

YEAR 9



Home Learning



Home Learning - Parent/Carer guide

These home learning booklets will be emailed to all parents/carers of all students in Years 7, 8 and 9 every 2 weeks on a Monday A week.

The idea is that, across 12 subjects, you will be able to speak with your child about the key pieces of knowledge that they will need to know across that 2 week period. Key Stage 3 is all about students being exposed to a knowledge-rich curriculum so that they know more and remember more about each area of study.

This E-booklet allows all parents and carers to quiz their children, to talk to them about the knowledge and maybe learn things together.

Much like the primary model of learning spellings every week, this allows all parents/carers to know the key knowledge that your child will be learning in the next two weeks and also how well your child is doing in remembering these key pieces of knowledge and information.

It is to be expected that students can remember more towards the end of the two weeks than at the beginning and you should be able to see your child make progress.

This can all be done with no pen, no paper, just discussion. Quiz your child whilst having dinner maybe, or even let them quiz you if you would like to learn together! Of course, you can get your child to write down answers but it is not necessary.

I hope that this new initiative allows parents to be more involved with your child's home learning without the pressure and stress that some homework tasks can put on child/parent relationships.

If you have any questions or would like to know more about home-learning at Penketh High School then please get in touch with me directly on ***ifarrar@penkethhigh.org*** and I will only be too happy to assist in any way I can

Kind Regards

Ian Farrar

Vice Principal - Curriculum and Progress

ART



Current Learning

1	Record	To set down in some form of permanence - Record through sketching, drawing, printing and painting- in our personal sketchbooks.
2	Develop	Refine and develop idea through changing our design when working from 2 dimensional drawings into 3d models.
3	Communication	Using visual elements to convey ideas
4	Secondary Research	Using our past observations and taking inspiration from books, the internet and studio resources.
5	Construct	Building our Seth Clark response in cardboard and collected materials.
6	Layers	More than one sheets or piece of materials, through our model making and collage.
7	Texture	The feel and appearance of a material, selected for our models.
8	De-collage	The opposite of collage; instead of an image being built up of all or parts of existing images, it is created by cutting, tearing away.
9	Single flute (cardboard) Double Flute (Cardboard)	1 layer of corrugated card trapped between 2 layers of flat sheet or 2 corrugated layers of card sandwiched in between 3 layers of flat card. Manipulation of these materials through model making

Prior Learning

10	Urban Decay	Urban - relating to a town or a city. Decay - the state or process of rotting or decomposition. Referencing the work of Seth Clark.
11	Contextual analysis: Derelict - Architecture	Selecting and recording form the from the design of buildings in very poor condition as a result of disuse and neglect.
12	Composition	The way in which element work together to produce an overall effect, within our sketchbooks to research and within our drawings.
13	Layout	The arrangement of images, text and style on a page - Seth Clark research page.
14	Shading	A slight variation of tones within our drawings and using the pressure of our pencil in our illustrations.

A 3D visualization of a human head and neck, constructed from a dense array of glowing blue dots and lines. The structure is positioned centrally, with the head tilted slightly to the left. The background is a dark, deep blue, featuring a grid of smaller, dimmer blue dots that recede into the distance, creating a sense of depth and perspective. The overall aesthetic is futuristic and digital.

COMPUTER SCIENCE

Current Learning

1	Computer System	A computer system takes a set of digital inputs, processes them and creates a set of outputs.
2	Embedded System	This is a control device that is built into a larger piece of equipment and do one specific job. Examples include SAT NAV, washing machine and traffic lights.
3	CPU	Central processing unit also known as a microprocessor, is the 'brain' at the core of any computer system
4	Input	Information or data needs into the system from input devices such as keyboards, mice, cameras, or sensors.
5	Process	The information collected needs to be processed and actions need to be carried out. E.g. carry out calculations.
6	Output	Once processed the result is presented by an output device such as a monitor or speaker or printer.
7	Hardware	Physical components of a computer system e.g. monitor, keyboard, mouse, CPU
8	Software	a set of instructions, data or programs used to operate computers and execute specific tasks. For example, email software like Outlook.

Prior Learning

9	Cyber attack	An attack on an organisation that tries to access their systems to steal large quantities of data.
10	Malware	Malicious software is intended to cause damage to files and systems.
11	Encryption	Converts information using a public encryption key into a meaningless form that cannot be read if intercepted.
12	Social engineering	The art of exploiting human psychology, rather than technical hacking techniques, to gain access to buildings, systems or data
13	Hacking	A term used to describe illegal access of computer systems by unauthorised users.
14	Personal data	Any data /information relating to an individual that can allow them to be identified e.g. first name, date of birth.
15	Firewall	Controls the transmission of data between a computer and other network computers on the Internet

DRAMA

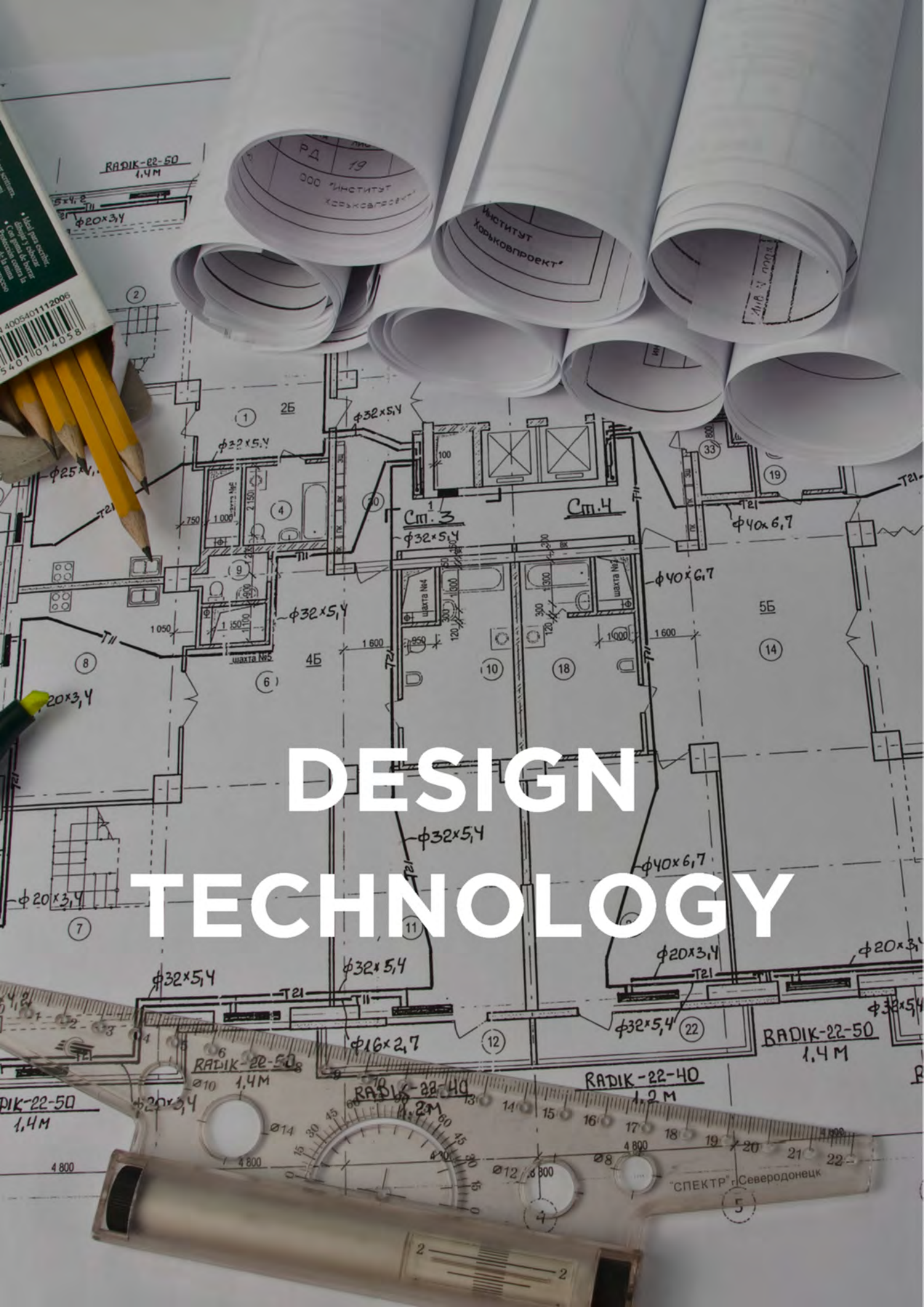


Current Learning

1	What is genre?	The theme / type of play.
2	What does comedy aim to do?	Theatre to make people laugh. A stop in the scene or in a line of text.
3	What does action aim to do?	Theatre to make the audience feel excited.
4	What does drama aim to do?	Theatre to make the audience feel sad.
5	What does horror aim to do?	Theatre to make the audience feel scared.
6	What is a stereotype?	A label given to a group of people that categorises them, this is not necessarily true.
7	What does it mean to exaggerate?	To be over the top and bigger with your physical and vocal skills.
8	Why does exaggeration create comedy?	Because the characters are over the top and larger than life.
9	What does to analyse mean when we feedback?	To consider what the purpose of the choices in the play made were, what are they showing to the audience.

Prior Learning

10	What is physical theatre?	Representing a story, emotion, event or idea using your body and movement to tell the story.
11	What is dramatic irony?	Where the audience know something that the characters don't.
12	What is facial expression?	Using your face to express emotion.
13	What is a gesture?	A small movement or actions that communicates a meaning to the audience.
14	What does represent mean?	To show something in your performance, e.g. if you walk away from someone, you represent that you don't want to be near them.



DESIGN TECHNOLOGY

RADIK-22-50
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ХАРЬКОВПРОЕКТ

ИНСТИТУТ
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2

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2Б

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$\phi 32 \times 5,4$

См. 3

См. 4

$\phi 40 \times 6,7$

5Б

14

4Б

10

18

8

6

$20 \times 3,4$

$\phi 32 \times 5,4$

$\phi 40 \times 6,7$

$\phi 20 \times 3,4$

$\phi 20 \times 3,4$

$\phi 32 \times 5,4$

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RADIK-22-50
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RADIK-22-40
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RADIK-22-50
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СПЕКТР Северодонецк

2

2

5

Current Learning

1	What is acrylic?	Acrylic is a transparent plastic material with outstanding strength, stiffness, and optical clarity
2	What is a LED?	Paper covered with powdered glass, used for smoothing and polishing
3	What is a client?	A client is a person or organization using the services of a professional person or company
4	What are design ideas?	Realization of a concept or idea into a drawing that for fills what you set out to achieve.
5	What is soldering?	Soldering is a process that joins two or more types of metals through melting solder
6	What does Quality assurance mean?	A machine having one or more flat circular disks faced with abrasive for smoothing wood surfaces
7	What is an Interference fit?	A fit between two parts in which the external dimension of one part slightly exceeds the internal dimension of the part into which it has to fit.
8	What does Ecco friendly?	Imply means Earth-friendly, being eco-friendly means being 'designed to have little or no damaging effect on the environment
9	What is Malleable?	A substance that is malleable is soft and can easily be made into different shapes
10	What does assemble mean?	To fit together the separate component parts of a machine or other object.

Prior Learning

11	What is a final design?	A Final design is a drawing that has been developed or selected from previous design ideas that might get made into a real item.
12	What is a vice? What do we use it for?	A vice is a mechanical piece of apparatus used to secure an object; it allows work to be performed on it.
13	What does CAD stand for?	Computer Aided Design
14	What is a laser cutter?	Laser cutting is a precise method of cutting a design from a given material using a CAD file to guide it, this is a CAM device.
15	What is CAM?	Computer Aided Manufacture

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point of
English
language
and the
reside

Current Learning

1	Acts	Large sections of a play, typically divided into several parts. Each act can have one or more scenes.
2	Scenes	Smaller divisions within an act, usually marking a change in location, time, or characters present.
3	Stage Directions	Instructions in the script that tell actors where to move, how to speak lines (e.g., tone, volume), and how to interact with other characters. These are often written in italics or brackets.
4	Characters	The people or beings who take part in the action of the play. They are typically introduced in the cast list at the start of the play.
5	Dialogue	The spoken lines of the characters in the play. This is the primary form of communication between characters.
6	Monologue	A long speech delivered by one character, often revealing their thoughts, emotions, or perspectives. It can be spoken to another character or as a soliloquy.
7	Soliloquy	A type of monologue where a character speaks their thoughts aloud, often while alone on stage. It gives insight into their inner feelings or plans.
8	Foreshadowing	Hints or clues in the play that suggest what will happen later in the story. It builds suspense or prepares the audience for future events.
9	Set	The physical environment where the action of the play takes place, including furniture, backdrops, and other visual elements.
10	Malorie Blackman	The famous author of the 'Noughts and Crosses' novel.

Prior Learning

11	Rhetoric	Understanding the elements of rhetoric: Logos, pathos, ethos
12	Audience	Understanding your audience helps you choose the right language, tone, and style to persuade them effectively.
13	Purpose	This could be to inform, persuade, argue, or entertain. Clear purpose shapes your message.
14	Rhetorical devices	Techniques used to persuade and engage. These include repetition, rhetorical questions, alliteration, and figurative language.
15	DAFOREST	Helpful acronym to help with persuasive writing.
16	Powerful speakers	Analyse figures like Martin Luther King Jr. or Greta Thunberg to learn how they inspire and influence others.
17	Anecdote	A short personal story used to persuade. Anecdotes make arguments relatable and emotional, drawing the audience in.
18	Expert opinions	Quoting knowledgeable individuals. Using experts adds credibility and strengthens your argument.
19	Advertising	Advertisements rely on language, images, and emotional appeal to influence customers.
20	Customer manipulation	This can include emotional triggers, scarcity tactics, or creating a sense of urgency to make customers act.

FOOD TECHNOLOGY

A chef in a white uniform is chopping carrots on a green cutting board in a kitchen. The chef is using a knife to slice the carrots into small, round pieces. On the cutting board, there are several whole carrots and some sliced pieces. The background shows a stainless steel kitchen counter and a large metal pot. The text 'FOOD TECHNOLOGY' is overlaid on the image in a bold, white, sans-serif font.

Current Learning

1	Food miles	Food miles
2	Carbon footprint	a measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of humans.
3	Sustainable	using natural resources in a way that we could keep doing for a long time. We can be more sustainable by reducing our use of natural resources.
4	Agriculture	both growing and harvesting crops and raising animals, or livestock.
5	Emissions	is something that's been released or emitted into the world. Car exhaust, burps, and radio broadcasts are all examples of emissions.
6	Greenhouse gas	gases in the earth's atmosphere that trap heat.
7	Methane	Greenhouse gas produced by human activities like farming.
8	Synthetic	Made in a chemical process and isn't found naturally on earth eg synthetic rubber or plastic
9	Fertiliser	A substance (such as animal manure or an artificial chemical, particularly one that contains nitrogen, phosphorus, and potassium) that is added to soil to increase its productivity for crops.

Prior Learning

10	Low biological value protein (LBV)	Low biological value (LBV) proteins are missing one or more of the essential amino acids we need.
11	High biological protein (HBV)	High Biological value (HBV) proteins contain all the 10 essential amino acids. Functions in the body.
12	Amino Acids	Amino acids are molecules that combine to form proteins. Amino acids and proteins are the building blocks of life
13	Deficiency	a lack or shortage
14	Protein deficiency (Kwashiorkor)	Kwashiorkor is a disease marked by severe protein malnutrition and bilateral extremity swelling. It usually affects infants and children, most often around the age of weaning through age 5. The disease is seen in very severe cases of starvation and poverty-stricken regions worldwide

GEOGRAPHY



Current Learning

1	How many people visit the Lake District each year?	16 million
2	How much money do tourists spend in the Lake District?	£1 billion
3	Name Earth's highest mountain	Mount Everest
4	Where is the Lake District located?	West of the United Kingdom, northwest of England.
5	What are the opportunities for economic activity in the Lake District?	Tourism, farming, quarrying and forestry
6	What is economic activity?	Activities which generate an income (money) for an area.
7	How many people visited the Lake District in 2018?	Around 19.38 million visitors each year (2018).
8	What are the main tourist activities in the Lake District?	Hiking, rock climbing, water sports or enjoyment of towns and scenery.
9	How many people does farming employ in the Lake District?	2,500

Prior Learning

11	What is an ice sheet?	A mass of ice which is more than 50,000km ² in size.
12	What is a tundra environment?	A cold region where the ground is deeply frozen; only the surface thaws in the summers, allowing small plants to grow.
13	When did the last ice age start?	100,000 years ago
14	When did the last ice age end?	20,000 years ago
15	What was most of the UK covered by in the last ice age?	An ice sheet
	What term is used to describe permanently frozen ground, where the surface thaws in summer?	Tundra
	How much lower were sea levels during the ice age?	120 metres in places

HISTORY



Current Learning

1	The Germans were forced to start retreating from Russia after defeat in what battle?	Stalingrad
2	How many Germans were killed by Allied bombing during the war?	Over 400,000
3	What was the coding machine used by the Germans to encrypt military communications?	Enigma
4	What British scientist led the team at Bletchley Park that cracked these codes?	Alan Turing
5	What was the name for the Allied invasion of Normandy on 6 June 1944?	D-Day
6	What American general commanded the Allies in Europe in 1944-45?	Dwight D. Eisenhower
7	How did Hitler die?	Suicide by gunshot
8	What action did the USSR take against Japan in August 1945?	Invaded Japanese-occupied territories
9	What was the name of the American research project in which the atomic bomb was developed?	The Manhattan Project
10	On what two Japanese cities did America drop atomic bombs in August 1945?	Hiroshima and Nagasaki

Prior Learning

11	What policy was imposed by the British government that mobilised all of society for the war effort?	Total war
12	What government department was tasked with controlling news and communication with the public?	Ministry of Information
13	How many women were working in roles such as mechanics and engineers by 1943?	7.25 million
14	What name was given to the organisation of 80 000 women that ensured that farms kept running during the war?	Women's Land Army
15	How many children were evacuated to the countryside from major British cities?	1.5 million children
16	How many major bombing raids was London subjected to by the Luftwaffe during the Blitz?	71 bombing raids
17	What other major British cities were bombed during the Blitz?	Coventry, Bristol, Birmingham, Glasgow, Liverpool
18	What was developed by the Germans in 1944 that led to significant damage in Britain and was impossible to prevent?	V-1 flying bombs and V-2 rockets
19	How many British civilians died during the bombing raids?	60 000 British civilians
20	What were Home Guard units instructed to do in the event of Nazi occupation?	Destroy supply lines, disable vehicles and assassinate Nazi officers

MFL

AHOJ TER HALLO
iHOLA ER OLA HEJ
HELLO HALLO
MERHABA KUMUSTA
BONJOUR

Current Learning GROUP 6 WORDS

1	ich benutze	I use
2	nie	never
3	Abend	evening
4	nach	after
5	manchmal	sometimes
6	Handy	phone
7	normalerweise	normally
8	Freizeit	freetime
9	Soziale Medien	social media
10	Wochenende	weekend

Prior Learning

11	Grundschule	primary school
12	Hausaufgaben	homework
13	Reihenhaus	terraced house
14	spannend	exciting
15	unterhaltsam	entertaining



MUSIC

Current Learning

1	Time Signature	Amount of beats in a bar
2	Syncopation	Off beat rhythms
3	Call and Response	Question and answer musical devices
4	Improvisation	Making up a music rhythm or phrase
5	Crescendo	Gradually getting louder
6	Diminuendo	Gradually getting quieter
7	Accelerando	Gradually getting faster
8	Signal	Musical phase use to signify a change in section
9	Master Drummer	Leader of a drum performance

Prior Learning

10	Pulse	Constant steady beat, heartbeat of the music
11	Ostinato	Repeated rhythm
12	Polyrhythm	Many rhythms, layered rhythms
13	Note values: Semibreve = 4 Minim = 2 Crotchet = 1 Quaver = 1/2 Semiquaver = 1/4	Duration of notes used in music notation
14	Beat	Main pulse

RELIGIOUS EDUCATION



Current Learning

1	Anti-Semitism	Hostility or prejudice to Jewish people.
2	Atonement	Making things better after sinning, asking for forgiveness from God
3	Banality of Evil	Evil that can result from thoughtless behaviour, normal, common, and dull, not sadistic, evil actions.
4	Dignity	To treat someone with honour and respect.
5	Evil	That which is considered to be extremely immoral, wicked and wrong.
6	Free Will	The ability to choose between right and wrong for yourself. To follow your own path.
7	Moral Evil	It is manmade: it is evil created on purpose by humanity and often leads to suffering.
8	Natural Evil	Evil caused by nature; humans, have very little control over it and it does not discriminate.
9	Sin	Any thought or action which goes against God's will.

Prior Learning

10	Discrimination	To act differently towards or against someone or a group on the basis of prejudice.
11	Equality	The state of being equal, especially in status, rights, or opportunities.
12	Prejudice	Believing some individuals or groups are inferior or superior without even knowing them, forming an unreasonable opinion without evidence for it.
13	Social Injustice	The wrongful actions against individuals within society.
14	Social Justice	Means ensuring there is equal distribution of wealth, opportunities, and privileges in society.



SCIENCE

Current Learning

1	Inheritance	The process of passing genetic information from parents to offspring through genes during reproduction.
2	DNA	A molecule found in the nucleus of cells that contains genetic information.
3	Evolution	The gradual change of species over time, influenced by natural selection.
4	Variation	The differences between individuals of the same species, some of which are inherited and some caused by the environment.
5	Chromosome	Thread-like structures containing tightly coiled DNA, which carry many genes.
6	Gene	A section of DNA that determines an inherited characteristic.
7	Gamete	A reproductive cell (sperm or egg) that carries half the genetic material of each parent.
8	Dominant	An allele that expresses its trait even when only one copy is present.
9	Recessive	An allele that is expressed only when two copies are present.
10	Biodiversity	The variety of living organisms, which is important for maintaining ecosystems and populations.

Prior Learning

11	Velocity	The speed of an object in a given direction.
12	Vector Quantity	A quantity that has both magnitude (size) and an associated direction. Example: velocity.
13	Scalar Quantity	A quantity that has magnitude (size) but no associated direction. Example: speed.
14	Displacement	The distance moved in a straight line, in a given direction, from the starting point.
15	Distance-Time Graph	A graph used to represent a journey with distance travelled on the y-axis and time on the x-axis.
16	Stationary	A word used to describe an object that is not moving.
17	Gradient	A measure of the slope of a line. The greater the gradient, the steeper the slope.
18	Relative Motion	A way of describing an object's motion relative to another object's motion.
19	Misconception	A commonly believed idea or fact that is incorrect.
20	Moment	The turning effect of a force which is created by a force acting around a pivot.