the lino surface with a cutter, the lino sheet is inked with a roller, and then impressed onto paper, fabric, or any other surface. Lino cutting can be used in fabric design or to create art for display. It is a bold technique, that shows an imprint of a design and can be layered to create the linocut printing technique was used first by the artists of Die Brücke in Germany between 1905 and 1913, where it had been similarly used for wallpaper printing.

#### Block Print

Block printing is one of the oldest types of printmaking. It is traditionally intricate patterns made from wooden blocks printed onto textiles. Block printing was mainly traditionally used as a way of forming patterns onto fabrics, used in East Asia and China. Blocks were created and printed by hand. It can now be done on large scale machinery and is used as a skill all over the world. However, this has been developed over time and now can be any material carved into, covered in ink to transfer an image onto paper or fabric. Block printing is detailed and usually uses 1 colour.

#### Screen Print

Screen printing originates from China and was first seen in Europe in the late 18th Century. Screen printing is the process where an image is transferred onto paper or fabric using photo-reactive chemicals and light on a mesh or silk before applying ink and pressing it through the mesh with a squeegee. One colour is printed at a time. It has been developed over time to use both emulsion to create an image or you can use cut out acetate to place under the screen.

#### Collagraph Print

Collagraph printing is a printmaking process where textures and materials are placed on a plate (such as cardboard) to create a block suitable to print. It is similar to creating a block print but uses a wide variety of materials to show different textures of the design. The collagraph board can be rolled with a coloured ink, or unlike other printing processes the ink is often applied to different sections so that different textures can show a different colour when using one block. The basic printing process is a very old way of working because it was inexpensive.

#### Mono Print

Mono printing is a form of printmaking made from a block that can be reprinted. Unlike other forms of printmaking mono print uses a shape, line or image made into the block that can only be printed using one colour. However, in many cases the artwork has an element of change because the artist will use the mono block to print in one colour and then rework/add more etching to the block and print again. This means the original print cannot be printed again.

#### Relief Print

Relief print is when the ink that is printed onto the material is from the main block. This is created by removing areas of the block to form a pattern, usually this is carved from the block. An example of relief print is lino or block printing.

#### Intaglio Print

Intaglio print is the type of print where the inked area shows when printed, this means that when creating a block for printing you add to the block, instead of taking away areas. This is the opposite of relief print. An example of Intaglio printing is collagraph.

### Print Making Equipment

#### Printing Inks

Printing inks are used to press the chosen design onto the chosen material. There are different types of printing inks.

#### Plastisol Inks

These are opaque inks that are not absorbed by the fabric. This means that inks show vibrant colours on any fabrics including black because the inks sit on top of the fabric. These inks are easy to use and are a popular choice when printing on clothing.

#### Water-Based Inks

These are more transparent than plastisol inks and are absorbed slightly more into the fabric, this means that the colours are not as vibrant and can be lost on dark fabrics, they are good to use on very light fabrics. These inks are popular because they are eco-friendly.

#### Discharge Inks

These are also a water-based ink that sets into the fabric, however, these inks are usually only used on dark fabric and the print is clearly shown. This is because there is an activating agent within the inks that bleach the area that will be printed, allowing the inks to show clearly.

#### Print Roller

A mini print roller is used to spread the ink evenly so that there are no blobs or blotches on the printing block.

#### Lino Carving Tool

A lino carving tool is used to create the relief print in lino to cut away areas of the design that will not be printed. Carving tools have a variety of carving heads to show different textures and patterns.

#### Lino

Lino is a material that can be carved to create a relief print. It is known as the 'block'.

#### Screen

A special screen is used in screen printing, it is usually a wooden frame that is wrapped tightly with silk or a mesh type fabric that will let ink pass through it.

#### Squeegee

A squeegee is a rubber edged blade used to distribute the printing ink evenly when using a screen.

## Print Artists

### Lino Print

Edward Bawden (1930-1989)

Edward Bawden was a British war time artist known for his paintings, illustrations and graphic arts. When serving as a war time artist he primarily worked in watercolour. After this time other media became more easily available and he began to develop graphic art using lino print as his main media. He illustrated several books and created art murals in public spaces. Bawden was a valued member of the Great Bardfield Artists group who, after the Second World War, became known for their varied styles and their passion for figurative art.



### Irving Amen (1918-2011)

Irving Amen was a New York based artist who also studied in Paris. Amen specialised in painting, printmaking and sculpture. He also designed 12 stained glass windows and this was the inspiration in his lino prints. They included bold block colours and often depicted personal experiences or were inspired by places he had visited.

### Screen Print

Andy Warhol (1928 – 1987)

Andy Warhol was an American artist, producer and director. He was a leading artist in the Pop Art movement. He was inspired by popular culture, advertisement and home commodities. Warhol used a range of different art techniques such as photography, film and sculpture. However, his best-known works include silkscreen prints called 'Campbell's Soup Cans' and 'Monroe.'



### Oswaldo Ramirez Castillo (1947 – Present)

Castillo emigrated from El Salvador to Canada in 1989. He studied art at Ontario College. His drawings are inspired by his past, his current life and his feelings throughout life. He explores his memory, his identity and looks into personal traumas in his life. His prints are abstract and 'dream-like', they show images of fictional characters and made up landscapes and surroundings. His drawings and prints mix emotions of happy and distraught.

### Mono Print

Marc Chagall (1887 – 1985)

Marc Chagall was a Russian-French Artist, who grew up in Russia and later settled in France. Chagall was considered at the forefront of Modernist art. He worked in a number of art styles and mediums. He was most known for his use of bright, vibrant colours and unusual imagery in his mono prints. It is often documented that Chagall was inspired by his early life as a Jewish child growing up in Russia.



### Collagraph Print

Roxanne Faber Savage (Present)

Roxanne Faber Savage is an American based artist, based in New York and Connecticut. Savage is a print maker who experiments with many print techniques and is a popular collagraph print maker who is inspired nature and outdoors.

## Understanding Christianity Incarnation | RE | Years 5 & 6 |

Key Question		Key Vocabulary	
Was Jesus the Messiah?		1	Messiah A saviour sent by God to the aid of His people
Key Concepts		2	Prophet Someone who prophesises. Often an outsider, making pronouncements and judgements about how the Jews were living
The Messiah	Christians believe Jesus was the Messiah (the Saviour sent by God). The idea of the Messiah is important in Jewish culture, and was central to Jewish belief in the years that Jesus lived and taught; they hoped for a saviour who would vanquish their enemies and restore them to their homeland to live in peace under their own laws	3	Prophecy Foretelling of the future
Prophecy	Written by prophets, prophecies were seen by Jewish people of Jesus's time as evidence that God really did still care about them, that he had promised to come to their aid, and would fulfil his promise.	4	Incarnation God in human form
Incarnation	The prophecies in Isaiah tell of a baby who would be called 'God with us'. This foretells the idea (which Christians believe) that Jesus is actually God incarnate (i.e. in human form).	5	Immanuel Means 'God with us'
		7	The Gospels Eye-witness accounts of the people who lived and spoke with Jesus
		8	Advent The period of expectation for the arrival of an important person (Jesus). Celebrated by Christians as the first season of the church year, leading up to Christmas and the preceding four Sundays
Key People		Key Bible Passages	
Jesus Christ	The Messiah, The 'anointed one', God incarnate	Isaiah 7: 14	Prophesises about the coming of the Messiah
Matthew	Disciple of Jesus and author of one of the Gospels of the New Testament	Isaiah 9: 6-7	Prophesises about the coming of the Messiah
God's People	Jewish people in exile from Egypt in Jesus's time	Isaiah 11: 1-5	Prophesises about the coming of the Messiah
Isaiah	An important prophet of the Old Testament who prophesied about the coming of a Messiah	Micah 5: 2	Prophesises about the coming of the Messiah
Micah	An important prophet of the Old Testament who prophesied about the coming of a Messiah	Matthew 1 & 2	Tell of the birth of Jesus and arrival of the Magi (Wise men). Evidence for Jesus being considered to be the Messiah.
King David	A descendent of Abraham (ultimately of Adam) who became King of Israel after defeating Goliath (in the Old Testament)		