

YEAR 6 KNOWLEDGE ORGANISERS

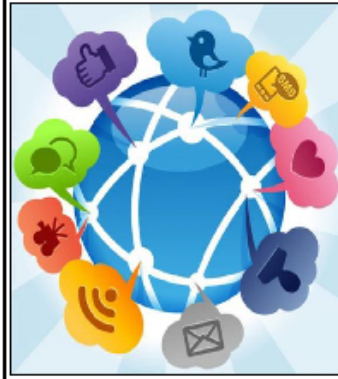
AUTUMN 1



COMPUTING SYSTEMS AND NETWORKS KNOWLEDGE ORGANISER



Overview



Searching and Communicating

- You should already know that the internet is a network of networks.
- You should also know that the World Wide Web is the part of the internet where we can visit websites and webpages.
- The World Wide Web can be used to find information, using search engines.
- The internet is also a useful communication tool – with a number of different communication mediums for a range of different purposes.

Selecting and Ranking Search Results

Selecting Search Results

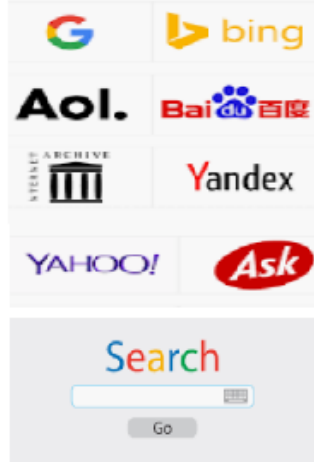
- Search engines use programs known as crawlers to index the World Wide Web.
- They 'crawl' websites for searchable information – they then store where it is found in a huge index.
- Search engines select information from this index when we type in key words.
- Searching for some search terms can bring many millions of results.
- We need to make sure that our search terms are as refined as possible, in order to allow the search engine to select the information that is most relevant.

Ranking Search Results

- Search engines 'rank' the web pages (the highest ranked page is at the top).
- Search engines use algorithms to do this – algorithms look at a number of different factors and give web pages a score for each.
- The web page with the highest score ranks the highest.
- Some factors include if the search term is in the title of the page (high points) or if it appears in the paragraphs of the text on the page (lower points).
- Web designers consider algorithms when making when pages.

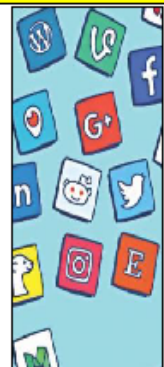
Search Engines - Introduction

- We can find information on the World Wide Web by using search engines.
- A search engine is a program that finds websites & webpages based on key words entered by the user.
- When the World Wide Web was invented by Tim Berners-Lee in 1989, there was only 1 website. By 2018, there were 1,630, 322, 579! The World Wide Web is a big place, and we need search engines to be able to find what we need.
- Some examples of search engines are Bing, Google, Yahoo, DuckDuckGo and Kiddle.
- You can also type searches into the address bar of the browser (e.g. Google Chrome or Microsoft Internet Explorer).



Online Communication

- Communication is when we share information with one another. We can communicate in lots of different ways on the internet, e.g. messaging services, emails, social media, video calling and gaming platforms.
- Public communication is visible to all, whilst private communication is restricted to only some people.
- Some communications are one-way (e.g. Youtube) whilst others are two-way (e.g. Skype).
- Some communications are to one person, whilst others are to many.
- We should consider which type of communication is most appropriate to our needs, safety and privacy.



Important Vocabulary

Internet World Wide Web Search Engine Browser Keyword Google Tim Berners-Lee Ranking Crawlers Algorithm



UKS2 D.T: STRUCTURES

KNOWLEDGE ORGANISER


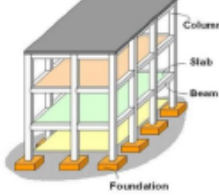


Overview

Frame Structures

You should already know that structures are things that are built for a purpose, for example to support something or hold something.

- Frame Structures are rigid support structures that use beams, columns and slabs to hold large forces of gravity and weight.
- Frame structures give shape, and are useful for support & weight bearing.
- Unlike shell structures, frame structures have joints, which are formed according to the design requirements and materials being used.
- Some examples of man-made objects that use frame structures are houses, skyscrapers, bridges, scaffolding, tables, and roller coasters!
- The system of beams and columns in a frame structure can be further strengthened through the use of other features, e.g. foundations, bracing.

Designing – How do I design a strong, stable, secure frame structure?

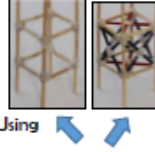
- Remember your prior learning, a wider base can help a structure to be more secure.
- Frames should be able to stand on their own, providing a 'skeleton structure.'
- You may wish to consider a foundation/ anchoring system, where appropriate.

You should be able to consider the most appropriate materials for your frame structure, considering a number of properties (e.g. weight, toughness, malleability, strength and presentation) depending upon the nature of your project.

- You should also be able to consider restraints, for example time and cost.

Triangulation can help to make structures stronger. This is important to consider when creating stable joints (see the making section below for this).

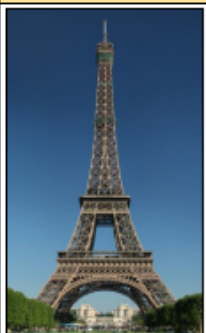

- Triangulation is also important when bracing. When force is applied to one point on the triangle, the pressure is shared amongst the other two points, which provide a secure wide base. Using bracing, you can create triangular shapes, can therefore make your structure more rigid from different angles.



Design stage should include: step-by-step plan, annotated sketches, listing tools & materials.

- ### Key Vocabulary
- Structures
 - Frame Structures
 - Rigid
 - Beam
 - Column
 - Slab
 - Joints
 - Foundations
 - Triangulation
 - Bracing
 - Malleable
 - Horizontal
 - Diagonal
 - Vertical

Example Structures

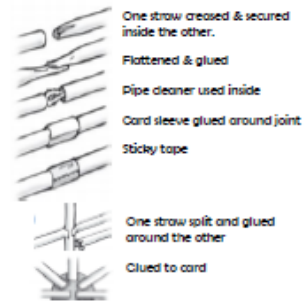
	<p>Name: The Eiffel Tower</p> <p>Location: Paris, France</p> <p>Height: 324m</p> <p>Built in: 1889</p> <p>Purpose: Observation/ Broadcasting Tower</p> <p>Materials: Wrought Iron</p>	<ul style="list-style-type: none"> -The Eiffel Tower is one of the most famous structures in the world. The main architect who designed the Eiffel Tower was Stephen Sauvestre, whilst Gustave Eiffel was the chief engineer. -The wrought-iron structure is based of four huge arched legs, set on masonry piers that curve inward. -The material used to make this tower is wrought iron which has is tough, malleable (can be pressed into shape without cracking) & corrosion-resistant. -Sauvestre and Eiffel wanted to prove that the metal could be as strong as stone, whilst lighter. -It uses a diagonal bracing structure throughout, to prevent side-to-side movement in the wind.
	<p>Name: Gazebos/ Tents</p> <p>Purpose: Shelter/ Temporary Habiting Space</p> <p>Materials: Wood, iron or aluminum & canvass.</p>	<ul style="list-style-type: none"> -Tents and gazebos are shelters made up of sheets of fabric/material, draped over a frame structure. -The frames are often made of iron or aluminium poles (lightweight, which make them easy to transport/ erect/ deconstruct) or wood. They can range in size, from simple 'bivouac' structures for one person, to huge circus tents for thousands of people. -Rather than foundations, hooks or pegs are ordinarily used to anchor tents to the ground.

Making & Evaluating

Making


Using Straw/Rolled Paper

- When using straw, rolled paper, a number of adhesives can be used – e.g. sellotape, different types of glue.
- However, these structures are not as strong/ stable as wooden structures.
- Creating a rigid frame requires the creation of secure joints.
- These can be made using the methods shown on the right.



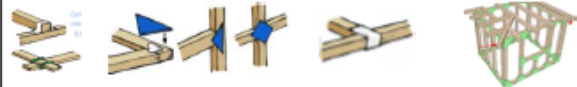
Evaluating

- How well does your structure work? Does it meet its purpose?
- How did you make your frame structure strong and rigid?
- How could you make it more strong and rigid?
- Which materials did you use? Why did you make these choices?
- What restraints did you have? How would you have changed your product without these restraints?
- How did you cover your frame? Was this the best material? Why or why not?
- How does your product look? How could it look more appealing?



Using Wood

- When using wood, PVA glue is most appropriate. Joints should be securely clamped together to allow for drying time.
- Card strips can be used to create secure joints.
- Card triangles can be used to create secure corner joints.
- One suitable alternative is elastic bands, which can be securely fastened around beams and columns, in order to create secure joints.



Health and Safety

-Remove any jewellery and tie back long hair. Keep belongings clear.	-Wear an apron where necessary and roll up your sleeves.	-Walk safely and calmly around the classroom/ workshop.	Keep your work area and floor area clear – regularly tidy up to avoid accidents.	Follow the teacher's cutting/ machinery instructions carefully.	Make sure that you are wearing the correct equipment for tasks, including safety goggles.	Should you need to move around with sharp objects, hold them appropriately.	Report and clean all spillages & other potential hazards.
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RE

Key Question: Are the saints encouraging role models?	
Learning Intention: <ul style="list-style-type: none">*To explore reasons behind the persecution of saints/believers*To compare the saints to the person and persecution of Jesus	
Values Explored: community, faith, commitment, trust, courage, respect	Key Vocabulary: Persecution- the bad treatment of a person, or group by another group Saint- a person who is believed to be especially close to God Commitment- dedicated to a faith Martyr- a person that suffers death rather than give up his/ her religion Faith- belief, trust and loyalty to God Relics- an object treated with great respect due to its connection to a saint or martyr Reliquaries- containers that contain relics
What I should already know: <ul style="list-style-type: none">*Believers show commitment to their faith in a variety of ways*Jesus was persecuted	
I will know by the end of this unit: <ul style="list-style-type: none">*An understanding of the beliefs of saints and the influence of these beliefs on behaviour*The differences between saints and Jesus*Similarities between the saints of Christianity and of other religions and none*The impact of faith on the lives of believers, particularly in the face of persecution*The meaning for reliquaries and compare their use to objects used by other faiths*Answers to questions about the choices that saints have made	
I will know a range of stories about saints by the end of this unit: St Joan  St Francis  St George 	Reflection:  Would you want to make anyone a saint? If so, why? If not, why not?



What you should already know...



- Animals and plants can be classified into different groups based on their characteristics.
- Animals can be grouped into vertebrates (with a backbone) and invertebrates (without a backbone).
- They can then be subdivided into further groups, for example mammals, fish, reptiles etc. (vertebrates) or spiders, snails, worms etc. (invertebrates).
- Plants are commonly grouped into flowering plants and non-flowering plants. They too can be sub-divided beyond these broad classifications.

Linnaeus Classification

Carl Linnaeus

Carl Linnaeus was a Swedish scientist, botanist and zoologist who is known as the 'father of taxonomy.'

He created something called the binomial nomenclature, which was a way of classifying plants and animals (taxonomy).

He classified man among the primates, which brought him criticism at the time!

He was made a noble by the Swedish King. He lived from 1707-1778. Parts of his system are still used today.

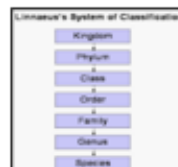


Classification System

Linnaeus gave each organism a two part Latin scientific name, based on their genus and species. A genus is a group made up of several species.

For example, the genus 'Pan' is made up of the chimpanzee (pan troglodytes) and the bonobo (pan paniscus).

His scientific process involved observing, recording the information and making conclusions.



Classification of Animals

M-R-S G-R-E-N

You can remember the seven features of living things by using the acronym MRS GREN (Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion and Nutrition).

Mammals -Mammals are warm-blooded. -They often have hair/fur on their bodies. -Mammals give birth to live young. -Mammals often drink milk from their mothers.	Bear, Lion, Dog, Cat, Rabbit, Squirrel, Whale, Monkey, Horse, Cow, Pig, Sheep, Tiger, Human.	Snails -Snails have shells. -They have a large muscular foot, which secretes mucus. -Their stomach is directly above their muscular foot. -Most snails live underwater.	Garden Snail, Scutalus, Giant African Land Snail.
Reptiles -Reptiles are cold-blooded. -They normally lay eggs (but some don't). -Reptiles have scales or spikes .	Crocodiles, Lizard, Turtles, Chameleons, Snakes, Ceckoi, Iguanas, Dinosaur.	Slugs -Slugs do not have shells. -They have a large muscular foot, which secretes mucus. -Their stomach is directly above their muscular foot.	Leopard Slug, Black Slug, Yellow Slug.
Amphibians -Amphibians are cold-blooded animals. -They have moist, scaleless skin. It is often permeable. -Amphibians lay eggs.	Frog, Salamander, Toad, Newt, Tadpole.	Worms -Worms have long, narrow bodies. -Worms do not have limbs (arms and legs). -They are bilaterally symmetrical (both sides the same).	Flatworms, Round Worms, Segmented Worms.
Fish -Fish are cold-blooded animals. -Fish can breathe underwater, using gills. -Fish lay eggs. -Fins help to propel fish through the water.	Sharks, Goldfish, Carp, Swordfish, Stingray, Clownfish, Pike, Salmon, Bass, Haddock, Tuna, Cod, Eel, Turbot.	Spiders -Spiders have eight legs. -Spider bodies are made of two main parts. -Spiders create silk from their spinneret glands. -Spiders lay eggs.	Tarantula, Wolf Spider, Huntsman Spider, Widow Spider.
Birds -Birds are warm-blooded. -Birds have feathers, wings and a beak. -Birds lay eggs.	Parrot, Owl, Eel, Flamingo, Penguin, Puffin, Chicker, Toucan, Blackbird, Sparrow, Pigeon.	Insects -Insects have exoskeletons: hard shell-like coverings of their body. They also have three main body parts. -They have antennae on the top of their heads.	Beetle, Ant, Fly, Flea, Butterfly, Mosquito, Bee, Cricket.

Classification in Local Habitats

Garden

Vertebrates: Mammals = cats, dogs, rabbits, foxes. Birds = sparrow, robin, crow. Amphibians = frogs, toads.

Invertebrates: Insects = bee, wasp, fly, Spiders, Worms = earthworm, Snails = garden snail, Crustaceans = woodlice

Seaside

Vertebrates: Mammals = Beach mice, Birds = seagulls, pigeons, Reptiles = sea turtles, Fish = cod, haddock.

Invertebrates: Crustaceans = crabs, lobsters, prawns, Echinoderms = starfish, sea cucumbers, sea urchins.

Forest

Vertebrates: Mammals = badger, deer, squirrel, boar, pine marten. Birds = woodpecker, owl, warbler. Reptile: adder, lizard, slowworm.

Invertebrates: Spiders: harvestman, woodlouse spider, Insects: Ants, crickets, grasshoppers.

Human Classification – from vague to specific

Kingdom: Animals → Phylum: Chordates → Class: Mammals → Order: Primates → Family: Hominids → Genus: Homo → Species: Homo Sapiens

Music

Year 6: Songs of World War 2

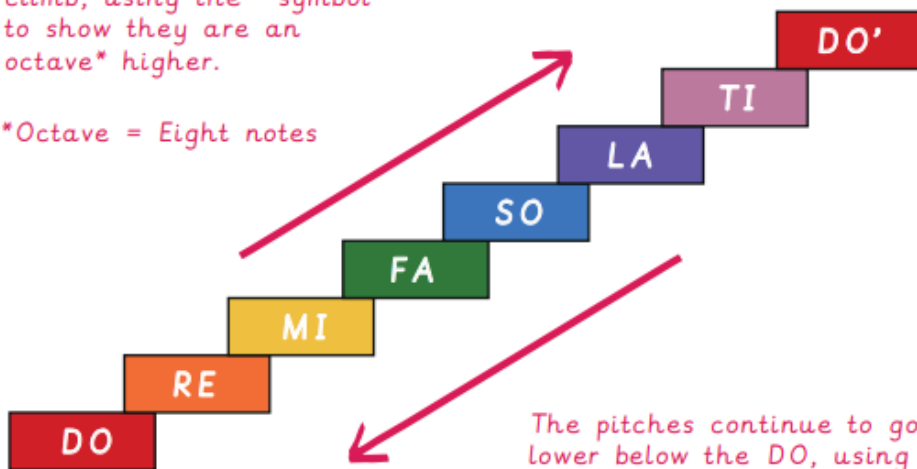
The songs of WW2 were often very sentimental. They were seen to offer hope and understanding to the feelings of those who were affected by the war effort.



Solfa ladder pitches

The pitches continue to climb, using the ' symbol to show they are an octave* higher.

*Octave = Eight notes



The pitches continue to go lower below the DO, using the , symbol to show they are an octave lower.

Vocabulary

Expression Playing or singing with a personal response to the music.

Dynamics The volume of the notes. This often changes throughout a piece of music.

Diaphragm

A dome shaped muscle, which we use to control our breath when singing.



Melody The combination of pitch and rhythm which forms a tune.

Melody line The notes that make a melody.

Counter melody A melody that can be sung to complement the existing melody. It uses harmony to make it sound good, but is different to harmony because it uses a different rhythm.

Pitch How high or low a note sounds.

Score A written form of a musical composition.

Graphic score A way of writing down music on the page without using traditional staff notation, instead using symbols and images to represent the music.





Year 6 Knowledge Organiser – AUTUMN TERM 1 niveau tricolore

les mois de l'année		the months of the year		Asking how someone is	
janvier	January	juillet	July	Ça va ?	How are you?
février	February	août	August	Comment ça va ?	
mars	March	septembre	September	Comment vas-tu ?	
avril	April	octobre	October	Ça va, et toi ?	
mai	May	novembre	November	Ça va	I'm fine, thanks.
juin	June	décembre	December	Oui, ça va	
Greeting				Ça va bien, merci	
Salut !	Hi!				

Upper-case

capital letter

Majuscule


Lower-case

small letter

Minuscule

The terms *upper case* and *lower case* originate from the early days of the printing press, when the letter blocks were stored in cases.

The cases containing the capital letters were higher up than those containing the smaller letters. This way of organising the letters made it easier for the printer to set the type.



Grammar informal speech	Grammar question tag	Grammar capitalisation	Grammar upper and lower case	Knowledge about France numerical date format	Grammar numbers in the date
There is a difference between vocabulary typical of informal and formal speech, e.g. <i>Salut, ça va</i> and <i>et toi ?</i> are informal.	<i>Et toi ?</i> is a question tag that can ask the same question that has just been asked, or can ask a question based on a statement. There is no simple equivalent in English.	The months of the year begin with a capital letter in English. In French, the months only begin with a capital letter if they are the first word in the sentence.	The terms upper case and lower case originate from the early days of the printing press, when the letter blocks were stored in cases.	In the UK, France and the rest of Europe, the numerical date format is DD.MM.YY or DD.MM.YYYY	In English, ordinal numbers are used when saying the date. In French, cardinal numbers are used, except on the first day of the month: <i>le premier février</i> .
Grammar written form of the date		Grammar writing the date on the board		Spelling circumflex accent	Pronunciation / spelling the cedilla (ç)
In English, ordinal numbers with letter suffixes are used when writing the date by hand, but letter suffixes are not used when word processing. In French, cardinal numbers are used when writing the date by hand, and when word processing, with the exception of the first day of the month: <i>le 1er mai, le 2 mai</i> .		If the day of the week is not included, the date begins with the definite article. A capital letter is used at the start of the phrase. No commas are used in French dates. If the day of the week is included, it is the first word in the phrase, and it replaces the definite article. A capital letter is used at the start of the phrase.		The circumflex is used over any vowel to show that a historical letter has disappeared from the word, e.g. the 's' from August → <i>août</i> .	The cedilla is placed underneath the letter 'c' to show that it is pronounced like an 's' rather than a 'k' (e.g. <i>façade</i>).

Year 6 - Families and relationships

Authority	A person with high status and decision making power.
Conflict	A disagreement or argument.
Earn	To gain something like respect by showing others that you are a good, trustworthy person.
Conflict	Anticipating that something will happen a certain way.
Authority	Feelings of sadness experienced after someone's death.
Grieving	A period of sadness that someone experiences when someone close to them dies.
Resolve	To find a solution to a problem.
Respect	Being thoughtful and polite towards other people.
Stereotype	A view or idea about something, often someone, which is often untrue.



Grief is a process we go through when someone dies (or we no longer see them for another reason).

Grief is different for everyone and we might need support from other people to help us deal with it.

Getting help

Talk to an adult you trust, this could be:

- someone at school e.g. teacher
- someone at home e.g. parent or older siblings
- another relative e.g. grandparent or aunty/uncle
- someone at a club or organisation you attend e.g. sports coach

Contact: Childline

www.childline.org | 0800 1111

Calls DO NOT show on the phone bill

Key facts

Sometimes people might lose your respect but this can be returned if they change their behaviours.



Respect is an important part of relationships and we need to show others respect if we want them to respect us.

Stereotyping can happen when people have limited information about a person or group of people.



Stereotypes can have negative consequences but they can be challenged.

Conflicts can happen between people but there are strategies we can use to overcome these.



History

Core Knowledge

WWII began in 1939 when Germany invaded Poland. It was Japan that officially ended the war on 2nd September 1945; the war lasted for six years and one day. The war had two sides: the Allies and the Axis powers. Germany was led by Adolf Hitler - the leader of the Nazi party. Hitler had extreme anti-Semitic beliefs, which meant that he wanted to eradicate Jewish people. Most women stayed at home and took over the men's jobs when they went to fight in factories. Great Britain had two Prime Ministers during the war: Neville Chamberlain and Winston Churchill. It was Winston Churchill who helped the Allies to victory. Life during the Second World War was very hard. In order to cope with reduced supplies, in 1940 the Government introduced a number of measures:

- The Government organised the rationing of foodstuffs, clothing and fuel during the war.
 - The price of restaurant meals was limited.
 - Extra milk and meals were provided for expectant mothers and children.
- Rationing helped to change attitudes - the fact that everyone was restricted to buying a certain amount of goods, created a sense of sharing and cooperation in Britain. Bombing helped to change attitudes because civilians helped each other construct shelters and would check to see if families needed help after a raid.

Women

Women's place in society was greatly affected by WW2. With most of the men fighting, women were needed to fill in for the jobs that needed doing. Over 350,000 women were directly involved in the war effort (including late Queen Elizabeth II).

This upset traditional views held at the time of men as the main earner for the family, starting a long and difficult journey for gender equality.

Children

1.5 million children (disabled citizens and the elderly) were evacuated to safer areas in the countryside and abroad from cities in operation 'Pied Piper'.

For some, cultures clashed and not everyone had a positive experience of evacuation. Some parents decided to keep their children home, putting up with the sacrifices and dangers of The Blitz. Life was very tough for everyone.

Books/associated reading:

- **Letters From The Lighthouse** by Emma Carroll
- **Once** by Morris Gleitzman
- **Goodnight Mister Tom** by Michelle Magorian
- **Carrie's War** by Nina Bawden



Key WW2 points

What?	Global war, mainly in Europe and Asia.
When?	1939-1945. Britain entered war when Germany invaded Poland in 1939.
Who?	Allied (GB, France, Russia) vs Axis (Germany, Italy, Japan)
How?	Badly affected most of Europe and the world. Millions of people fought and died in those 6 years.
And?	It looked like Germany were winning at the beginning, but after US joined Britain in 1941, the tables turned before Germany surrendered on May 8 th 1945 (VE - victory in Europe - day)



Winston Churchill
1874-1965

Some people argue that his **leadership** and speeches are ultimately what stopped Hitler by uniting Britain and giving them something to fight for

Famous speeches called 'finest hour' and 'Rattle of Britain'

Propaganda - information, usually biased or misleading, that tries to promote a political cause or idea.

Governments used this to persuade public to help more in war effort, from signing up to fight to growing vegetables.



UK propaganda was about encouraging people to help, and that the fight against Germany was a fight of good vs. evil



Nazi propaganda was aimed at justifying the war, especially fuelling hatred of Jews and the UK.



Myth: Americans saved the day

Reality: It was actually the Soviet union most responsible for the defeat of the Nazis. They lost 10 million soldiers. More than 80% of German soldiers died at the hands of the Soviets.

Vocabulary

Words	Meaning
Ally	A country's ally is another country that has an agreement to support it, especially in war.
Anderson shelter	Half buried in the ground and with earth on top, they protected people from bomb blasts.
Atom bomb	An extremely destructive type of nuclear bomb.
Blackout	All windows and doors had to be covered at night to stop enemy aircraft seeing house lights.
Evacuee	Vulnerable adults and children moved to areas of less risk.
Gas mask	Issued to all civilians at the start of the war, gas masks were used to protect from gas attacks.
Invasion	To try and take over a place by force.
Nazis	A member of the far-right political party in Germany.
Rations	Ration cards were given out and only a certain amount of food/clothes per family were allowed.
Blitz	The sustained aerial bombing against Britain by Nazis. Blitz means lightning in German.
Antisemitism	Hostility to or prejudice against Jewish people.
Surrender	Stop resisting to an enemy or opponent and submit to their authority.
Star of David	Jews throughout Europe were forced to wear the star of David to clearly identify themselves.
Evacuation	The action of evacuating a person or a place.
Swastika	An ancient symbol of a cross with arms at a right angle. Taken and adopted by the Nazis to use as an emblem for the Nazi party.

Subject Specific

Social	Relating to society or its organization.
Political	Relating to the government or public affairs of a country.
Propaganda	Information, especially of a biased or misleading nature, used to promote a political cause or point of view.
Cultural	Relating to the ideas, customs, and social behaviour of a society.