

Y9 KNOWLEDGE ORGANISER

Name: _____

Tutor: _____



For each subject, this book contains the knowledge that you should learn by the end of...

Autumn 2025-26

TIMETABLE

Glue your timetable onto this page.

A	MON	TUES	WEDS	THURS	FRI
1					
2					
3					
4					
5					

B	MON	TUES	WEDS	THURS	FRI
1					
2					
3					
4					
5					

INTRODUCTION

At The Purbeck School, we know completing your home learning is essential to long term academic success. It allows you to extend your learning and to reinforce what has been learnt in class.

Daily home learning will be in three 20-minute parts:

1. **English: Sparx Reader**
2. **Maths: Sparx Maths**
3. Knowledge organiser **self-quizzing**

ENGLISH: www.sparxreader.com

Login:

Password:

Sparx Reader gives all students access to a rich range of books, with quizzes throughout to support engaged reading.

- Each week, tasks are set Monday to Monday.
- In total, reading and quizzes should take around one hour.
- You must complete 100% in each task.
- Gold Readers can add any book and earn points by keeping reading logs.

MATHS: www.sparxmaths.com

Login:

Password:

Sparx-Maths provides practice on what you've learnt in class and consolidation what you've learnt through the year.

- Each week, tasks are set Monday to Monday.
- In total, tasks should take around one hour.
- You should show your workings in your orange homework book.
- You must complete 100% in each task.

SELF-QUIZZING

Your teachers will quiz you regularly on what you are expected to learn.

- On the subject page in this book, organise yourself by noting:
 - The date of your knowledge quiz.
 - What knowledge you need to self-quiz and learn.
- Pick one of our Independent Study Strategies (see next page) and spend at least 20mins revising.
- Bring evidence of your self-quizzing to the lesson.
- On the day of your knowledge quiz, be prepared and attempt every question.

SUPPORT

If you need help with any aspect of your home learning then...

- Please go and see your subject teacher.
- Extra help is also available at Study Plus, our after-school home learning club, every Tuesday – Thursday 3.10-4.10pm in room E14.

INDEPENDENT STUDY STRATEGIES

Independent study involves undertaking activities that will help you to improve in that area. There are many effective ways you can study independently – here are a few strategies

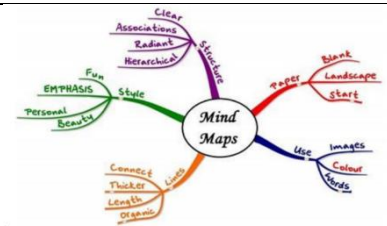


Self-quizzing – Look, Cover, Write, Check

- **LOOK:** Read the question and the answer.
- **COVER:** Cover up the answer column.
- **WRITE:** Write the answer from your memory.
- **CHECK:** Finally, mark your work. Correct any mistakes.

Mind Maps

- Make notes around a key concept or subject.
- Draw lines to link definitions, key ideas and related parts.
- You may find it helpful to use different colours for different ideas.

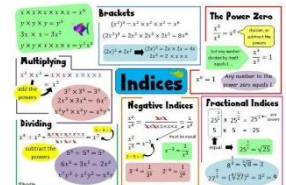


Flash Cards

- Write key points down on flash cards and carry them around with you – look at them as often as you can!
- Use them as a quiz – write a key word on one side and the definition on the other, then test yourself.

Posters

- Make your own colourful posters! You can pick any subject as your theme.
- Draw diagrams or pictures to go with your text.
- Display them in a visible place at home.



Practice Example Questions

- For many subjects a good way to revise is to work through some example questions.
- You can practice these questions over and over to develop your understanding.
- If there are parts of questions that you find hard or think you haven't understood, you can check your notes, search online, or seek advice from your teacher.

Websites

These websites provide opportunities for students to learn, practise and get feedback:

- Seneca Learning: www.senecalearning.com
- BBC Bitesize: www.bbc.com/bitesize
- Sparx-Maths: www.sparxmaths.com
- Free Science Lessons: www.freesciencelessons.co.uk



KNOWLEDGE ORGANISER SELF-QUIZZING

This table will help you organise your knowledge organiser self-quizzing.

9X	MON	TUES	WEDS	THURS	FRI
A	FRENCH/SPANISH	SCIENCE	RE ART ³ , MuDr ¹⁺²	ENGLISH MATHS	SCIENCE
B	ENGLISH GEOGRAPHY ¹⁺³	SCIENCE HISTORY	ART ¹⁺² , MuDr ³	GEOGRAPHY ²	MATHS DESIGN

9Y	MON	TUES	WEDS	THURS	FRI
A	ENGLISH	SCIENCE ART ¹⁺²	HISTORY ¹ RE ²⁺³	SCIENCE	MATHS ART ³ , RE ¹ HISTORY ³
B	DESIGN	GEOGRAPHY DRAMA/MUSIC	ENGLISH	FRENCH/SPANISH HISTORY ²	MATHS SCIENCE

* Class numbers noted in subscript

This knowledge organiser example gives an idea on how you can note the date of your quiz and a self-assessment (RAG) of your knowledge...

KNOWLEDGE ORGANISER – THE PURBECK SCHOOL

1.	What is The Purbeck School motto?	Achieving Excellence Together	1/9/24
2.	What are our three core values?	- Kindness - Aspiration - Perseverance	1/9/24
3.	Who is the Headteacher?	Mr Darley	1/9/24
4.	Name the four Houses.	- Kestrel - Kingfisher - Skylark - Swift	1/9/24
5.	What time should all students be in school for every day?	8.40am	1/9/24
6.	Where can students buy food at lunchtime?	- Y7: cafe - Y8/9: canteen	1/9/24
7.	Based in the Aim High block, where can students go if they are worried, concerned or having difficulties?	The Nest	1/9/24
8.	As part of home learning, state the three 20min activities that all students complete each evening.	- Reading Plus - Sparx Maths - Self-quizzing	1/9/24
9.	Where can you go to help and support with home learning?	- Your subject teacher - Home learning club	1/9/24
10.	State three extra-curricular activities that a student can get involved in.	- Choir - Sports clubs - STEM	1/9/24

LONG TERM PLAN

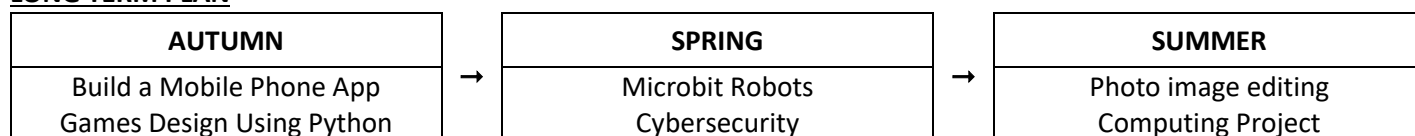


1.	What are the 4 main methods/approaches to sculpture?	• Carving • Modelling • Assembling • Casting	
2.	What is installation art?	Art that focuses on how the viewer experiences the work.	
3.	What are the 8 formal elements of 3D design?	• Line • Value • Shape • Colour • Space • Mass/Volume • Plane • Texture	
4.	What is value?	The lightness or darkness of a colour	
5.	What is a flat surface, and any distinct flat surface within a painting or sculpture called?	A plane	

6.	What is volume?	A shape in 3D.	
7.	What is mass?	Volume x density (actual or perceived weight).	
8.	What was Naum Gabo's real name?	Naum Pevsner	
9.	What Nationality was Naum Gabo?	Russian	
10.	What 2 things did Naum Gabo want to represent in his work?	Negative space 'released from any closed volume or mass' and time	

11.	List 3 ways to cut and connect cardboard	• Fold • Slot • Flange • Bend • Tab • Tab & slot • L-brace • Gusset • Wedge	
12.	Why is it important to follow health and safety rules when using scalpels?	To keep yourself and others safe	
13.	List 2 health and safety rules when using a scalpel	1. Keep your non-cutting hand away from the blade 2. Use a cutting mat 3. Use a metal ruler when cutting straight lines 4. Carry the scalpel blade down 5. Return all scalpels at the end of the lesson	
14.	What is the name of the painting technique where a small amount of paint is applied with a dry brush to accentuate textured surfaces?	Dry-brushing	

LONG TERM PLAN



1.	Who is credited with having conceived the first automatic digital computer in 1837?	Charles Babbage	
2.	State a digital currency using cryptography to secure transactions.	Cryptocurrency	
3.	A to do list is an example of which Computational Thinking Skill?	Decomposition	
4.	What year was the word 'computer' first used? It described someone who did calculations perfectly.	1615	
5.	In Programming, what term describes when you make a mistake using the programming language, missing a comma, that causes it to crash?	Syntax Error	

6.	Who is the founder of Tesla and SpaceX and the owner of Twitter?	Elon Musk	
7.	How do individuals or businesses reduce the risk of Cyber Attack?	Cybersecurity	
8.	Calculating a tip on restaurant bill an example of which Computational Thinking Skill?	Pattern Recognition	
9.	What year was the first keyboard used to input data?	1956	
10.	In Programming, what is the blank space at the beginning of the line of code known as?	Indent	

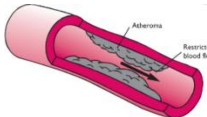
11.	Who is the founder of Facebook?	Mark Zuckerberg	
12.	The simulation of human intelligence processes by machines, especially computer systems?	Artificial Intelligence	
13.	A map is an example of which Computational Thinking Skill?	Abstraction	
14.	What year was Microsoft founded?	1975	
15.	In Programming, what term describes a bug in a program that causes it to operate incorrectly, but not crash	Logic Error	

16.	Who is a founder of Microsoft?	Bill Gates	
17.	What term describes a system of recording information in a way that makes it difficult or impossible to change, hack or cheat the system?	Blockchain	
18.	A recipe for a cake is an example of which Computational Thinking skill?	Algorithm	
19.	What year was the first iPhone released?	2007	
20.	In Programming, what term describes a block of code that can be used repeatedly, rather than writing it out multiple times?	Function	

Y9 DESIGN KNOWLEDGE ORGANISER – FOOD 1: BRITISH AND INTERNATIONAL CUISINE

LONG TERM PLAN

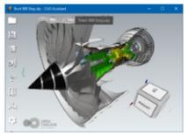
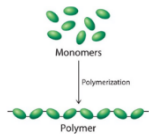
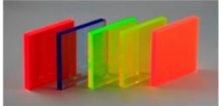
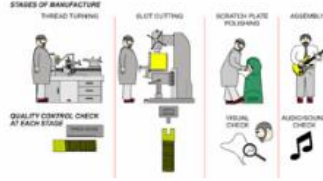
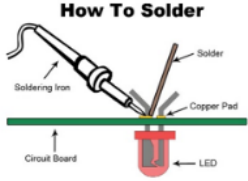
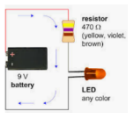
ROTATION 1	→	ROTATION 2
British And International Cuisine		Nutrition and Healthy Eating

1.	What does CHD stand for?	Coronary heart disease		
2.	What is obesity?	A diet related disease in which the body contains too much stored fat, a BMI of 30+		
3.	What is enzymic browning?	Discoloration of a fruit or vegetable due to reaction of enzymes with plant cell substances and oxygen from the air.		
4.	What is caramelisation?	Breaking up of sucrose [sugar] molecules when they are heated , which changes the colour, flavour and texture of the sugar.		
5.	a. Name one chemical raising agent used in cookery. b. How does it work? c. What gas is produced?	a. Bicarbonate of soda, baking powder b. They are activated by heat/moisture c. Carbon dioxide (CO ₂)		
6.	Name one biological raising agent used to bake bread.	Yeast		
7.	List the five conditions micro-organisms need to grow.	• Suitable temperature [warmth] • A supply of moisture • A supply of food • Enough time • The right PH level		
8.	What temperature is a fridge and why?	0 – 5°C. It slows down the growth of bacteria and extends the shelf life.		
9.	What temperature should cooked food be heated to and why?	Above 75 °C This kills the bacteria		
10.	When reheating food to 75°C or above, how long should it take?	3 mins		

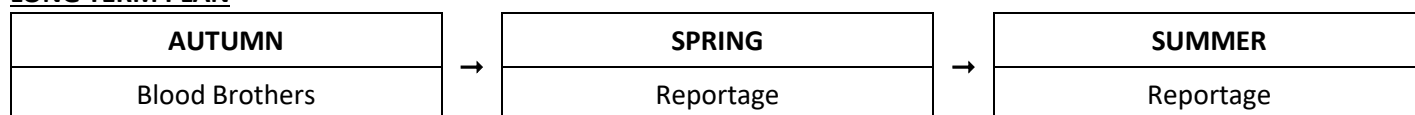
Y9 DESIGN KNOWLEDGE ORGANISER – PRODUCT DESIGN 1: LAMP

LONG TERM PLAN

ROTATION 1	→	ROTATION 2
Lamp		Work of Others

1.	What benefits do CAD/CAM offer companies?	• Designs can be easily emailed to other designers. • CAD allows for designs to be tested on screen in 3D. • CAM allows for parts to be made quickly.		
2.	How does a 3D printer work?	Material is put down in layers to build up a 3D shape.		
3.	Describe how polymerisation is used to make plastics.	Molecules of simple compounds known as monomers join together to other monomers to form polymers. A polymer is a very strong, flexible material.		
4.	How can a thermoplastic be recycled?	Plastics are separated (using the identifying symbols) and melted down. They can then be reformed into other plastic products.		
5.	Name two thermoplastics other than acrylic.	• HIPS High impact polystyrene • Polypropylene • Polyethylene		
6.	What are the characteristics of acrylic?	It is tough but brittle when thin. Easily scratched, formed and bonded.		
7.	Why is quality control important during manufacture?	To ensure each part is made accurately with no faults. It stops poor quality products being made and ensures customers are happy.		
8.	What is soldering?	Soldering is a heat joining process which involves melting a conductive metal onto a circuit board and electrical components to join them.		
9.	What must you remember to do when soldering?	To aim to make a 'volcano' shaped joint, ensure that the joints are not too big and overlap to prevent short circuits.		
10.	Explain the purpose of the resistor in a circuit.	Resistors are a passive component that restricts the flow of electricity around the circuit.		

LONG TERM PLAN



1.	Which play's main themes are social class and inequality, education and opportunity, superstition and fate, and violence?	Blood Brothers	
2.	Which theatre practitioner said "Art is not a mirror with which to reflect reality but a hammer with which to shape it."?	Bertolt Brecht	
3.	What is the name given to the type of theatre created by Brecht?	Epic Theatre	
4.	What did Brecht call the act of distancing the audience from emotional involvement?	Verfremdungseffekt	
5.	What do you call the imaginary wall between actors and audience that Brecht aimed to break?	The forth wall	
6.	What term is used to describe when the audience know something that the characters on stage do not?	Dramatic irony	
7.	Which role is on stage the whole time? Acting as the storyteller in the prologue, they represent the theme of superstition and also often appear as the game-changer at important moments. For example, he appears as Mrs Johnstone's gynaecologist, telling her that she's expecting twins.	Narrator	
8.	Which minor characters are created for dramatic purposes? They either lack sympathy or are unfair and two-faced when dealing with others. They represent social institutions; which Russell seems to suggest are prejudiced.	- Policeman - Milkman - Judge - Teachers.	
9.	What motif is repeatedly used in Blood Brothers?	A gun	
10.	What term is used to describe a particular form of language which is peculiar to a specific region or social group? For example, someone from Liverpool might use the word "boss" instead of the standard English term "awesome" or "scran" to mean food.	Dialect	

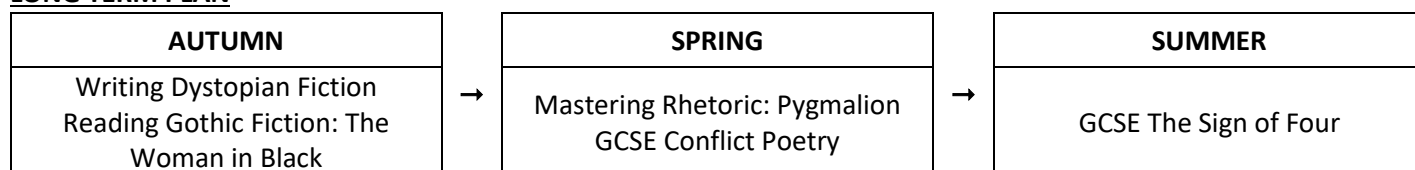
In addition to the self-quizzing questions, students will be required to learn short script extracts. These lines are provided in a separate Drama booklet.

How do I learn lines?

- Read the lines aloud.** By speaking the lines, you will hear them and they are more likely to stick.
- Ask a friend to help you. Friends can correct you on any mistakes you make, give you the cue lines and go back over any weak areas.
- Little and often. Go over them first thing in the morning, a few times during the day and last thing at night.
- Move around while you are saying your lines. This has been scientifically proven to aid memory.
- Learn the cue lines that lead in to each of your lines. Being prompt with your lines will give you and your fellow actors more confidence.
- In rehearsals, listen to and think about what the other actors are saying. Don't just concentrate on what you've got to say.

Practise, practise, practise. This is the only way to make the lines stick.

LONG TERM PLAN



1.	What genre of fictional writing is used to explore social and political structures in 'a dark, nightmare world'?	Dystopian fiction	
2.	What is the term for a common feature that defines a particular literary genre?	Convention	
3.	What are typical conventions of dystopian fiction?	- Government has strict control. - Citizens under surveillance. - Individuality is restricted. - Society is an illusion of utopia.	
4.	What refers to a type of government that requires complete subservience to the state?	Totalitarian	
5.	What is the term for the mood implied by an author's word choice and the way that the text can make a reader feel?	Tone	

6.	What is the term for an imagined place or state of things where everything is perfect?	Utopia	
7.	What is the name for a person or thing who actively opposes or is hostile to someone or something; an adversary or 'baddie'?	Antagonist	
8.	What term refers to a great difference between two things?	Disparity	
9.	What is the term used to describe the leading character or one of the major characters in a play, film or novel?	Protagonist	
10.	What verbs can we use to comment on the intention of a writer?	- To criticise - To entertain - To create tension - To teach	

11.	What are the three sentence types can we use to vary our sentences?	- Simple - Compound - Complex	
12.	What term refers to a desire to act cruelly towards or harm others	Malevolent	
13.	What type of sentence may not contain a subject or verb? It may contain only one word.	Minor sentence	
14.	What terms means something excessively harsh or severe?	Draconian	
15.	At the Purbeck School, what do we call using more than one adverbial clause usually at the beginning of a sentence?	Stacking adverbials	

16.	What is the term for the events in a story being told in the order they occur?	Chronological	
17.	What is the narrative perspective called when the narrative is <i>not</i> told from the point of view of one character. All character's thoughts and feelings are known.	Third person omniscient narrative	
18.	What term means being ready to conform to the authority or will of others; being meekly obedient or passive?	Submissive	
19.	What is the narrative perspective when a narrator recounts events from a character's point of view? E.g. 'I opened the door and looked inside'.	First person narrative	
20.	What is the narrative perspective called when you are placed within the story. E.g. 'You opened the door and looked inside'.	Second person narrative	

21.	What term describes a warning or clue to a future event in a text?	Foreshadowing	
22.	What is the term for the weather creating/mirroring the tone? E.g. The storm clouds grew. The sun shone out over the fields.	Pathetic fallacy	
23.	What is the term for when a character or idea is first mentioned?	Introducing	
24.	As we are given more information, the writer is said to be...	Developing	
25.	What term describes where a text is rounded up and completed?	Concluding	

26.	What term gives background information about the main character, plot or setting?	Exposition	
27.	What is the term for the final part of a play or novel in which the plot is drawn together and matters are explained or resolved?	Denouement	
28.	What is the name of a repeated idea throughout a piece of writing?	Motif	
29.	What term refers to stopping or restraining personal freedom?	Repress	
30.	What is the name given to language that sparks off the senses helping readers "picture" images?	Visual Imagery	

31.	What term refers to something intended to teach, particularly in having moral purpose?	Didactic	
32.	What are three examples of visual imagery?	• Metaphor. • Simile. • Personification.	
33.	What term describes a person or thing that triggers or hastens an event?	Catalyst	
34.	What phrase can be used to a writer's structural feature?	Focus shift	
35.	What is the name given to language that sparks off the senses helping readers hear sounds in writing?	Auditory Imagery	

36.	What term refers to a long speech or piece of writing, typically one regarded as tedious?	Screed	
37.	What are two examples of auditory imagery?	• Alliteration. • Onomatopoeia.	
38.	What is the term for a past event being narrated that is set in a time earlier than the main story?	Analepsis	
39.	What is the term for a narrative structure where the events are not told in the order they occur?	Non-linear	
40.	What is the term for when a narrative ends where it began?	Circular Narrative	

41.	What term refers to a narrative with two different perspectives, usually two different characters.	Dual Narrative	
42.	Which type of hook begins in the middle of a scene or event?	Action hook	
43.	What terms refers to disagreeing with the commonly held viewpoint or resistance to the ideologies of the society?	Dissent	
44.	What is the term for the opening of a story that captures the reader's attention so that they will keep on reading?	Literary hook	
45.	What is the term for when a writer/narrator asks the reader something that they can visualize and try to think of in their own minds?	Question hook	

46.	What type of hook explains things which are strange, seem impossible or are hard to picture?	Mystery hook	
47.	If the writer uses lots of metaphors, personification and/or similes, or an extended metaphor, what type of hook is this?	Figurative hook	
48.	What refers to something being strange and <u>frightening</u> ?	Eerie	
49.	Which type of hook begins with a character speaking?	Dialogue hook	
50.	What terms describe the reader the feeling of moving through space towards or away from a character or object?	Zooming in, zooming out	

Y9 ENGLISH KNOWLEDGE ORGANISER – READING GOTHIC FICTION: THE WOMAN IN BLACK

1.	What does the term genre mean?	A style or category of literature	
2.	Susan Hill's <i>The Woman in Black</i> is associated with which genre of fiction?	The Gothic genre	
3.	What does the term convention mean?	Elements of a text that relate to a specific genre	
4.	What are the conventions of Gothic literature ?	• Involves the supernatural • Gloomy settings • Atmosphere of fear and terror	
5.	What was considered the first Gothic novel ?	Horace Walpole's <i>The Castle of Otranto</i> (1764)	

6.	Who is the narrator and protagonist of the <i>The Woman in Black</i> ?	Arthur Kipps	
7.	What is an unreliable narrator ?	An untrustworthy storyteller	
8.	What historical period is <i>The Woman in Black</i> set?	Edwardian period	
9.	When did Susan Hill write <i>The Woman in Black</i> ?	1980s	
10.	What does the term rational mean?	Based on or in accordance with reason or logic	

11.	At the start of the novel, what is Kipps writing?	A ghost story	
12.	What does the term supernatural mean?	Attributed to some force beyond scientific understanding e.g. a ghost	
13.	What does the term foreboding mean?	A feeling that something bad will happen	
14.	At the start of the novel, where does Kipps travel from London to?	Crythin Gifford	
15.	Who is Alice Drablow ?	A client of Arthur Kipps; she has died	

16.	What does the term countenance mean?	A person's face or facial expression	
17.	Who does Kipps see at Alice Drablow's funeral?	A woman in black	
18.	What does the term isolation mean?	The state of feeling or being alone	
19.	What is the Gothic setting that Kipps must go to?	Eel Marsh House	
20.	What is pathetic fallacy ?	When description of setting/ weather reflects atmosphere/ mood	

21.	What is significant about Nine Lives Causeway ?	When the tide comes in, there is no escape	
22.	What real-life setting did Hill base Eel Marsh house on?	The Suffolk marshes	
23.	Who is the driver of the pony and trap that takes Kipps to Eel Marsh House?	Keckwick	
24.	What does the term reclusive mean?	Avoiding the company of other people	
25.	What does Kipps hear on the marshes?	The sound of a pony and trap	

26.	What does the term remoteness mean?	The state of being distant from something else	
27.	What is symbolism ?	When an image, object, or idea is used to represent something other than its literal meaning.	
28.	What strange room does Kipps find when he returns to Eel Marsh house?	The haunted nursery	
29.	What does the term structure mean?	How the writer builds the text	
30.	What are examples of terminology used for writing about structural features ?	• Focus shifts • Introduces • Zooms in/ out • Flashback • Cliff-hanger • Motif	

31.	What does Kipps discover has happened to the nursery?	It has been destroyed	
32.	Who rescues Kipps from Eel Marsh house?	Samuel Daly	
33.	Who is the woman in black ?	The ghost of Mrs Drablow's sister, Jennet	
34.	What does the term alienation mean?	The state of experiencing or inducing isolation.	
35.	What happened to Jennet?	Her child was taken from her	

36.	What is the curse of the woman in black?	Every time Jennet's ghost is seen a child dies	
37.	Who is Stella Kipps ?	Arthur Kipps' fiancé and first wife	
38.	What happens to Stella and their young child?	They die in an accident	
39.	What influenced Hill in writing about the tragedy of Kipps' wife and daughter?	Susan Hill's first fiancé died; she also lost her middle daughter	
40.	What is the term given to the main idea explored by the writer in a text?	Theme	
41.	What are the key themes in <i>The Woman in Black</i> ?	• Fear • Isolation • Haunting	

LONG TERM PLAN

AUTUMN	→	SPRING	→	SUMMER
Technology		World of Work		Holidays

Sentence Builder 1 – What I like to watch



1. Quelles sortes d'émissions aimes-tu? Which TV programmes do you like?									
1	2	3	4	5	6	7	8	9	10
A la télé, On TV	j'aime regarder <i>I like watching</i>	les films <i>films</i> les dessins animés <i>cartoons</i> les jeux télévisés <i>game shows</i> les séries <i>series</i>	car c'est <i>because it is</i>	amusant <i>funny</i> intéressant <i>interesting</i>	et <i>and</i>			les comédies <i>comedies</i> les films de guerre <i>war films</i> les films de science fiction <i>sci-fi films</i> les films d'horreur <i>horror films</i>	
	j'adore regarder <i>I love watching</i>	les documentaires <i>documentaries</i> les émissions de télé- réalité <i>TV reality shows</i>	parce que c'est <i>because it is</i>	divertissant <i>entertaining</i> enfantin <i>childish</i> éducatif <i>educational</i>	par contre <i>however</i>	au cinéma <i>at the cinema</i>	Repeat 2	les films d'action <i>action films</i> les westerns <i>westerns</i> les films romantiques <i>romantic films</i> les films policiers <i>crime films</i> les films historiques <i>historical films</i> les films d'animation <i>animated films</i>	Repeat 4 & 5
	je n'aime pas regarder <i>I don't like watching</i>	les émissions de sports <i>sports programmes</i> les émissions de cuisine <i>cooking programmes</i>	comme c'est <i>as it is</i>	ennuyeux <i>boring</i> barbant <i>boring</i>	cependant <i>however</i>	sur le grand écran <i>on the big screen</i>			
	je déteste regarder <i>I hate watching</i>	les émissions de cuisine <i>cooking programmes</i> les feuilletons <i>soap operas</i> les émissions musicales <i>musical programmes</i>	puisque c'est <i>as it is</i>	nul <i>rubish</i> bête <i>silly</i> triste <i>sad</i>	mais <i>but</i>				

Sentence Builder 2 – How I use technology



2. Comment utilises-tu la technologie? How do use technology?					
1	2	3	4	5	6
J'utilise <i>I use</i>	mon portable <i>my mobile phone</i>		regarder des films <i>watch films</i> écrire et lire des textos <i>write and read texts</i> écrire et envoyer des emails <i>write and send emails</i> consulter des sites web <i>check websites</i> faire des recherches <i>do some research</i> télécharger des jeux <i>download games</i> télécharger de la musique <i>download music</i> surfer sur l'internet <i>surf the net</i> participer aux forums <i>participate in forums</i> m'amuser <i>have fun</i>	car c'est <i>because it is</i>	pratique <i>practical</i> bon marché <i>cheap</i> facile à utiliser <i>easy to use</i> simple <i>simple</i> rapide <i>fast</i>
Je me sers de <i>I use</i>	ma tablette <i>my tablet/ipad</i>	pour <i>to</i>	télécharger de la musique <i>download music</i> surfer sur l'internet <i>surf the net</i> participer aux forums <i>participate in forums</i> m'amuser <i>have fun</i>	parce que c'est <i>because it is</i>	utile <i>useful</i> intéressant <i>interesting</i>
J'ai besoin de <i>I need</i>	mon ordinateur <i>my computer</i>	afin de / afin d' <i>in order to</i>	jouer à des jeux en ligne <i>play online games</i> faire mes devoirs <i>do my homework</i> aller sur des réseaux sociaux <i>go on social media</i> regarder des vidéos <i>watch videos</i> prendre des photos <i>take photos</i> organiser mon agenda <i>organise my diary</i> acheter en ligne <i>buy online</i> chatter <i>to chat</i>	comme c'est <i>as it is</i>	amusant <i>fun</i> marrant <i>funny</i> éducatif <i>educational</i> divertissant <i>entertaining</i> passionnant <i>exciting</i>
	mon ordinateur portable <i>my laptop</i>			puisque c'est <i>as it is</i>	

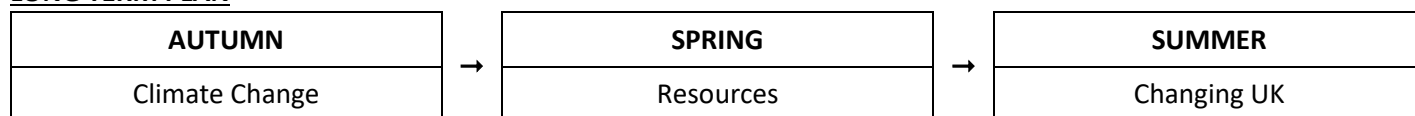
Sentence Builder 3 – Advantages and disadvantages of technology

3. Les avantages et les inconvénients de la nouvelle technologie? <i>Advantages and disadvantages of new technology?</i>					
1	2	3	4	5	6
Tout d'abord <i>First of all</i> Pour commencer <i>To start with</i> Premièrement <i>Firstly</i>	on peut rester en contact avec des amis / la famille <i>we can stay in touch with friends / family</i> c'est facile à utiliser <i>it's easy to use</i> on peut faire des recherches <i>we can research</i> on peut joindre des réseaux sociaux <i>we can join social networks</i>	en plus <i>furthermore</i> en outre <i>in addition</i> deuxièmement <i>secondly</i>	c'est éducatif <i>it's educational</i> c'est divertissant <i>it's entertaining</i> c'est informatif <i>it's informative</i> c'est pratique pour les devoirs <i>it's convenient for homework</i>	pour terminer <i>to finish</i> pour finir <i>to finish</i> finalement <i>finally</i> enfin <i>lastly / finally</i>	on peut télécharger de la musique <i>we can download music</i> on peut prendre des photos <i>we can take photos</i>
	ça coûte cher <i>it's expensive</i> on peut passer trop de temps dessus <i>we can spend too much time on it</i> on peut devenir accro <i>we can become addicted</i> il y a beaucoup de fraudes <i>there are a lot of scams</i>	puis <i>then</i> ensuite <i>then</i>	c'est illégal de télécharger certains sites <i>it's illegal to download certain sites</i> c'est dangereux <i>it's dangerous</i> votre identité peut être volée <i>your identity can be stolen</i>		c'est malsain <i>it's unhealthy</i> ça peut mener à la cyberintimidation <i>it can lead to cyberbullying</i> il faut faire attention aux fausses informations <i>you must be careful of fake news</i>

Sentence Builder 4 – For or against new technology

4. Es-tu pour ou contre la nouvelle technologie? <i>Are you for or against new technology?</i>				
1	2	3	4	5
Je suis pour la nouvelle technologie <i>I'm for new technology</i>	car <i>because</i> parce que <i>because</i>	ça rend la vie plus facile <i>it makes life easier</i> j'adore les nouveaux gadgets <i>I love new gadgets</i> on peut rester en contact avec des amis / la famille <i>we can stay in touch with friends / family</i> c'est éducatif <i>it's educational</i> c'est pratique pour les devoirs <i>it's convenient for homework</i> c'est utile pour faire des recherches <i>it's useful for research</i> on peut télécharger de la musique <i>we can download music</i> elle est indispensable <i>it is indispensable</i> c'est bon pour se tenir au courant <i>it's good to keep up to date</i>	et je dirais que je l'utilise <i>and I would say that I use it</i>	souvent <i>often</i> très souvent <i>very often</i> trop souvent <i>too often</i> rarement <i>rarely</i> tous les jours <i>everyday</i> tous les week-end <i>every weekend</i> tout le temps <i>all the time</i> tous les soirs <i>every night</i> jamais <i>never</i>
	comme <i>as</i> puisque <i>as</i>	il peut y avoir des personnes malintentionnées <i>there can be some people with malicious intent</i> on peut devenir accro <i>we can become addicted</i> il y a beaucoup de fraudes <i>there are a lot of scams</i> c'est dangereux <i>it's dangerous</i> votre identité peut être volée <i>your identity can be stolen</i> ça coûte cher <i>it is expensive</i> beaucoup de gens ne savent pas l'utiliser <i>many people do not know how to use it</i> c'est difficile de vivre sans elle <i>it's difficult to live without it</i>	et je dirais que je suis <i>and I would say that I am</i> et je dirais que je ne l'utilise pas <i>and I would say that I don't use it</i>	accro) mordu(e)) <i>addicted</i> fana) souvent <i>often</i> assez souvent <i>often enough</i> du tout <i>at all</i>

LONG TERM PLAN



1.	What is climate?	Climate is the average atmospheric conditions over a year, e.g. polar climate.	
2.	What is weather?	Weather is the day to day changes, e.g. rainy	
3.	What gases make up the Earth's atmosphere?	- Carbon dioxide - Oxygen	
4.	What is a high-pressure air system?	Cold (dense) air that descends to the ground	
5.	What is a low-pressure air system?	Warm air that rises into the atmosphere	

6.	What is the distribution of insolation (Incoming Solar Radiation) across the globe?	Insolation is greatest at the equator.	
7.	What are the causes of natural climate change?	- Sunspots - Volcanic Eruptions	
8.	What process describes 'the trapping of the sun's energy that maintains our planets average temperature'?	The Greenhouse Effect.	
9.	How has climate change been caused by humans?	- Transport - Burning fossil fuels	
10.	State two impacts of climate change on the Arctic.	- Ice caps melting. - Destruction of habitats.	

11.	Name two responses to climate change.	- Investment in renewable energy. - Electric cars	
12.	Define the term mitigation.	To prevent or stop the actions of climate change.	
13.	Write down one advantage of the Paris Agreement.	The EU have pledged a 40% reduction in carbon emissions by 2030.	
14.	Explain an advantage of recycling.	- Fewer fossil fuels are needed to create new products. - Meaning less greenhouse gas emissions.	
15.	What are four characteristics of sustainability?	- Long lasting. - Environmentally friendly. - Cost effective. - Benefits locals.	



LONG TERM PLAN

AUT1	How Did Power Change Before the Second World War?
AUT2	How Did Power Change After the Second World War?
SPR1	How Did Individuals Experience the First World War?
SPR2	How Can We Tell the Full Story of The Holocaust?
SUM1	How Did the Wider World Impact Britain In the Later Twentieth Century?
SUM2	What Are the Impacts of Decolonisation on The Wider World?

1.	Which countries were part of the Triple Alliance?	• Britain • France • Russia	
2.	Which countries were part of the Triple Entente?	• Germany • Austria-Hungary • Italy	
3.	What was militarism?	Building up your army and military	
4.	What does nationalism mean?	Believing that your country is the best	
5.	What is imperialism?	Where empires rule over smaller countries and influence them.	

6.	What is a revolution?	A rapid change in a country's political, social or economic system	
7.	When was the Russian Revolution?	1917	
8.	Who took control in Russia?	Vladimir Lenin and the Communists	
9.	What was the name of the peace treaty signed to end WW1?	Treaty of Versailles	
10.	State two terms of the Treaty of Versailles.	• Germany had to pay £6.6 billion in reparations • Germany could have only 100,000 soldiers and no air force	

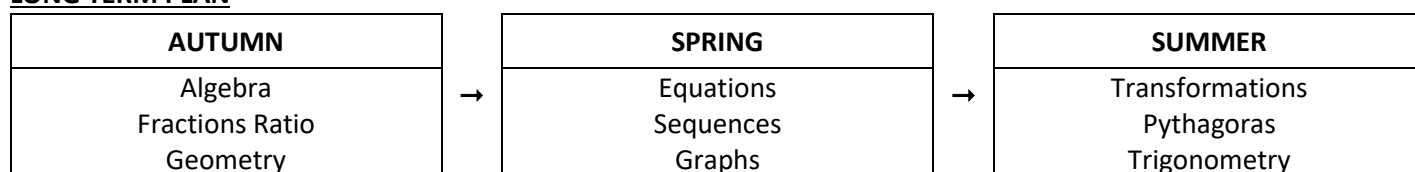
11.	What is democracy?	When people can vote for their elected leaders and have civil rights.	
12.	What is dictatorship?	When people have no control over their government and do not have civil rights.	
13.	Which two ideologies used dictatorship?	• Communism • Fascism	
14.	What was Adolf Hitler's idea of 'Lebensraum'?	Having living space for German people in eastern Europe.	
15.	What was Adolf Hitler's idea of 'Grossdeutschland'?	Uniting all German speaking people in one 'Greater Germany'.	

Y9 HISTORY KNOWLEDGE ORGANISER – 9.2: HOW DID POWER CHANGE AFTER THE SECOND WORLD WAR?

1.	What type of warfare did Nazi Germany use to achieve swift victories at the start of the Second World War?	Blitzkrieg (lighting war)	
2.	Who were 'the Axis' during the Second World War?	- Germany - Italy - Japan	
3.	Who were 'the Allies' during the Second World War?	- British Empire - French Empire - United States of America - Soviet Union (Russia)	
4.	Who was the Prime Minister of Britain for most of the war?	Winston Churchill	
5.	In what four ways did life change for the British people on the 'home front'?	- Rationing - Work - Evacuation (evacuees) - The Blitz	

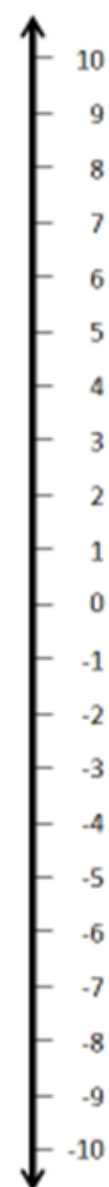
6.	What was the Cold War?	A conflict between the Soviet Union and the USA where they never directly fought.	
7.	What major event took place in 1948-9 which kickstarted Cold War tensions?	The Berlin Blockade	
8.	Why was the Berlin Wall built in 1961?	To prevent people from fleeing communist East Berlin.	
9.	Which event in 1962 almost led to nuclear war between the Soviet Union and the USA?	The Cuban Missile Crisis	
10.	In which south-east Asian country did the USA go to war against communists?	Vietnam	

11.	When did the Berlin Wall come down?	1989	
12.	When did the Soviet Union stop being a country?	1991	
13.	What is nuclear proliferation?	The spread of nuclear weapon technology to new countries.	
14.	In Northern Ireland, what is a unionist?	A person who wants Northern Ireland to remain part of the United Kingdom.	
15.	In Northern Ireland, what is a republican?	A person who wants Northern Ireland to join the Republic of Ireland.	

LONG TERM PLAN


In Maths, all lessons begin with a Knowledge Quiz. Lessons held earlier in the week provide opportunities to practice the skills and receive feedback from your teacher. Always mark your practice quizzes thoroughly and glue them into your self-quizzing exercise book.

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144



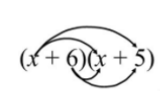
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1.	What word describes a letter that represents an unknown number?	Variable	
2.	What are the rules for writing algebra?	- Write the number first. $a \times 3 = 3a$ - If this is 1, then omit it. $1 \times b = b$ - Omit the multiplication sign. - Write the letters in alphabetical order. $c \times d = cd$	
3.	What word describes the short 'bits' of algebra, a number or variable, in an expression which are separated by a '+' or a '-'?	Term	
4.	What word describes a collection of terms?	Expression	
5.	What word describes the number in front of a term?	Coefficient	
6.	What process involves replacing the letter in the expression with the assigned number?	Substitution	

7.	When raising a number to a power, what word is used for the number?	Base	
8.	What is the multiplication law of indices?	- Keep the base the same - Add the powers. $a^5 \times a^2 = a^7$	
9.	How do I multiply terms?	- Multiply the coefficients - For each type of variable, add the powers. $3f^2g \times 4fg^3 = (3 \times 4) \times (f^2 \times f) \times (g \times g^3) = 12f^3g^4$	
10.	What is the power law of indices?	- Keep the base the same - Multiply the powers. $(a^3)^4 = a^{12}$	
11.	What is the factor law of indices?	- Raise the coefficient by the power. - For each type of variable, multiply the powers. $(5a^4b^2)^3 = 5^3 \times (a^4)^3 \times (b^2)^3 = 125a^{12}b^6$	
12.	What is the division law of indices?	- Keep the base the same. - Subtract the powers. $a^5 \div a^2 = a^3$	

13.	What word describes terms with the same combination of variables raised to the same powers?	Like term	
14.	What process involves... - Adding or subtracting the coefficients of like terms - Keeping the variables/powers the same?	Collecting like terms	
15.	What process involves multiplying each term inside the bracket by the value on the outside of the bracket?	Expanding brackets.	
16.	What mnemonic is used to remember the process of expanding double brackets, where each term in first bracket is multiplied by each term in the second bracket?	 $(x+6)(x+5) = x^2 + 5x + 6x + 30$ $= x^2 + 11x + 30$ F First O Outer I Inner L Last FOIL	

17.	What process involves inserting brackets and is the opposite of expanding?	Factorising	
18.	How do I factorise algebraic expressions ?	- Find the HCF. - Write it in front of a pair of brackets. - Complete the factor inside the bracket. $21x - 28y = 7(3x - 4y)$	
19.	How do I factorise quadratic expressions of the form $x^2 + bx + c$?	Find a pair of numbers which there: product equals the constant term. sum equals the coefficient of x. $x^2 + 5x + 6 = (x + 3)(x + 2)$	
20.	What term describes an expression that contains exactly two squared terms separated by a minus sign, $a^2 - b^2$?	A difference of two squares $a^2 - b^2 = (a + b)(a - b)$	



Y9 MATHS KNOWLEDGE ORGANISER – PROPORTIONAL REASONING

In Maths, all lessons begin with a Knowledge Quiz.

Lessons held earlier in the week provide opportunities to practice the skills and receive feedback from your teacher. Always mark your practice quizzes thoroughly and glue them into your self-quizzing exercise book.

1.	What is a fraction ?	A fraction is a part of a whole. A quantity is split into equal parts.
2.	What is the top number of the fraction called?	Numerator.
3.	What is the bottom number of the fraction called?	Denominator.
4.	What is an improper fraction?	A fraction where the numerator is more than the denominator. E.g. $\frac{10}{7}$
5.	What is a mixed number ?	A whole number and a fraction together. E.g. $1\frac{3}{7}$
6.	What are equivalent fractions ?	Fractions that look different but have the same value.
7.	What is a simplified fraction?	A fraction where its numerator and denominator have a HCF of 1.
8.	What is a percentage ?	A quantity where a whole is split into 100 parts. $27\% = 0.27 = \frac{27}{100}$
9.	What is a ratio ?	Ratio compares multiple parts within a whole. Identify what represents each part and what represents the whole.
10.	What does it mean if two quantities are in proportion ?	The quantities increase/decrease in the same ratio.

11. How do I convert between standard units of measure?			Other conversions:
<i>Kilo</i> means 1000 <i>Centi</i> means $\frac{1}{100}$ <i>Milli</i> means $\frac{1}{1000}$	1 km = 1000 metres 1 metre = 100 cm 1 cm = 10 mm	1 kg = 1000 grams 1 litre = 100 centilitres 1 gram = 1000 milligrams	5 miles = 8 km 1 inch $\approx$ 2.5 cm 1 kg $\approx$ 2.2 pounds 1 gallon $\approx$ 4.5 litres

Fraction	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{100}$
Decimal	0.5	0. $\dot{3}$	0.25	0.2	0.125	0.1	0.05	0.01

In Maths, all lessons begin with a Knowledge Quiz.

Lessons held earlier in the week provide opportunities to practice the skills and receive feedback from your teacher.

Always mark your practice quizzes thoroughly and glue them into your self-quizzing exercise book.

1.	What word describes two lines that never intercept (cross) each other? These are indicated using arrows.	Parallel	
2.	What word describes two lines that intercept or cross at right angles?	Perpendicular	
3.	What word means 'next to'?	Adjacent	
4.	What word describes two identical objects of the same size and same shape?	Congruent	
5.	What word describes a 2D object with any number of straight sides?	Polygon	

6.	What type of polygon has equal length sides and equal angles?	Regular polygon	
7.	What type of polygon does not have equal length sides and equal angles?	Irregular polygon	
8.	What type of triangle has three equal length sides and three equal angles (all 60°)?	Equilateral triangle	
9.	What type of triangle has two equal length sides and two equal angles?	Isosceles triangle	
10.	What type of triangle has no equal length sides and no equal angles?	Scalene triangle	

11.	What is the name of any four-sided shape?	Quadrilateral	
12.	What type of quadrilateral has both pairs of opposite sides parallel?	Parallelogram	
13.	What type of parallelogram has all sides equal?	Rhombus	
14.	What type of parallelogram has four right angles?	Rectangle	
15.	What type of parallelogram has all sides equal and four right angles?	Square	

16.	What type of quadrilateral has one pair of parallel sides?	Trapezium	
17.	What type of quadrilateral has two pairs of equal adjacent sides but unequal opposite sides?	Kite	
18.	What is the name of a five-sided shape?	Pentagon	
19.	What is the name of a six-sided shape?	Hexagon	
20.	What is the name of a seven-sided shape?	Heptagon	

21.	What is the name of an eight-sided shape?	Octagon	
22.	What is the name of a nine-sided shape?	Nonagon	
23.	What is the name of a ten-sided shape?	Decagon	
24.	What word describes the flat surface of a 3D object?	Face	
25.	What word describes where two faces meet on a 3D object?	Edge	

26.	What word describes the point or corner of a geometric shape?	Vertex	
27.	What type of 3D object has each of its ends the same size and shape?	Prism	
28.	What type of prism has all rectangular faces?	Cuboid	
29.	What type of prism has a circular cross section?	Cylinder	
30.	What type of prism has a triangular cross section?	Triangular prism	

31.	What type of 3D object has four triangular faces and a square base?	Square based pyramid	
32.	What type of 3D object has four triangular faces?	Tetrahedron	
33.	What type of 3D object has one curved face, with every point on its surface equidistant from its centre?	Sphere	
34.	What word describes how a 3D object can be represented in 2D form?	Net	
35.	What word describes the bird eye view of a 3D object?	Plan	

36.	What word describes the side view of a 3D object?	Elevation	
37.	What type of angle is less than 90° ?	Acute	
38.	What type of angle is more than 90° but less than 180° ?	Obtuse	
39.	What type of angle is more than 180° but less than 360° ?	Reflex	
40.	What is the sum of adjacent angles on a straight line?	180°	

41.	What is the sum of angles around a point?	360°	
42.	What is the sum of the angles in a triangle?	180°	
43.	What is the sum of the angles in a quadrilateral?	360°	
44.	What type of angle describes opposite angles where two lines intersect?	Vertically opposite	
45.	What word describes a line crossing two or more parallel lines?	Transversal	

46.	What type of equal angles lie on opposite sides of parallel lines and the opposite side of a transversal?	Alternate	
47.	What type of equal angles lie on the same side of parallel lines and the same side of a transversal?	Corresponding	
48.	What type of angle, which sums to 180° , lie on opposite sides of parallel lines and the same side of a transversal?	Allied	
49.	What is the name of the angle between an extended side of a polygon and its adjacent side?	Exterior angle	
50.	What is the name of the angle between two adjacent sides of a polygon?	Interior angle	

51.	What is the sum of exterior angles of any polygon?	360°	
52.	What is the sum of adjacent interior and exterior angles?	180°	
53.	What word describes an angle measured from north, measured clockwise and written using three digits?	Bearing	
54.	What term describes a path of a point that follows a rule?	Locus (plural: loci)	
55.	What term describes a line intersecting a line segment at its midpoint?	Perpendicular bisector	
56.	What term describes a ray that divides an angle into two equal parts?	Angle bisector	
57.	What term describes a quadrilateral whose vertices all lie on the circumference of a circle?	Cyclic quadrilateral	

LONG TERM PLAN

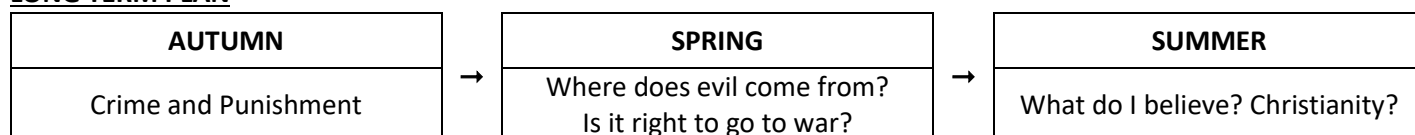


1.	When and where did Blues music originate?	At the end of the slave trade era (1800s) in the deep south of America.	
2.	What is a work song/field holler?	Songs that were sung on plantations by black people being held as slaves whilst they were working.	
3.	What is an AAB lyric structure?	When the first and second lines of the song are the same and the third line is different.	
4.	What is call and response?	Call & response originated in traditional African music and is when one person sings or plays a line of music then the rest of the group sing or play a response back.	
5.	Why does early blues music usually have simple instrumentation such as guitar and voice?	The people held in slavery didn't have access to many instruments so they used their voices and homemade instruments to create their music.	
6.	What 3 notes are in each of the 12 Bar Blues chords in the key of C?	(I) C = C E G (IV) F = F A C (V) G = G B D	
7.	What is an improvisation?	An improvisation is when a musician makes something up on the spot without having pre-planned exactly what they will play.	
8.	What's the difference between a triad and a 7 th chord?	A triad is a chord with only three notes in it; a 7 th chord has four notes in it.	
9.	What is the order of the 12 Bar Blues chord sequence?	C C C C F F C C G F C C	
10.	Why should you play the walking bassline with your left hand on the keyboard?	The left-hand side of the keyboard has a lower pitch and basslines should be low pitched.	

Y9 PRE KNOWLEDGE ORGANISER –

UNIT 1: CRIME AND PUNISHMENT – SHOULD YOU FORGIVE

LONG TERM PLAN



1.	What is the word for breaking the law?	Crime	
2.	What is the word for when you pay for your crime?	Punishment	
3.	What is another word for rules made by the government for people to follow and the breaking of which leads to punishment?	Law	
4.	What is the word for treating people fairly?	Just	
5.	What is the name for the system which upholds the laws and decides on punishments for crimes fairly?	Justice system	

6.	Give two examples of types of crime.	- Hate - Psychological - Historical - Organised	
7.	What is the term for the characteristics or qualities which make up a person?	Nature	
8.	What is the word for how people are raised and supported into adulthood?	Nurture	
9.	What is the term religious people use for going against God?	Sin	
10.	What is the term for doing something which is bad or morally wrong?	Evil	

11.	What is the aim of punishment which protects society?	Protection	
12.	What is the word when a criminal is punished for his or her crime?	Retribution	
13.	What is the word for putting the criminal off from doing the crime in the first place or committing the crime again?	Deterrence	
14.	What is the name of the punishment which allows the criminal to change their behaviour and become a better person?	Reform	
15.	What is the name for when the criminal has been punished and society can move on?	Vindication	

16.	What is the word for letting go of the crime and not blaming a person for a crime and moving on?	Forgiveness	
17.	What is the name for forgiving a person and moving on in your life?	Reconciliation	
18.	What is the name of the punishment that kills people?	Death penalty or capital punishment	

Y9 PRE KNOWLEDGE ORGANISER –

UNIT 2: CRIME AND PUNISHMENT – THE DEATH PENALTY

1.	What is the term for the system in our society which decides the punishment for criminals?	Justice system	
2.	What is the term religious people use for going against God?	Sin	
3.	What is the aim of punishment which protects society?	Protection	
4.	What is the word when a criminal is punished for his or her crime?	Retribution	
5.	What is the word for putting the criminal off from doing the crime in the first place or committing the crime again?	Deterrence	

6.	What is the name of the punishment which allows the criminal to change their behaviour and become a better person?	Reform	
7.	What is the name for when the criminal has been punished and society can move on?	Vindication	
8.	What is the word for letting go of the crime and not blaming a person for a crime and moving on?	Forgiveness	
9.	What is the name for forgiving a person and moving on in your life where you resolve your differences?	Reconciliation	
10.	What is the word when a criminal is punished for his or her crime?	Retribution	

11.	What is the name for the punishment in which physical pain is inflicted on the criminal? (not legal in the UK)	Corporal punishment	
12.	What is the name of the punishment that kills people?	Death penalty / Capital punishment	
13.	Which aims of punishment could support the death penalty?	• Protection deterrence • Vindication retribution	
14.	Which aims of punishment would not support the death penalty?	Reformation	
15.	What is the term used where people are wrongly convicted?	Miscarriage of justice	

LONG TERM PLAN

AUTUMN	• B1 Cell structure and transport • B9 Respiration • C1 Atomic Structure • C2 Periodic Table • P1 Conservation and Dissipation of Energy • P2 Energy Transfer by Heating
SPRING	• B4 Organisation in animals: Circulatory system • C1 Atomic Structure • C2 Periodic Table • C13 The Earth's Atmosphere • P1 Conservation and Dissipation of Energy • P2 Energy Transfer by Heating • P3 Energy Resources • P4 Electric Circuits • Practical Skills
SUMMER	• B3 Organisation and the digestive system • B8 Photosynthesis • C1 Atomic Structure • C2 Periodic Table • C13 The Earth's Atmosphere • C14 The Earth's Resources • C7 Energy changes • P1 Conservation and Dissipation of Energy • P2 Energy Transfer by Heating • P3 Energy Resources • P4 Electric Circuits • P5 Electricity in the home • Practical Skills

Y9 GCSE BIOLOGY KNOWLEDGE ORGANISER –

B1 CELL STRUCTURE AND TRANSPORT

1.	Name the two main types of microscope.	• Light microscope • Electron microscope	
2.	Which type of microscope has a greater magnification?	Electron microscope	
3.	What is the word that is used to describe the ability to distinguish between 2 separate points (how clear the image is)?	Resolution	
4.	Which type of microscope has a greater resolution?	Electron microscope	
5.	What is the formula for calculating the magnification of an image when you know the size of the image and the size of the real object?	Magnification = $\frac{\text{size of image}}{\text{Size of real image}}$	

6.	What type of cell DOES contain a nucleus (e.g. animal and plant cells)?	Eukaryotic cell	
7.	What type of cell that does NOT contain a nucleus (e.g. bacterial cell)?	Prokaryotic cell	
8.	What is the name of the part of a bacterial cell that is a ring of DNA?	Plasmid	
9.	What part of cell contains the DNA and controls the cell?	Nucleus	
10.	What part of the cell makes proteins (site of protein synthesis)?	Ribosome	

11.	What part of the cell is where aerobic respiration takes place and releases energy (site of aerobic respiration)?	Mitochondria	
12.	What part of the plant cell is where photosynthesis occurs (site of photosynthesis)?	Chloroplast	
13.	What part of the cell controls the movement of substances into and out of the cell?	Cell membrane	
14.	What part of the plant cell is made up of cellulose and gives the cell strength and support?	Cell wall	
15.	List 3 parts of a cell that can be found in plant cells but are not found in most animal cells.	• Cell wall • Vacuole • Chloroplast	

16.	What is the word used to describe the process in which molecules move from an area of higher concentration to an area of lower concentration (along concentration gradient)?	Diffusion	
17.	What is the word used to describe the process in which WATER molecules move from an area of higher WATER concentration (dilute solution) to an area of lower WATER concentration (concentrated solution) across a partially permeable membrane?	Osmosis	
18.	What is the term used for the movement of substances from an area of LOWER concentration to HIGHER concentration (against the concentration gradient) which requires energy?	Active transport	
19.	In terms of concentration gradient, which way will molecules move during diffusion?	Down a concentration gradient	
20.	In terms of concentration gradient, which way will molecules move during active transport?	Against a concentration gradient	

21.	Which form of transport requires energy from respiration?	Active transport	
22.	State the 3 factors that will affect the rate of diffusion	1. Difference in concentrations 2. Temperature 3. Surface area of the membrane	
23.	State 3 adaptations of an exchange membrane that will increase the rate of diffusion	1. Large surface area 2. Thin to provide a short diffusion pathway 3. Good blood supply to maintain a steep concentration gradient	
24.	State an example of active transport in plants	Transport of mineral ions into the root hair cells	
25.	State an example of active transport in animals	Transport of sugar molecules from the small intestine into the blood	

1.	State 5 uses of the glucose made during photosynthesis	1. Respiration 2. Converted into starch for storage 3. Produce fat or oil for storage 4. Produce cellulose (for cell walls) 5. Produce amino acids for protein synthesis	
2.	What is the name given to the type of respiration that requires oxygen?	Aerobic respiration	
3.	State the word equation for AEROBIC respiration	Glucose + Oxygen → Carbon dioxide + water	
4.	What type of reaction is respiration?	Exothermic	
5.	Where does aerobic respiration happen in cells?	Mitochondria	

6.	Respiration releases energy, what are the 3 main things this energy is needed for?	1. Chemical reactions 2. Movement 3. Keeping warm	
7.	What is the name given to the type of respiration that does NOT require oxygen?	Anaerobic respiration	
8.	What type of respiration releases more energy?	Aerobic respiration	
9.	Write the word equation for ANAEROBIC respiration in muscle cells	Glucose → Lactic acid	
10.	Why is the energy released during anaerobic respiration less than in aerobic respiration?	The oxidation of glucose is incomplete	

11.	What is the effect of lactic acid on muscle tissue?	Fatigue	
12.	To remove the lactic acid it must be reacted with oxygen. What is the term used for the amount of extra oxygen required to remove the lactic acid?	Oxygen debt	
13.	What organ does the blood transport the lactic acid to so it can be removed?	Liver	
14.	Write the word equation for anaerobic respiration in yeast and plant cells	Glucose → Ethanol + Carbon dioxide	
15.	What is anaerobic respiration in yeast cells also called?	Fermentation	

16.	What processes is anaerobic respiration of yeast used for?	Making bread and alcoholic drinks	
17.	What is the term used for the sum of all of the reactions in a cell or in the body?	Metabolism	
18.	Give examples of 3 metabolic reactions	1. Respiration 2. Conversion of glucose to starch 3. Use of glucose and nitrate ions to form amino acids that are used in protein synthesis	

Y9 SCIENCE KNOWLEDGE ORGANISER –

CHEMISTRY: C1 ATOMIC STRUCTURE

1.	What do we call a substance made of one type of atom only?	An element	
2.	What do we call a substance made of two or more types of atom chemically combined?	A compound	
3.	What do we call a substance made of two or more elements or compounds that are not chemically combined?	A mixture	
4.	How do we separate an insoluble solid from a liquid?	Filtration	
5.	How do we separate a mixture of soluble substances?	Chromatography	

6.	How do we separate a solution to obtain crystals of solute?	Evaporation	
7.	How do we separate a solution to obtain the solvent?	Distillation	
8.	What do we call the early model of the atom as a ball of positive charge with negative electrons embedded in it?	The plum pudding model	
9.	The alpha particle scattering experiment led to the development of which model of the atom?	The nuclear model	
10.	What are the relative charges of the three sub-atomic particles?	- Proton = +1 - Neutron = 0 - Electron = -1	

11.	All atoms have the same number of protons and electrons. What does that mean about the overall electrical charge on an atom?	It is neutral	
12.	Atoms of the same element always have the same number of which sub-atomic particle?	Protons	
13.	What is the approximate size of the radius of an atom?	1×10^{-10} m or 0.1nm	
14.	How much bigger is the radius of an atom compared to the radius of its nucleus?	10 000 times	
15.	What are the relative masses of the three sub-atomic particles?	- Proton = 1 - Neutron = 1 - Electron = nearly 0	

16.	What do we call the total number of protons and neutrons in an atom?	The mass number	
17.	What do we call atoms of the same element with different numbers of neutrons?	Isotopes	
18.	How do you calculate the number of neutrons in an atom?	Mass number – atomic number	
19.	What do we call the average relative mass of all isotopes of an element?	The relative atomic mass (A_r)	
20.	What is the maximum number of electrons that the first three atomic energy levels can hold?	2.8.8	

Y9 SCIENCE KNOWLEDGE ORGANISER –

CHEMISTRY: C2 THE PERIODIC TABLE

1.	How are the elements arranged in the modern periodic table?	By atomic (proton) number	
2.	What does the group number tell you about an element?	The number of electrons in the outer shell	
3.	How were the early periodic tables arranged?	By atomic weight	
4.	How did Mendeleev overcome the issues of elements in the same group not having similar properties?	He left gaps	
5.	Where are the metals found on the periodic table?	On the left	

6.	Group 0 have a stable full shell of electrons. How does this affect their reactivity?	They are unreactive	
7.	What happens to the boiling point of the noble gases as you go down the group?	It increases	
8.	What name do we give to group 1 of the periodic table?	Alkali metals	
9.	What two substances are produced when a group 1 metal reacts with water?	A metal hydroxide and hydrogen	
10.	What happens to reactivity as you go down group 1?	It increases	

11.	What charged ions do alkali metals form when they react?	+1	
12.	What do we call group 7 of the periodic table?	The halogens	
13.	What happens to the melting and boiling points as you go down group 7?	They increase	
14.	What happens to reactivity as you go down group 7?	It decreases	
15.	What type of reaction occurs when a more reactive halogen replaces a less reactive one from its compound?	Displacement reaction	

16.	<i>What do we call the elements between groups 2 and 3?</i>	<i>Transition metals</i>	
17.	<i>How are transition metals different from group 1?</i>	• <i>Higher melting point</i> • <i>Harder</i> • <i>Less reactive</i> • <i>Higher density</i>	
18.	<i>Transition metals can lose different numbers of electrons. What does this mean?</i>	<i>They can form positive ions with different charges.</i>	
19.	<i>How can you recognise a transition metal compound?</i>	<i>It will be coloured.</i>	
20.	<i>Transition metals can be used to speed up reactions. What do we call a substance that does this?</i>	<i>A catalyst</i>	

Y9 SCIENCE KNOWLEDGE ORGANISER –

PHYSICS: P1 ENERGY AND ENERGY RESOURCES

1.	What type of energy is stored in fuels, foods or batteries?	Chemical	
2.	What type of energy is stored in moving objects?	Kinetic	
3.	What type of energy is stored in an object above the Earth's surface?	Gravitational potential	
4.	What type of energy is stored in a spring when you stretch it?	Elastic potential	
5.	Energy cannot be _____ or _____	<u>Created</u> or <u>destroyed</u>	

6.	Energy transferred is the same as _____	Work done	
7.	Which equation links work done, force applied and distance moved?	$W = F \times s$	
8.	What happens to the gravitational potential energy store of an object when it moves up?	It increases	
9.	Which equation do we use to calculate the change in an object's gravitational potential energy?	$\Delta E_p = m g \Delta h$	
10.	Which equation do we use to calculate the change in an object's kinetic energy?	$E_k = \frac{1}{2} m v^2$	

11.	Which equation do we use to calculate the change in an object's elastic potential energy?	$E_e = \frac{1}{2} k e^2$	
12.	What do we call energy that is transferred to where it is wanted in the way that is wanted?	Useful energy	
13.	What do we call energy that is not usefully transferred?	Wasted energy	
14.	What eventually happens to wasted energy?	It is dissipated	
15.	Which equation do we use to calculate the efficiency of a device?	Efficiency = $\frac{\text{useful output energy}}{\text{total input energy}}$	

16.	What is the maximum efficiency of any energy transfer?	100%	
17.	What is meant by power?	The rate of transfer of energy	
18.	Which equation do we use to calculate power?	$P = \frac{E}{T}$	
19.	What is the unit of power?	Watts (W)	
20.	What is the unit of energy?	Joules (J)	

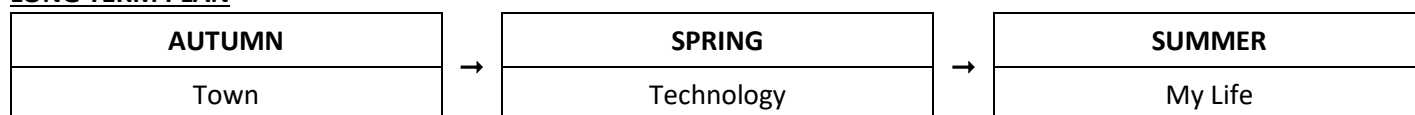
Y9 SCIENCE KNOWLEDGE ORGANISER –

PHYSICS: P2 ENERGY TRANSFER BY HEATING

1.	Which materials make the best conductors?	Metals	
2.	Which materials make the best insulators?	Non-metals	
3.	What type of radiation do all objects emit and absorb?	Infrared	
4.	What happens to the temperature of an object if it absorbs more radiation than it emits?	It increases	
5.	What equation do we use to find the specific heat capacity of a substance?	$c = \frac{\Delta E}{m\Delta\theta}$	

6.	What equation calculates the energy transferred for a known change of temperature of a known mass of a substance?	$\Delta E = m c \Delta\theta$	
7.	The specific heat capacity of a substance is the amount of energy needed to change the temperature of ____ of the substance by ____	<u>1kg</u> of the substance by <u>1°C</u>	
8.	The greater the mass of a substance, the more _____ its temperature increases when it is heated.	<u>slowly</u>	
9.	What type of insulation reduces the rate of energy transfer through the roof of a house?	Loft insulation (fibreglass)	
10.	What type of insulation reduces the rate of energy transfer through the wall of a house?	Cavity wall insulation	

LONG TERM PLAN



Sentence Builder 1 – In my town

  ¿Dónde vives? – Where do you live?  		
Mi pueblo – my town	Vivo – I live Mi abuelo vive – my grandfather lives Mi familia y yo vivimos – my family and I, (we) live	en una ciudad. – in a city. en un pueblo. – in a town. en una aldea. – In a village. en el campo. – in the countryside.
	En mi pueblo (no) hay – In my town there is (no) En mi ciudad (no) hay – In my city there is (no) En mi aldea (no) hay – In my village there is (no) Lo mejor de mi pueblo es que (no) hay – the best thing about my town is that there is (no) Lo peor de mi pueblo es que (no) hay – the worst thing about my town is that there is (no) Mi pueblo necesita – My town needs Mi ciudad necesita – My city needs Mi aldea necesita – My village needs	un ayuntamiento – a town hall un centro comercial – a shopping centre un estanco – a tobacconist un estadio – a stadium un instituto – a school un museo – a museum un parque – a park un polideportivo – a sports centre un puerto – a port un río – a river decepcionante. – disappointing. grande. – big. industrial. – industrial. bonito. – pretty. espléndido. – fantastic. feo. – ugly. hermoso. – pretty. histórico. – historical. moderno. – modern. nuevo. – new. pequeño. – small. turístico. – touristy. viejo. – old.
	una biblioteca – a library una bolera – a bowling alley una estación de tren – a train station una iglesia – a church una librería – a bookshop una mezquita – a mosque una peluquería – a hairdressers una plaza de toros – a bullring	decepcionante. – disappointing. grande. – big. industrial. – industrial. bonita. – pretty. espléndida. – fantastic. fea. – ugly. hermosa. – pretty. histórica. – historical. moderna. – modern. nueva. – new. pequeña. – small. turística. – touristy. vieja. – old.

Sentence Builder 2 – What I do in my town

 ¿Qué haces en tu pueblo? – What do you do in your town? ¿Qué vas a hacer en tu pueblo? – What are you going to do in your town?  					
Lo que hago – What I do	Todos los días – Every day Los lunes – On Mondays Los martes – On Tuesdays Los miércoles – On Wednesdays Los jueves –On Thursdays Los viernes –On Fridays Los sábados –On Saturdays Los domingos –On Sundays Los fines de semana – At the weekends De vez en cuando – From time to time Nunca – I never	voy – I go vas – you go va – he/she it goes vamos – we go vais – you (plural) go van – they go	al ayuntamiento – to the town hall al centro comercial – to the shopping centre al estanco – to the tobacconist al estadio – to the stadium al instituto – to the school al museo – to the museum al parque – to the park al polideportivo – to the sports centre al puerto – to the port al río – to the river a la biblioteca – to the library a la bolera –to the bowling alley a la estación de tren – to the train station a la iglesia – to the church a la librería – to the bookshop a la mezquita – to the mosque a la peluquería – to the hairdressers a la plaza de toros – to the bullring	para- in order	apoyar a mi equipo- to support my team pasear al perro – to walk the dog leer un libro – to read a book estudiar – to study ir de compras – to go shopping comprar comida – to buy food jugar al fútbol – to play football jugar a los bolos – to play bowling descansar – to relax ver una película – to watch a film visitar a mi abuela – to visit my grandmother viajar – to travel y – and también – also además – furthermore pero – but sin embargo –however no obstante – nevertheless
	El verano que viene Next summer La semana que viene Next week El lunes que viene Next Monday El fin de semana que viene Next weekend Mañana Tomorrow	voy – I’m going vas – you are going va – he/she is going vamos – we are going vais – you (plural) are going van – they are going	a		

Sentence Builder 3 – Where I prefer to live

¿Prefieres vivir en la ciudad o en el campo? – Do you prefer living in the city or the countryside?				
Las ventajas y desventajas – advantages and disadvantages Lo mejor de vivir – The best thing about living Lo peor de vivir – The worst thing about living Lo que me gusta – The thing I like Lo que odio – the thing I hate	en la ciudad – in the city	es que – is that	es un poco ruidoso – it's a little noisy es peligroso – it's dangerous la vida es más estresante – life is stressful hay demasiado tráfico – there's too much traffic hay demasiada contaminación – there's too much pollution hay mucho que hacer – there's lots to do	y - and también – also además – furthermore pero – but sin embargo –however no obstante – nevertheless
	en el campo – in the countryside		la vida es más tranquila – life is calmer hay muchos espacios verdes – there's lots of green spaces se puede aprovechar del aire libre – you can make the most of the outdoors no hay mucho que hacer – there's not much to do hay bastante desempleo – there's quite a lot of unemployment	
	Si fuera posible – if it were possible Si fuera alcalde – if I were mayor	en mi pueblo habría – in my town there would be	más árboles – more trees más tiendas en el centro – more shops in the centre edificios modernos – modern buildings una red de transporte gratuita – a free public transport network más/menos pobreza –more/less poverty más/menos sin techo – more/less homeless people más/menos contaminación – more/less pollution más/menos espacios verdes - more/less green spaces más/menos tráfico – more/less traffic más/menos atascos – more/less traffic jams	

Sentence Builder 4 – My town in the past

¿Cómo era tu pueblo en el pasado? – What was your town like in the past?				
Mi pueblo en el pasado – My town in the past Antes – Before En el pasado – In the past Hace dos años – Two years ago Hace cincuenta años – 50 years ago Cuando era pequeño/a – When I was little Mis abuelos dicen que – my grandparents say that	en mi pueblo –in my town en mi ciudad – in my city en mi aldea – in my village	había – there was/were	un ayuntamiento – a town hall un puerto – a port un río – a river más/menos que hacer –more/less to do mucho desempleo –lots of unemployment más/menos pobreza –more/less poverty más/menos sin techo – more/less homeless people más/menos contaminación – more/less pollution más/menos basura –more/less rubbish más/menos espacios verdes - more/less green spaces más/menos tráfico – more/less traffic más/menos atascos – more/less traffic jams más/menos violencia – more/less violence más/menos para los jóvenes – more/less for young people	sin embargo ahora hay – but currently there is pero actualmente hay – but currently there is pero hoy hay – but today there is
	mi pueblo – my town mi ciudad – my city mi aldea – my village	era – was	decepcionante – disappointing grande – big industrial – industrial bonito/a – pretty espléndido/a – fantastic feo/a – ugly hermoso/a – pretty histórico/a – historical moderno/a – modern nuevo/a – new peligroso/a – dangerous pequeño/a –small ruidoso/a – noisy turístico/a – touristy viejo/a – old	sin embargo ahora es – however now it is pero actualmente es – but currently it is pero hoy es – but today it is

Tips for a happy library

Read books you enjoy

If you move a chair,
put it back

Eat your lunch
somewhere else

Only bring water
bottles with a lid

Recommend books
to friends rather than
passing them your
library book

Run around in the
playground
instead of the
library

If you don't like
your book, swap it for
another



How to use the Purbeck School Library

- You may borrow up to 3 books at a time for 2 weeks.
- The date a book is due back is stamped in the front of the book
- If you need a book for longer, just come to the library to renew it.
- You can come to the library before school and at any break time.
- Fiction books are arranged by genre (or type of book) – have a look at the map below to see how to find the book you want.

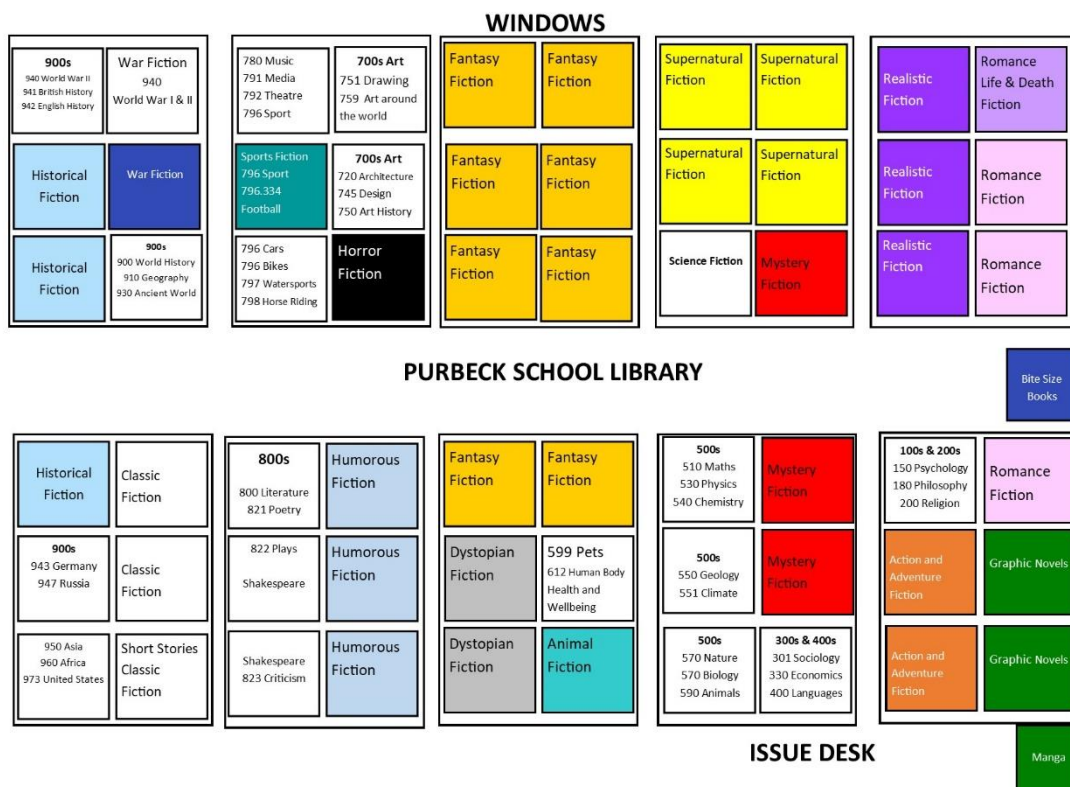
Using the Library WebApp

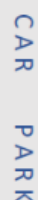


The Purbeck School Library



Go to <https://uk.accessit.online/thp04/> or scan the QR code to find the library WebApp. You can search for books, see what you have on loan, and find book recommendations under Quicklists and Dashboards.





NOTES

NOTES

KINDNESS ASPIRATION PERSEVERANCE

Moving Around School	Break Time	Kindness	Presentation	In lessons	Behaviour outside of School
We move with <u>purpose</u> - We keep to the left. - We do not run inside. We are <u>proud</u> of our site - We pick up litter, coats and resources on the floor, if left untidy. - We carry our kindness cards at all times. We wear uniform with pride. We are <u>polite</u> - We do not shout. - We are kind to all. - We open doors for others. - We knock and wait for permission to enter a room.	We are <u>safe</u> - We walk to our areas. - We do not hurt others. We are <u>proud</u> - We include others. - We are kind to all. - We collect rubbish. We are <u>patient</u> - We line up calmly for the canteen. We are <u>prompt</u> - We pack up when instructed. - We move with purpose to our lessons.	We are <u>polite</u> - We say 'please and thank you'. - We say 'Good morning and Good afternoon' We are <u>professional</u> - We offer to let others through a door way. - We give eye contact.	We are <u>proud</u> - We wear uniform correctly in line with the uniform policy. - We remove outdoor clothing (coat, hats, gloves, scarves etc.) once inside the classroom. We take <u>pride</u> in our books - Titles and dates are underlined. - Work should be completed. - Worksheets should be glued in. - No graffiti. - Any crossed out work should be with a single line.	We are <u>punctual</u> - We line up outside the classroom, with the right equipment, until we are greeted by a member of staff who will welcome us into the room. We are <u>engaged</u> - We ask and answer questions. - We listen to others. - We sit up, face the front and track the speaker. We <u>do not disrupt others</u> - We follow instructions at all times. - We apologise following a reset. We leave lessons with <u>pride</u> - We address uniform. - We place chairs under the table. - We leave a row one at a time.	We are <u>safe</u> - We stay safe online and use technology sensibly and safely. - We are mindful of pedestrians, cyclists and cars. - We are safe on the bus. - We know who to go to for help and support. We take <u>pride</u> - We understand we represent the school when wearing our uniform. - We behave responsibly and respectfully. - We are considerate of others. We are <u>polite</u> - We say thank you to the bus driver and others. - We are kind to all on the way home.

YEAR 9