



Year 9 Knowledge Organiser

Summer Term 2021/22

Name:

Form:

Core British Values

- I recognise that it is **unacceptable** to dismiss the **beliefs and opinions** of anyone.
- I understand that discussions about **sensitive issues** will be **controlled and structured**.

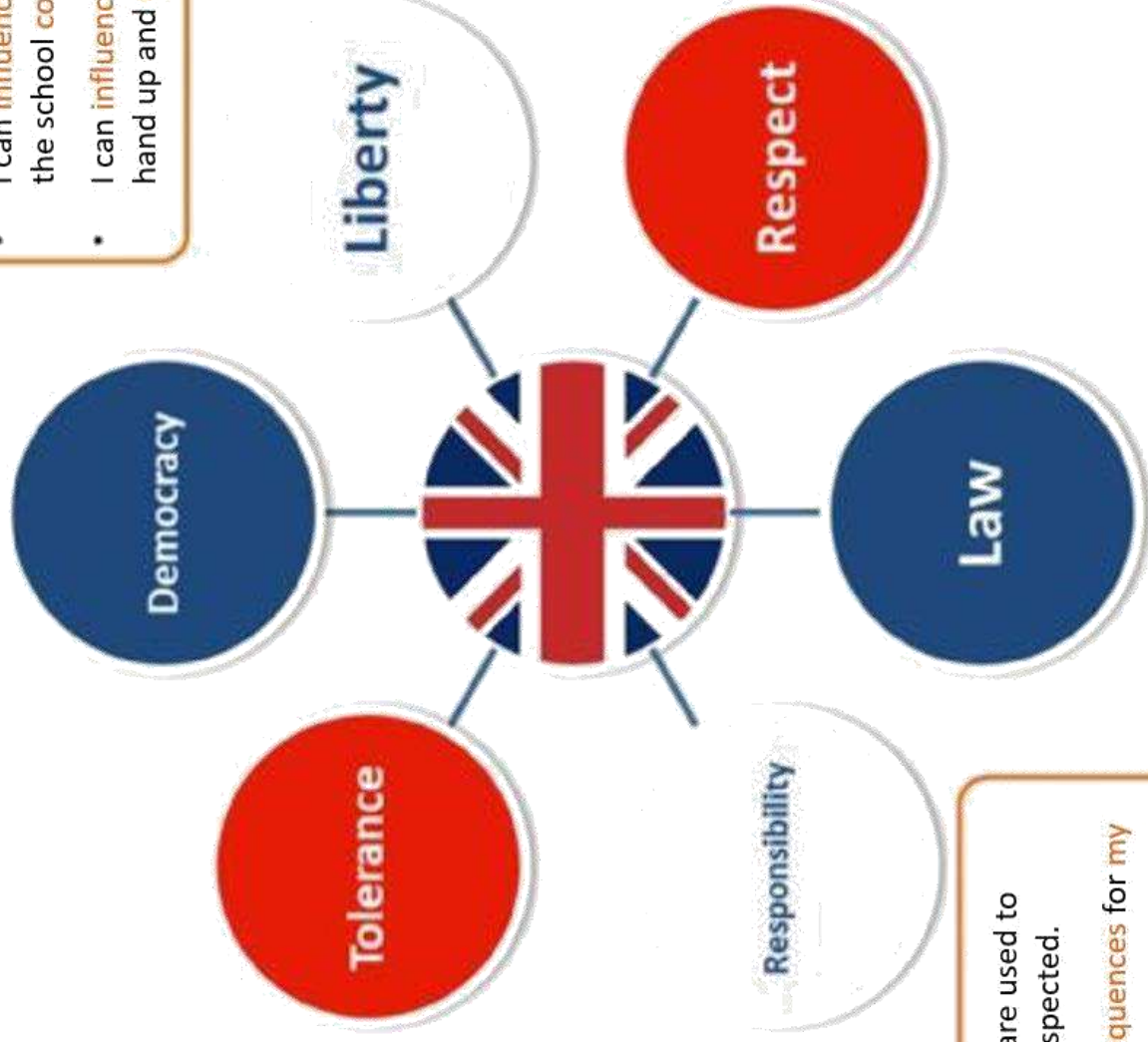
- I recognise that I am as **responsible** for my learning as my teacher.
- I take **responsibility** for all of my actions – good or bad.
- We **all** have a **responsibility** to **promote and protect** the wellbeing of others.

- I understand that the school **rules** are used to mirror **society laws** and must be respected.
- I recognise that there will be **consequences** for my actions.

- I can **influence** the way the school runs through the **school council** and by **talking to staff**.
- I can **influence my lessons** through putting my hand up and responding.

- I am **free to think** as I see fit.
- I have the **freedom to make choices** that affect me but I **recognise** that I am **accountable** for **all my actions**.

- I recognise that **everyone is entitled** to their **opinion** as long as it **does not promote extremism**.
- I understand that everyone is **entitled to a voice** within the classroom.
- I will **listen to others** as I would like to be listened to.



Social - Moral - Spiritual - Cultural



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Instructions for using your Knowledge Organiser

Every school day, you should study 1 to 2 subjects from your knowledge organiser for homework lasting at least 1 hour in total.

On pages 6 and 7 there is space for you to record the subjects you have studied to make sure you are giving equal time to all of them. Your parent should sign off your homework each evening on these pages.

Your parent should also sign your reading log on pages 8 and 9.

You can use the note pages in this booklet to help with your studies.

You need to bring your Knowledge Organiser to school every day. It will be checked regularly during form time.

You will be regularly tested on knowledge contained in this booklet in your lessons and through quizzes on Show My Homework.

Self- testing

You can use your Knowledge Organiser in a number of different ways but you should not just copy from the organiser. Use the following tips and guidance to help you get the most out of learning and revising your subject knowledge.

These are some possible tasks you could try:

- Ask someone to write questions for you
- Write your own challenging questions, leave them overnight and try answering them the next day
- Create mind maps
- Create flash cards
- Put the key words into new sentences
- Look, write, cover and check
- Write a mnemonic
- Use the 'clock' template to divide the information into smaller sections
- Give yourself a spelling test
- Give yourself a definition test
- Draw images and annotate/label them with extra information
- Do further research on the topic
- Create fact files
- Create flowcharts
- Draw diagrams

How to make the most of your knowledge organiser

Questions/Answers, Answers/Questions

Ask a parent, carer, study partner to write you questions (or answers) and then you write the answer (or possible question that would respond to that answer). You can also write your own questions but if you do this leave it until the next day before you answer them to see what you can remember after a break.

Always remember to check and correct

Flashcards

These are a very good and simple self-testing tool. To make your own, take some card and cut into rectangles roughly 10cm x 6cm. Write the key word on one side and the definition on the other. Then go through your cards looking at one side and seeing if you can remember the keyword/definition on the other side.

The Learning Scientists

As a trust, we have always been keen to find out more about how we learn and how we can support our students in their learning.

The Learning Scientists are a group of cognitive psychological scientists interested in research on education. Their main research focus is on the science of learning. (Hence, “The Learning Scientists”!)

Through decades of research, they have identified and developed six key learning strategies, which are explained over the next few pages. These are the main strategies we encourage our students to apply to their studies.

Please visit the Learning Scientists’ website for more useful information, including blogs for parents to help support their children with their learning.

<https://www.learningscientists.org/>



Six Strategies for Effective Learning

LEARNINGSOCIETISTS.ORG

All of these strategies have supporting evidence from cognitive psychology. For each strategy, we explain how to do it, some points to consider, and where to find more information.



Explain and describe ideas with many details



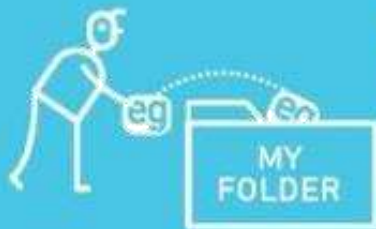
ELABORATION

Practice bringing information to mind



RETRIEVAL PRACTICE

Use specific examples to understand abstract ideas



CONCRETE EXAMPLES

Space out your studying over time



SPACED PRACTICE

INTERLEAVING



Switch between ideas while you study

DUAL CODING



Combine words and visuals





LEARN TO STUDY USING...

Spaced Practice

SPACE OUT YOUR STUDYING OVER TIME

- 1 TESTING
- 2 SPACING
- 3 SKETCHING



HOW TO DO IT

Start planning early for exams, and set aside a little bit of time every day. Five hours spread out over two weeks is better than the same five hours all at once.

Review information from each class, but not immediately after class.

After you review information from the most recent class, make sure to go back and study important older information to keep it fresh.

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LEARN TO STUDY USING...

Spaced Practice

SPACE OUT YOUR STUDYING OVER TIME

- 1 TESTING
- 2 SPACING
- 3 SKETCHING



TRY IT NOW

Think of a topic you read about a few chapters back. What were the main ideas?

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LEARN TO STUDY USING...

Retrieval Practice

PRACTICE BRINGING INFORMATION TO MIND



HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.

Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.

You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.

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LEARN TO STUDY USING...

Retrieval Practice

PRACTICE BRINGING INFORMATION TO MIND



TRY IT NOW

Close your book, and write down as much as you can from memory.

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LEARN TO STUDY USING...

Elaboration

EXPLAIN AND DESCRIBE IDEAS WITH DETAILS



HOW TO DO IT

Ask yourself questions while you are studying about how things work and why, and then find the answers in your class materials and discuss them with your classmates.

As you elaborate, make connections between different ideas to explain how they work together. Take two ideas and think of ways they are similar and different.

Describe how the ideas you are studying apply to your own experiences or memories. As you go through your day, make connections to the ideas you are learning in class.

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LEARN TO STUDY USING...

Elaboration

EXPLAIN AND DESCRIBE IDEAS WITH DETAILS



TRY IT NOW

Close the book and think about how what you just read connects to something you already know.

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LEARN TO STUDY USING...

Interleaving

SWITCH BETWEEN IDEAS WHILE YOU STUDY



HOW TO DO IT

Switch between ideas during a study session. Don't study one idea for too long.

Go back over the ideas again in different orders to strengthen your understanding.

Make links between different ideas as you switch between them.

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LEARN TO STUDY USING...

Interleaving

SWITCH BETWEEN IDEAS WHILE YOU STUDY



TRY IT NOW

OK, you've read enough about this topic. Why don't you try to answer some questions about a different topic for a bit?

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LEARN TO STUDY USING...

Concrete Examples

USE SPECIFIC EXAMPLES TO UNDERSTAND ABSTRACT IDEAS



HOW TO DO IT

Collect examples your teacher has used, and look in your class materials for as many examples as you can find.

Make the link between the idea you are studying and each example, so that you understand how the example applies to the idea.

Share examples with friends, and explain them to each other for added benefits.

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LEARN TO STUDY USING...

Concrete Examples

USE SPECIFIC EXAMPLES TO UNDERSTAND ABSTRACT IDEAS



TRY IT NOW

Look around you: Can you find an example related to the idea you were just reading about?

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LEARN TO STUDY USING...

Dual Coding

COMBINE WORDS AND VISUALS



HOW TO DO IT

Look at your class materials and find visuals. Look over the visuals and compare to the words.

Look at visuals, and explain in your own words what they mean.

Take information that you are trying to learn, and draw visuals to go along with it.

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LEARN TO STUDY USING...

Dual Coding

COMBINE WORDS AND VISUALS



TRY IT NOW

Now that you have read a bit, close the book and draw a visual that incorporates the main ideas.

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Homework log and parental check

Week 1	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 2	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 3	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 4	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 5	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 6	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 7	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Homework log and parental check

Week 8	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 9	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 10	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 11	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 12	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 13	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Week 14	Subject 1	Subject 2	Signed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Reading log

Use this reading log to record the books you read along with how long you have spent reading and the Accelerated Reader quizzes you have completed.

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Book(s) read (title and author)	Total time spent reading	Parent/Guardian /Staff signature
1										
2										
3										
4										
5										
6										
7										

Reading log

Use this reading log to record the books you read along with how long you have spent reading and the Accelerated Reader quizzes you have completed.

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Book(s) read (title and author)	Total time spent reading	Parent/Guardian /Staff signature
8										
9										
10										
11										
12										
13										
14										

Art – Independent Project:

Art Specific Language and Terms			
Development of ideas	Ideas are the underlying theme (concept) behind your work and normally come from a given starting point. Your idea helps you to create a journey for your project that changes gradually as your project progresses. The idea helps you focus your work and give direction.	Presentation	Carefully considering the most appropriate and creative ways to present your work and research. Backgrounds should compliment the work to be placed on them.
Brainstorm	Taking a starting point and writing as many words/ideas that link to that theme as possible. This helps to generate a unique theme and idea for your own work.	Annotation	Evaluative writing that supports your own work. This annotation shows understanding of the media techniques used, the success of the work produced and explains the idea behind the work.
Artist Reference	Making relevant contextual links to Art, Artists or Cultures whose work may inspire or influence your own ideas and imagery.	Quality of imagery	Quality imagery refers to not just how clear the image is but how creative the image is and how relevant it is to your work.
Media Experimentation	Using a variety of different Art skills and techniques throughout your work. This enables you to demonstrate your ability to decide which art technique is most appropriate for your chosen work and ideas.	Development of own work	Your own work is Art that you develop through experimentation and not work copied from others and is one of the most important elements at GCSE.
Secondary Source Imagery	Using the work or imagery of others to help inspire and influence your own ideas and work.	Primary Source Imagery	Working from real life or photographic imagery taken by yourself.

Concepts are defined as abstract ideas or general notions that occur in the mind, in speech, or in thought. They are understood to be the fundamental building blocks of thoughts and beliefs. They play an important role in all aspects of art.



Ian Francis 'Revolving Cage'
Mixed media on birch panel 2016



Marcelo Jácome 'Planos-pipas'
Tissue paper, bamboo, fiberglass and cotton thread 2013



Adrian Samson 'Beggar'
Metallic C-Print 2015

Art – Independent Project – Painting:

Art Specific Language and Terms		
Scaling Up	A technique to help enlarge an image accurately. A grid is drawn over the image to be copied and also onto the paper (both to scale). The image is then copied in sections.	Colour Blending
Observation	Looking closely at the original image/source so that all detail and colour changes are seen and replicated.	Layering
		The change from one colour to another gradually. The colour change should appear smooth and is achieved when the two colours are mixed and layered smoothly without an obvious step or line.
		Applying the colour in stages, starting with lighter base colours and adding darker tones later over the top. Often there can be multiple layers to a painting.

Acrylic Paint: Acrylic paint is a fast-drying paint made of pigment suspended in acrylic polymer emulsion. It is water-based and a fast drying paint which is easy to mix and blend. The paint can be thinned with water.

Paintbrush choice:

Flat brushes are versatile. Their long bristles can lay smooth patches of color, make long, bold strokes or when using their edges, execute fine crisp lines. Marks made with a flat brush have a distinctive square edge.

Round brushes come in pointed and blunt tips. Both can be used to create a linear mark by applying more or less pressure during the stroke; the pointed round brush is ideal for fine detail.

Contemporary Painters:



Chloe Early - Eggwhite



Ant Carver



Takashi Murakami – Panda Gold

Advocacy

Action taken to try and raise awareness of a cause or issue by acting as a representative.

Advocate

A person who acts on behalf of others as a representative.

Boycott

Refusing to buy goods or use a service to achieve a desired political outcome.

Unionist

A person in favour of the union between Northern Ireland and Great Britain.

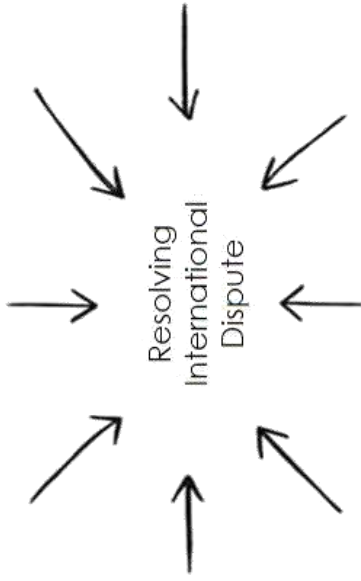
Nationalist

A person who believes that Northern Ireland should be independent from Great Britain.

The ability to influence through the power of your culture, political and foreign policy values.

Hard power vs. Soft power

The ability to use military or economic power to achieve aims.



Mediation

A process of involving outsiders in a dialogue to try to resolve a dispute between two parties.

Sanctions

Measures taken by a country against others to achieve a change in policy or action.

Boycott

Refusing to buy goods or use a service to achieve a desired political outcome.

Use of force

Military action using the armed forces. Usually involves working with others in alliances, for example UN or NATO.

Humanitarian Aid

Non-military aid given to countries and people in need: for example, food, shelter or medical help.

International Criminal Court (ICC)

This is a permanent, international criminal court. The ICC was established in 2002 to investigate, prosecute and bring to trial individuals accused of committing crimes towards the international community. This could be genocide, crimes against humanity and war crimes.

Making connections

How can you link different topics together?

Human Rights + equality + legislation
UK + Commonwealth
Humanitarian aid + human rights
International community + human rights + United Nations
Boycott + advocate

HUMAN RIGHTS

Human rights are the basic rights and freedoms that belong to every person in the world, from birth until death.

Here are some examples...

7 Equality Before the Law

You have the right to be treated by the law in the same way as everyone else



11 Innocent until Proven Guilty

You have the right to be considered innocent until proven guilty.



19 Freedom of Opinion

You have the right to freedom of opinion and expression.



26 Education

You have the right to education



Did you know?

These Human Rights Articles have been written into UK law – they form the Human Rights Act 1998.

Did you know?

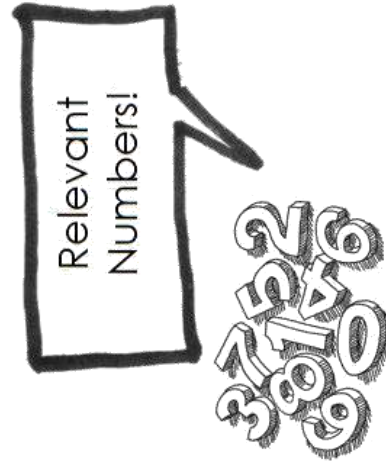
There are 30 Human Rights articles in total. They were established in 1948 by the United Nations.



The UK and the Wider World



World Trade Organisation (WTO)	Only organisation dealing with global trading rules between nations.
European Union (EU)	European organisation who seek to encourage trade, free movement and cooperation between its 27 European member states.
North Atlantic Treaty Organisation (NATO)	Intergovernmental military defence alliance. The organisation provides a system of defence, if a member country is attacked, the other members come to its defence.
United Nations (UN)	193 members belong to this international organisation. It seeks to maintain international peace and security, develop friendly relations between nations, solve international problems and promoting respect for human rights.
Commonwealth	Represents 30% of the world's population, all members must agree the values set out in its own Charter. It's a voluntary organisation and its charter highlights issues related to democracy, human rights and law. The head of this organisation is the Queen.
Council of Europe	Intergovernmental human rights organisation, who aim to promote democracy, rule of law and human rights to their 47 member states.



193
This is how many countries belong to United Nations.

1945
This is the year United Nations was formed.

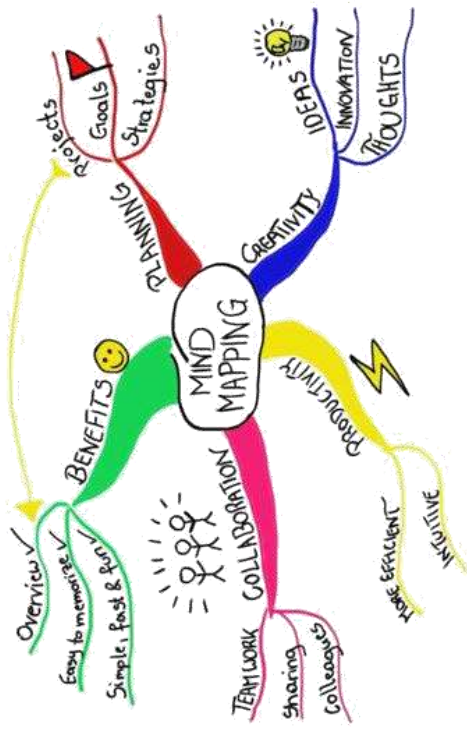
30%
This is the proportion of the world population who live in a Commonwealth country.

2016
The year the UK voted to leave the European Union.

30
The number of Human Rights all human beings are entitled to.

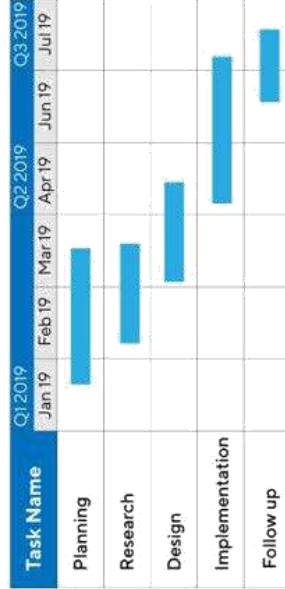
Computer Science – Integrated Project Knowledge Organiser

9.5 and 9.6: Integrated Project covering: Mind maps, Gantt charts, system life cycles, Spreadsheets - Financial Models



Keyword	Definition
Mind Map	A mind map is a graphical way to represent ideas and concepts. It is a visual thinking tool that helps structuring information, helping you to better analyse, recall and generate new ideas.

Gantt Chart

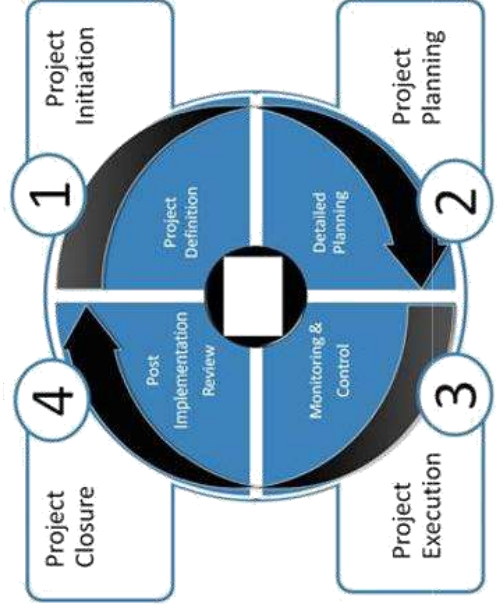


Keyword

Gantt Chart

Definition

A Gantt chart is a visual view of tasks scheduled over time. Gantt charts are used for planning projects of all sizes and they are a useful way of showing what work is scheduled to be done on a specific day.



Keyword

Project Life Cycle

Definition

The project life cycle is a series of stages that are worked through during the development of a new information system.

Computer Science – Integrated Project Knowledge Organiser

9.5 and 9.6: Integrated Project covering: Mind maps, Gantt charts, system life cycles, *Spreadsheets - Financial Models*

Keywords	Definition
Project	A project is a series of tasks that need to be completed in order to reach a specific outcome.
Data Analysis	Data analysis is a method in which data is collected and organised so that one can derive helpful information
Data Collection	Data collection is a means for gathering facts, statistics and details from different sources.
Target Audience	A particular group at which a product such as a film or advertisement is aimed
Financial Models	A financial model is simply a tool that's built in Excel to forecast a business' financial performance into the future
Planning	Planning is the process of thinking about the activities required to achieve a desired goal. It is the first and foremost activity to achieve desired results.
Implementation	Implementation is the process of putting a decision or plan into effect; execution.
Execution	Execution is the carrying out of a plan, order, or course of action.
Design	Design is the process of imagining and planning the creation of a systems. It is about creating solutions for people.

Integrated 

Project 

Analysis

Data Collection 

Target Audience

Year 9 Dance Knowledge Organiser: Choreography Part 2

A Motif

A movement phrase encapsulating an idea that is repeated and developed throughout the dance.

A dancer is kneeling on the floor, centre stage, facing front, with both arms down by the side of the body, looking straight ahead. The right arm rises forwards, remaining straight, to shoulder height, creating a horizontal line. The right arm continues to travel upwards, remaining straight, until it is in a vertical position with the elbow next to the ear. The hand is open with the palm facing forwards and the fingers reaching up to the sky. The dynamic is steady and slow.

Choreographic Devices

- Motif and development - Ways in which a movement phrase can be varied.
- Repetition - Performing the same action or phrase again.
- Contrast - Movements or shapes that have nothing in common.
- Highlights - Important moments of a dance.
- Climax - The most significant moment of the dance.
- Manipulation of number - How the number of dancers in a group is used.
- Unison - Two or more dancers performing the same movement at the same time.
- Canon - When the same movements overlap in time.

Motif and Development

Ways in which a movement phrase can be varied

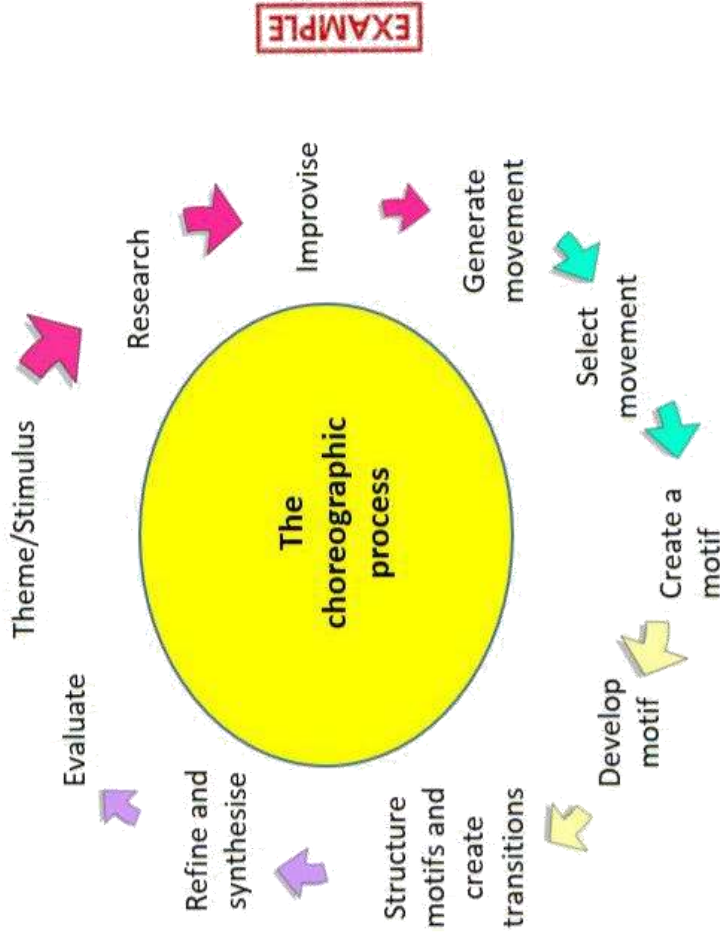
Motifs can be varied by using movement components. For example:

Actions: Fragmentation – Re-ordering parts of the motif, Retrograde – Reverse movements, Addition – to add in a movement.

Space: Change the pathways, levels, movement size or directions. E.g. a small jump into a large jump.

Dynamics: change the dynamics. E.g.. From soft to sharp

Relationships: change one relationship to another. E.g. leading and following into mirroring



Year 9 Dance Knowledge Organiser: Choreography Part 2

If this is your motif, how could you develop it in three different ways?

A dancer is kneeling on the floor, centre stage, facing front, with both arms down by the side of the body, looking straight ahead. The right arm rises forwards, remaining straight, to shoulder height, creating a horizontal line. The right arm continues to travel upwards, remaining straight, until it is in a vertical position with the elbow next to the ear. The hand is open with the palm facing forwards and the fingers reaching up to the sky. The dynamic is steady and slow.

State the choreographic device

Clearly apply it

Make it clear how the phrase is now developed

EXAMPLE

I would use change of dynamics. For example instead of rising the arm upwards steady and slow the dancer would perform it quickly and sharply.

I would use change of level so instead of the dancer starting on the floor, they would start by standing up.

I would use retrograde so that instead of the right arm starting down by the side the right arm would start above the dancer's head in a vertical position next to the ear and then lower down straight and horizontally until it ends by the dancer's side.

Communication of Intent

The aim of the dance: what the choreographer aims to communicate

Mood

Meaning

Idea

Theme

Style/style fusion



BINARY FORM



TERNARY FORM



RONDO FORM

Structure

The ways in which a dance is made, built, ordered or organised.

Binary	AB
Ternary	ABA
Narrative	ABC
Episodic	A B C D
Arch	ABCBA
Rondo	ABACADA



Drama – Theatre Creation

You **MUST** make sure all aspects of your performance fit your chosen practitioner or genre....

Key to Characterisation

Voice	<p>You need make sure that you:</p> <ul style="list-style-type: none"> • Speak clearly • Emphasise words in the right place • Use pauses • Think about the pace you speak • Can be heard
Movement	<p>How you move can define a character. Think about why and how you move on the stage. What is your purpose?</p>
Body Language and Facial Expressions	<p>These need to be clear and strong- is your body language and facial expressions telling the correct story? Do they match?</p>
Proxemics	<p>Are you standing at the right distance away from another character?</p>

Vocabulary	Theatre Creation Vocabulary	Explanation
Stimuli	The starting point, idea or inspiration for your devised drama. It is the thing you base your drama around.	
Dramatic devices	Dramatic devices are rehearsal techniques that help you to create your piece of theatre and work.	
Plot	Plot refers to the storyline of the text. The plot is the sequence of events in the story or drama.	
Climax	The climax is the plays point of highest tension or it is the time when the action starts during which the solution is given. Plays should build to a climax or anti-climax.	
Practitioner	A theatre practitioner is someone who creates theatrical performances and/or produces an idea or theory that informs his or her practical work.	
Genre	A type of theatre – for example, physical, mask, T.I.E...	



Par Can – Light for large areas as it literally floods the stage



Profile Spotlight – Definite sharp edged beam, can also be used for gobos



Fresnel Spotlight – Soft edged beam, good for smaller areas



Strobe Light – Quickly successive flashing light, making action appear jumpy



Birdie – A tiny lantern good for up lighting facial features and distorting them, creating an eerie atmosphere



Moving Head Light – A light which moves across the stage, changes colour and can project images using gobos

Genres

- Gothic
- Surrealism
- Physical theatre
- Pantomime
- Naturalism
- Absurdism
- Comedy
- Melodrama
- Theatre in education
- Musical

Practitioners

- Commedia Dell'Arte
- Greek theatre
- Stanislavski
- Kneehigh
- Brecht
- Gecko
- Artaud
- Frantic assembly

Websites / Literature / Media

<https://www.youtube.com/watch?v=2FWAUn0Aw4>

The Frantic Assembly Book of Devising Theatre By Scott Graham

A Beginner's Guide to Devising Theatre By Jess Thorpe & Tashi Gore

BBC Bite Size

<https://www.theguardian.com/culture-professionals-network/2014/dec/16/devvised-theatre-ten-bits-collaboration>



Drama – Analysing Theatre

When analysing theatre you will be asked to look at in one of two ways
 Either - a) Practically- What the actor is doing Movement/Voice/Gesture...
 Or - b) Performance support- Set/ Props/ Sound/ Lighting/ Costume...



Evaluative Vocabulary

- Conveys – gets across a message / idea / theory
- Demonstrates – Provides a clear explanation / example
- Emphasises – draws attention to something
- Evidences – provides evidence/proof for an argument / theory
- Evokes – brings about a strong feeling or idea
- Foreshadows – hints at subsequent events / themes
- Highlights – draws clear attention by making it stand out
- Illustrates – creates a distinct image
- Implies – suggests something beyond the obvious
- Indicates – acts as a clear pointer or a signpost
- Portrays – Shows or represents something / someone in a certain way
- Presents – introduces an idea
- Projects – takes an idea and makes it more distinct
- Represents – takes an idea and puts it forward in a different light
- Reveals – makes a meaning / interpretation clear that was previously unclear
- Signifies – uses a word or a sign to make the meaning clear
- Symbolises – takes a visual image and uses it for a deeper meaning

Key Vocabulary	Explanations
Adaptation	Alter a script to make it suitable for the stage, TV or film. It may include changing the use of language or setting
Characterisation	Creating a character, through the use of voice and movement
Tone	The thought or feeling behind spoken words
Pitch	The note used when speaking
Physical theatre	Physical theatre is communicating a story or meaning through movement
Prop	Items held or used by actors onstage
Analyse	Breaking things down in detail in order to understand them (cause and effect)
Evaluate	Determining if something is effective or not

Remember to use drama vocabulary

Voice	Pitch Tone Pace Tempo
Movement	Pace Body language Intensity
Gesture	Facial expression Body language
Climax	Pace Tempo
Sound	Diegetic Non-diegetic Symbolism
Lighting	Gobo Gels Intensity Symbolism
Costume	Garment Colour Period Symbolism

Year 9, Summer Term: Advanced Application of Concepts

Core Text: *The Adventure of the Speckled Band* (Arthur Conan Doyle)



For the final half term of Year 9, we are going to bring all the key concepts which you have learned about over the past three years together. We will be studying a story about Sherlock Holmes by Sir Arthur Conan Doyle: a 19th century text belonging to the genre of detective fiction. You will revisit how stories are shaped by context; how specific genres are defined by a set of conventions; and how writers construct their characters. Additionally, you will consistently consider the writer's methods and the reader's response. The knowledge and skills you revisit this term will be excellent preparation for your GCSE English studies.

Key Vocabulary

- ◆ Victorian era
- ◆ detective fiction
- ◆ mystery
- ◆ archetype/archetypal
- ◆ detective
- ◆ villain
- ◆ victim
- ◆ conventions
- ◆ response
- ◆ writer
- ◆ reader
- ◆ argument
- ◆ structure
- ◆ reference
- ◆ evaluation

Threshold Concepts (everything so far)

1. Story and Context
2. Characterisation
3. Genre and Theme
4. Perspective
5. Rhetoric
6. Symbolism
7. Representation
8. Structure



Reading Assessment:

'In *The Adventure of the Speckled Band*, Conan Doyle provides the reader with an engaging mystery.' How far do you agree with this statement? Support your ideas with detailed reference to the text.

The Essay-Writing Process

Examples of questions to ask yourself before you respond to the main question:

'Why does there need to be a mystery?'

'What helps to engage the reader?'

'How effective is that method?'

'How might we disprove this statement?'

'What does not work very effectively?'

'Why has Conan Doyle chosen this method?'

You should plan your response, which should include a thesis statement and examples from the text.

Writing/Speaking and Listening Assessment

Writing Assessment:

A speech on a chosen topic (to be delivered for the spoken language endorsement).

Speaking and Listening Criteria:

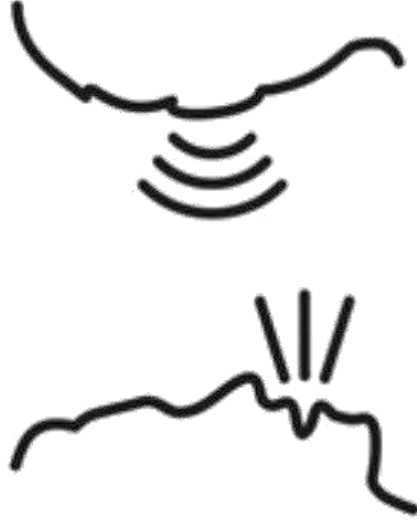
- You are audible (can be heard)
- You use spoken Standard English
- You express sophisticated ideas/information/feelings using a sophisticated range of vocabulary
- You organise and structure your presentation using an effective range of strategies to engage the audience
- You achieve the purpose of your presentation
- You listen to questions/feedback, and respond carefully and, if appropriate, extend ideas

Example

'The Adventure of the Speckled Band' is one of the many Sherlock Holmes stories: a classic work of detective fiction. One of the fundamental elements of this genre is that it contains a mystery to be solved. In 'The Speckled Band', the mystery is the cause of Julia Stoner's death: even though we can guess that Dr Roylott is somehow responsible, the inability to explain how she died until Holmes has gathered and analysed the evidence and constructed and proven a theory successfully engages the reader.

A way that Conan Doyle attempts to keep the reader intrigued is by ensuring that they do not understand too much too quickly. Choosing to narrate the story from the perspective of Holmes' companion, Dr Watson, is an effective way of sustaining the mystery because it allows the reader to take on this perspective as well, and we can follow Holmes' detective process in the way that Watson does. By doing this, our understanding is limited to Watson's, so we are relying on the superior intellect of Holmes to interpret the evidence and test his theories before revealing the solution or providing an explanation, successfully creating suspense for the reader.

Additionally, ...



Topic 5: International Cuisine

British people are now more adventurous with their food choice and will regularly eat food originating in other countries. Some examples of these are:

Italian Cuisine – family and food is very important to Italians – with recipes being passed down the generations through mothers and grandmothers. Italian flavours are simple and they often use seasonal local ingredients that are home-grown or purchased in markets. Traditional dishes include pasta, pizza and risotto. Bread is freshly baked and a rainbow of fresh vegetables and salads are regularly served as accompaniments. Healthy olive oil is used instead of animal fats. Desserts include ice-cream and tiramisu (Italian trifle).



Italians take a huge amount of pleasure in food and enjoy social or family occasions where food can be shared.

Chinese Cuisine – Chinese food is often quick to make, with an emphasis on colour, flavour and texture. Much of the food is stir-fried in a wok or steamed in a bamboo steamer – both healthy ways of cooking. In a very traditional Chinese kitchen there is no oven. Traditional dishes include spring rolls, crispy duck, soups and broths, sweet and sour noodles and fried rice. Chinese food often uses aromatic spices such as ginger to flavour food. At meal times, the Chinese family will have four or five dishes at the same time and each person will have a small bowl with rice in it. Food is eaten with



chopsticks. The traditional drink with a meal is green tea which is served without milk. The Chinese present their food beautifully with carved vegetables.

Indian Food – entertaining in the home is very popular in India with all the dishes placed on the table at once and shared. Many spices and herbs are blended or ground together to make Indian food – although most dishes are spicy and mild rather than overly hot. Traditional dishes include tandoori meat and fish (cooked in a clay oven), curries, samosas, bhajis and dahls (made with lentils). Main meals are served with traditional breads (naan, chapatti, poppadoms) or basmati rice. Desserts are not often served every day but are used for special occasions, for example sweets served for the festival of Diwali.



Topic 6: Consumer Awareness

Consumers can be defined as “a person who purchases goods and services for personal use”. People are consumers on a daily basis. On your way to school you may use the bus and then buy a snack at break time – you are a consumer.

Food is always in the news and sometimes consumers are confused about what to buy and eat. To be an effective consumer you need to know your rights and responsibilities and know how to get advice on issues if you are not satisfied with the food you buy.



It is important that consumers know how to manage their resources effectively when choosing, shopping for, preparing and storing food.

Consumers have a wide range of options when shopping for food. There are advantages and disadvantages for them all, it is therefore important for consumers to decide which is the most suitable for them, for example going to a big supermarket or shopping in a corner shop.

To make good use of time, energy, and money when choosing food consider the following:

Meal planning – thinking ahead will reduce the number and amount of time needed for shopping; Ingredients – try and choose ingredients that will save time and money; Seasonality – choose seasonal and local foods; Value for money – compare the cost of fresh and pre-prepared ingredients.



Consumers should avoid wasting food. Every year in the UK, seven to ten million tons of food are wasted. It is thought that approximately 50% of the food wasted is still edible. The cost of food waste is significant – estimates show that it costs an average family £700 per year. Using leftovers can save money and is good for the environment.

Food labelling is important to help us to decide which food buy, how to store and cook food correctly and to be aware of the nutritional content of food. Some food labelling is required by law. ‘Use by’ and ‘best before’ dates are

there for food safety reasons and to help use up food before it spoils. Labels on food must contain precise and accurate information about the nutrients in food. Fat, saturated fat, salt and sugar are labelled as either green, amber or red. When deciding what to eat, look at the label and try to choose foods that have more green and amber and less red.

Each serving (150g) contains

Energy 1046kJ 250kcal	Fat 3.0g LOW	Saturates 1.3g LOW	Sugars 34g HIGH	Salt 0.9g MED
13%	4%	7%	38%	15%

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal

Quel pays voudrais-tu visiter?

What country would you like to visit?

Je voudrais visiter...	<i>I would like to visit ...</i>
la Belgique.	<i>Belgium.</i>
le Laos.	<i>Laos.</i>
le Canada.	<i>Canada.</i>
le Vietnam.	<i>Vietnam.</i>
le Gabon.	<i>Gabon.</i>
le Sénégal.	<i>Senegal.</i>
la Martinique.	<i>Martinique.</i>
la Tunisie.	<i>Tunisia.</i>
la Suisse.	<i>Switzerland.</i>
les Seychelles.	<i>the Seychelles.</i>
car il y a ...	<i>because there is/are ...</i>
un festival de jazz.	<i>a jazz festival.</i>
une mosquée.	<i>a mosque.</i>
des plages.	<i>beaches.</i>
des éléphants.	<i>elephants.</i>
Je voudrais aller...	<i>I would like to go ...</i>
au lac de Genève.	<i>to lake Geneva.</i>
au parc national.	<i>to the national park.</i>
à la plage.	<i>to the beach.</i>
aux temples bouddhistes.	<i>to the Buddhist temples.</i>
Je voudrais manger ...	<i>I would like to eat ...</i>
du poulet fumé.	<i>(some) smoked chicken.</i>
du chocolat	<i>(some) chocolate.</i>
de la soupe.	<i>(some) soup.</i>
des fruits de mer.	<i>(some) seafood.</i>
des moules-frites.	<i>mussels and chips.</i>
J'adore / J'aime ...	<i>I love / I like ...</i>
le surf.	<i>surfing.</i>
la musique.	<i>music.</i>
l'histoire.	<i>history.</i>
les animaux.	<i>animals.</i>
les frites.	<i>chips.</i>

Visite à un pays francophone!

Visit a French-speaking country!

Le pays est sur quel continent?	<i>Which continent is the country in?</i>
en Afrique	<i>in Africa</i>
en Europe	<i>in Europe</i>
en Océanie	<i>in Australasia</i>
Il est comment, le paysage?	<i>What is the landscape like?</i>
Il y a ...	<i>There are...</i>
des forêts (tropicales).	<i>(tropical) forests.</i>
des montagnes.	<i>mountains.</i>
des plages.	<i>beaches.</i>
des rivières.	<i>rivers.</i>
des volcans.	<i>volcanoes.</i>
Qu'est-ce qu'on peut visiter ici?	<i>What can you visit here?</i>
On peut visiter...	<i>You can visit...</i>
Je veux visiter...	<i>I want to visit...</i>
le circuit de formule 1	<i>the Formula 1 track.</i>
le parc nationale.	<i>the national park.</i>
le port.	<i>the port.</i>
l'église.	<i>the church.</i>
Monaco est plus célèbre que le Laos.	<i>Monaco is more famous than Laos.</i>

On va voir des choses extraordinaires!

We will see lots of amazing things!

Le Mont-Saint-Michel est	<i>Mont-Saint-Michel is...</i>
La dune du Pilat est ...	<i>The Dune of Pilat is...</i>
grand/grande	<i>big</i>
beau/belle	<i>beautiful</i>
vieux/vieille	<i>old</i>
impressionnant/impressionante	<i>impressive</i>
intéressant/intéressante	<i>interesting</i>
fabuleux/fabuleuse	<i>fabulous</i>
mystérieux/mystérieuse	<i>mysterious</i>
célèbre	<i>famous</i>
historique	<i>historical</i>
un château	<i>a castle</i>
un monument	<i>a monument</i>
un pont	<i>a bridge</i>
une montagne	<i>a mountain</i>
une mosquée	<i>a mosque</i>
une ville	<i>a town</i>

Reserver de excursions Booking trips and excursions

Est-ce que tu aimes ...?	<i>Do you like ...?</i>
J'adore...	<i>I love...</i>
J'aime...	<i>I like...</i>
Je n'aime pas...	<i>I don't like...</i>
Je déteste...	<i>I hate...</i>
manger au resto	<i>eating out.</i>
visiter des musées	<i>visiting museums.</i>
visiter des monuments historiques.	<i>visiting historical monuments.</i>
aller à la piscine	<i>going to the pool.</i>
aller à la plage	<i>going to the beach.</i>
faire du surf.	<i>going surfing.</i>
faire du vélo.	<i>going cycling.</i>
faire des promenades	<i>going for walks.</i>
Qu'est-ce qu'on peut faire ici?	<i>What can you do here?</i>
On peut ...	<i>You can ...</i>
Je veux ...	<i>I want to ...</i>
Je ne veux pas ...	<i>I don't want to ...</i>
jouer...	<i>play...</i>
au minigolf.	<i>mini-golf.</i>
au tennis.	<i>tennis.</i>
au volleyball.	<i>volleyball.</i>
visiter ...	<i>visit...</i>
le château.	<i>the castle.</i>
des maisons historiques	<i>historic houses.</i>
faire du sport	<i>do sport.</i>
faire un pique-nique	<i>have a picnic.</i>
porter un costume medieval	<i>wear a medieval costume.</i>

Y9 French Knowledge Organiser – Summer Term 2

On va jouer au foot! *We are going to play football!*

Qu'est-ce que tu vas faire?	<i>What are you going to do?</i>
Je vais...	<i>I am going...</i>
manger beaucoup de pizza.	<i>to eat lots of pizza.</i>
passer du temps avec ma famille.	<i>to spend time with my family.</i>
poster des photos.	<i>to post photos.</i>
jouer au foot.	<i>to play football.</i>
faire les magasins.	<i>to go shopping.</i>
faire du sport.	<i>to do sport.</i>
aller à la plage.	<i>to go to the beach.</i>
lire des romans.	<i>to read novels.</i>
regarder des vidéos.	<i>to watch videos.</i>
dormir.	<i>to sleep.</i>

à l'avenir	<i>in the future</i>
un jour	<i>one day</i>
l'année prochaine	<i>next year</i>

Quel est ton sport préféré? *What is your favourite sport?*

Mon sport préféré, c'est ...	<i>My favourite sport is ...</i>
Ma passion, c'est ...	<i>My passion is ...</i>
le cyclisme.	<i>cycling.</i>
le ping-pong.	<i>table tennis.</i>
le rugby.	<i>rugby.</i>
le ski acrobatique.	<i>acrobatic skiing.</i>

Qu'est-ce que tu vas faire un jour? *What are you going to do one day?*

Je vais habiter ...	<i>I am going to live ...</i>
en Angleterre.	<i>in England.</i>
en Australie.	<i>in Australia.</i>
en Belgique.	<i>in Belgium.</i>
au Canada.	<i>in Canada.</i>

Je vais ...	<i>I am going...</i>
gagner une compétition importante	<i>to win an important competition.</i>
représenter mon pays.	<i>to represent my country.</i>
faire une formation.	<i>to do a training course.</i>
être joueur / joueuse professionnel(le)	<i>to be a professional player.</i>

On a fait le tour du monde! *We did a world tour!*

Comment est-ce que tu as fait le tour du monde?
How did you do the world tour?

J'ai fait le tour du monde ...	<i>I did the world tour ...</i>
en bus / en train.	<i>by bus / by train.</i>
à vélo / à pied.	<i>by bike / by foot.</i>
en avion.	<i>by plane.</i>

Je n'ai pas voyagé en / à ... *I did not travel by / on ...*

Où est-ce que tu es allé(e)? *Where did you go?*
Je suis allé(e) dans (trente) pays différents
I went to (thirty) different countries.

Qu'est-ce que tu as fait? *What did you do?*

J'ai blogué	<i>I blogged.</i>
J'ai fait des vidéos.	<i>I made videos.</i>
J'ai pris beaucoup de photos.	<i>I took lots of photos.</i>
J'ai mangé dans des restos traditionnels.	<i>I ate in traditional restaurants.</i>
J'ai vu beaucoup de sites extraordinaires.	<i>I saw lots of extraordinary places.</i>
J'ai logé (dans une tente / dans un hôtel).	<i>I stayed (in a tent / in a hotel).</i>
J'ai commencé mon tour du monde en (2018).	<i>I started my world tour in (2018).</i>
J'ai travaillé dans un camp de réfugiés.	<i>I worked in a refugee camp.</i>

Il y avait ...	<i>There was / were ...</i>
un lac / un volcan.	<i>a lake / a volcano.</i>
une forêt tropicale.	<i>a tropical forest.</i>
des animaux sauvages.	<i>wild animals.</i>
beaucoup de problèmes.	<i>lots of problems.</i>

C'était ...	<i>It was ...</i>
vraiment intéressant.	<i>really interesting.</i>
absolument fabuleux.	<i>absolutely fabulous.</i>
très difficile.	<i>very difficult.</i>

On découvre des artistes francophones

Finding out about French-speaking artists

Mon artiste francophone s'appelle.... *My French-speaking artist is called ...*

Il / Elle est né(e) le ...	<i>He/She was born on the...</i>
Il / Elle habite (au Canada)	<i>He / She lives (in Canada)</i>
Il / Elle est (musicien(ne))	<i>He / She is (a musician).</i>
Il / Elle est membre du groupe ...	<i>He / She is a member of the group ...</i>
Son premier succès a été...	<i>His / Her first success was ...</i>
la chanson ...	<i>the song ...</i>
le film ...	<i>the film ...</i>
la série ...	<i>the series ...</i>
Il / Elle a chanté la chanson ...	<i>He / She sang the song ...</i>
Il / Elle a joué dans le film ...	<i>He / She played in the film ...</i>
Il / Elle a joué dans la série ...	<i>He / She played in the series ...</i>

Il / Elle a fait l'album ...	<i>He / She made the album ...</i>
Il / Elle va faire une tournée en...	<i>He / She is going to do a tour in ...</i>
Il / Elle va jouer dans...	<i>He / She is going to play in ...</i>
Il / Elle va poster des images sur Instagram.	<i>He / She is going to post pictures on Instagram.</i>
Il / Elle va continuer son travail avec / pour ...	<i>He / She is going to continue his/her work with/for...</i>
une organisation caritative	<i>a charitable organisation</i>

Second Year French Summer Term Knowledge Organiser Unit 4/5: Ma région/Le sport –

Qu'est-ce qu'on peut faire comme sport dans ta région ?	What sport can you do in your area?
Dans ma ville/mon village...	In my town/village....
On peut jouer...	You can play...
au basket	basketball
au billard	snooker
au foot(ball)	football
au handball/volleyball	Handball/volleyball
au tennis (de table)	(table) tennis
au rugby/hockey	rugby/hockey
On peut faire...	You can do...
du footing	jogging
du ski	skiing
du judo	judo
du vélo/du cyclisme	cycling
du patin à glace	ice skating
de la danse	dance
de la gymnastique	gymnastics
de la musculation	weight training
de la natation	swimming
de la voile	sailing
de l'athlétisme	athletics
de l'équitation	horse riding

Quelle est ton opinion sur... ?	What's your opinion on...?
Je trouve le tennis/la danse... amusant(e)	I find tennis/dance... fun
complicqué(e)	complicated
divertissant(e)	entertaining
fatigant(e)	tiring
intéressant(e)	interesting
passionnant(e)	exciting
relaxant(e)	relaxing
violent(e)	violent
ennuyeux/ennuyeuse	boring
difficile	difficult
facile	easy

Remember to make sure adjective endings agree for masculine/feminine

J'ai déménagé !	I moved house!
Dans ma nouvelle maison	In my new house
il y a...	there is...
un salon	a living room
un bureau	an office
une cuisine	a kitchen
une salle de bains	a bathroom
trois chambres	3 bedrooms
un jardin	a garden
nouveau/nouvelle	new
beau/belle	beautiful
vieux/vieille	old

The comparative
You use the comparative to compare two or more things.
plus + adjective + que = more ... than
moins + adjective + que = less ... than
The adjective must agree with the first noun mentioned.
La natation est plus amusante que le rugby. Swimming is more fun than rugby.
Le football est moins compliqué que la gymnastique. Football is less complicated than gymnastics.
In English, we sometimes add -er to the adjective (bigger, easier), but you can't do this in French.

Reflexive verbs
Some verbs are reflexive and have a reflexive pronoun that goes before the verb.
They are often actions you do to yourself, such as verbs you use to talk about daily routine.
Se laver To wash oneself
Je me lave I wash myself
Tu te laves You wash yourself
Il/Elle se lave He/she washes his/herself
Nous nous lavons We wash ourselves
Vous vous lavez You (pl.) wash yourselves
Ils/Elles se lavent They wash themselves

Tu es sportif/sportive ?	Are you sporty?
Je suis (assez) sportif/sportive	I'm (quite) sporty
Je ne suis pas (très) sportif/sportive	I'm not (very) sporty
Je joue au rugby	I play rugby
Je fais du judo	I do judo
Je fais de la natation	I do swimming
Je suis membre d'un club/une équipe	I'm a member of a club/team
Je m'entraîne deux fois par semaine	I train twice a week
Mon héroïne sportive est...	My sporting heroine is...
Mon héros sportif est...	My sporting hero is...

Ma routine	My routine
Je me lève à six heures	I get up at 6:00
Je prends le petit déjeuner à six heures dix	I have breakfast at 6:10
Je me douche à six heures et quart	I have a shower at 6:15
Je m'habille à six heures vingt-cinq	I get dressed at 6:25
Je me lave les dents à six heures et demie	I brush my teeth at 6:30
Je me coiffe à sept heures moins le quart	I do my hair at 6:45
Je quitte la maison à sept heures moins cinq	I leave the house at 6:55
Je me lave à dix heures vingt	I wash myself at 10:20
Je me couche à onze heures moins vingt-cinq	I go to bed at 10:35

Second Year French Summer Term Knowledge Organiser Unit 5: Le sport et la santé –

Le corps	The body
le bras	arm
le dos	back
le cou	neck
le pied	foot
le ventre	stomach
le genou	knee
le nez	nose
la jambe	leg
la bouche	mouth
la gorge	throat
la tête	head
l'épaule	shoulder
l'œil/les yeux	eye/eyes
les dents	teeth
les doigts	fingers
l'oreille	ear

Vous allez bien ?	Are you well?
Ça ne va pas.	I'm not well
J'ai mal au bras	My arm hurts
J'ai mal au ventre	I've got stomach ache
J'ai mal à la gorge	I've got a sore throat
J'ai mal à la tête	I've got a headache
J'ai mal à l'oreille	I've got ear ache
J'ai mal aux yeux	My eyes hurt
J'ai mal aux dents	I've got toothache
J'ai un rhume	I've got a cold
J'ai de la fièvre	I've got a temperature
J'ai la grippe	I've got the flu
Je me suis blessé(e)...	I've hurt my...
...au pied	foot
...à la jambe	leg
...à l'épaule	shoulder
...aux genoux	knees

To say something hurts, use '**J'ai mal**' + the body part and correct preposition :
 masc (le) = **au** fem (la) = **à la** vowel (l') = **à l'** plural (les) = **aux**

Qu'est-ce qu'il faut faire ?	What must you do ?
Il faut...	You must...
travailler dur	work hard
manger équilibré	eat a balanced diet
manger des fruits et des légumes	eat fruit and vegetables
aller à la salle de fitness	go to the gym
être motivé(e) et déterminé(e)	be determined and motivated
faire du sport	do sport
dormir huit heures par nuit	sleep 8 hours a night
boire de l'eau	drink water
Il ne faut pas...	You mustn't...
consommer de drogue	take drugs
fumer de cigarettes	smoke cigarettes
manger du fastfood	eat fast food

Il faut
 Il faut means 'it is necessary to/you must'. It is followed by an **infinitive** :
 Il faut **manger des légumes** – you must **eat** vegetables.
 Il **ne** faut **pas fumer** – you must **not smoke**

Les conseils	Advice
Il faut...	You must
rester au lit	stay in bed
utiliser une crème	use a cream
mettre un pansement	put on a bandage
prendre des antidouleurs	take some painkillers
boire beaucoup d'eau	drink lots of water

Depuis (since)
 Use *depuis* to say how long you have been ill:
Depuis hier – Since yesterday
Depuis trois jours – For 3 days
Depuis une semaine – For one week

Le sport – passé, présent, futur	Sport – past, present, future
Je suis membre d'une équipe locale	I'm a member of a local team
Je joue un match tous les samedis	I play a match every Saturday
Je marque beaucoup de buts	I score a lot of goals
Je gagne un match	I win a match
Je vais être membre de l'équipe nationale	I'm going to be on the national team
Je vais jouer pour la France	I'm going to play for France
Je vais marquer beaucoup d'essais	I'm going to score lots of tries
Je vais gagner la Coupe du Monde	I'm going to win the World Cup
J'ai joué en compétition	I played in a competition
J'ai marqué beaucoup de points	I scored lots of points
J'ai gagné une médaille aux Jeux Olympiques	I won a medal at the Olympics

Pour aller...	How do I get to...
au stade/au lac ?	the stadium/the lake?
au centre aquatique ?	the aquatic centre?
au vélodrome ?	the velodrome?
au parking/au restaurant ?	the car park/the restaurant?
au bureau d'information ?	the information office?
à la piste d'athlétisme ?	the athletics track?
à la salle de gymnastique ?	the gymnastics hall?
à la gare SNCF ?	the train station?
à la gare routière ?	the bus station?
à l'hôtel ?	the hotel?
aux courts de tennis ?	the tennis courts?
aux magasins ?	the shops?
aux toilettes ?	the toilets?

Les directions	Directions
Allez tout droit	Go straight on
Tournez à droite	Turn right
Tournez à gauche	Turn left
Prenez la première rue à droite	Take the 1 st road on the right
Prenez la deuxième rue à gauche	Take the 2 nd road on the left

Year 9 Geography: Fieldwork

Key Term	Definition
Fieldwork	Answering a geographical question about people, places or environments outside of a classroom or laboratory.
Primary research	Data that you have collected yourself, first-hand , by completing surveys, interviews, or experiments.
Secondary research	Data that was collected by someone else and is therefore second-hand . However, it may help to guide your own investigation.
Data presentation	Using data that you have collected to create charts or graphs . This makes your data more 'visual' and easier to read.
Data analysis	Studying data to try and identify patterns or trends .
Conclusion	Using the data you collected to attempt to answer your original question or hypothesis from the start of your investigation.



Key ideas

Fieldwork is used by Geographers to try and **answer questions about the world**. To ensure their discoveries are valid and scientific, an enquiry process is followed with **six separate stages**. These stages are shown in the image above.

All fieldwork begins with using the questions we have about a specific environment to create a hypothesis. **A hypothesis is a statement that can be tested**. It must be clear and measurable. At the end of the enquiry, you should be able to say if your hypothesis was correct or not.

All fieldwork should end with an **evaluation**. This is when you reflect on your research and suggest how improvements could be made. You consider how you would do the fieldwork better if you had to repeat it.

Year 9 Geography: Africa



Africa is the second largest continent in the world with 54 countries and a population of 1.1 billion. It sits on the African tectonic plate. It has several major river basins including the Niger, Nile, Congo, Zambezi and Orange.

Key Term	Definition
Development	The process of change and improvement both economically and socially.
Standard of living	The degree of wealth and material comfort available to a person or community.
Quality of life	The standard of health, comfort, happiness and wellbeing experienced by an individual or group.
Biomes	A large community of plants and animals found in a major habitat. Examples found in Africa include rainforests, deserts and savannahs.
Desertification	The process by which land becomes drier and degraded.
Colonialism	The type of government where a geographic area is ruled by a foreign power.
Imperialism	Where countries impose influence through military force and economic force.
Neo-colonialism	When former colonies influence countries through the economy and international relations.

Key ideas

Africa's population is growing rapidly in countries such as Nigeria where birth rates exceed death rates. Birth rates are high because of a lack of contraception and the fact that parents need children to help on farms and support them in old age. Death rates are falling due to improved access to health care, food, water and sanitation.

The 1884-1885 Berlin Conference was a meeting of 14 nations who divided Africa amongst themselves. The UK was a colonial power ruling countries such as Ghana and Kenya until the mid-1900's. In the twentieth century African countries became independent and started to govern themselves. Countries including China which is investing heavily in Africa are keen to exploit Africa's resources including bauxite, uranium, diamonds, platinum, cobalt, oil, gas and timber.

1. Mit welchem Alter darf man das?

Man darf ab ... Jahren in Deutschland ...
 einen Teilzeitjob haben.
 die Schule verlassen.
 Blut spenden. / heiraten.
 ein Piercing haben. / ein Mofa fahren.
 Ich denke, das ist richtig/falsch.
 Das finde ich toll.
 Das ist ganz in Ordnung.
 Das ist nicht gut.

At what age are you allowed to do that?

In Germany at the age of ... you are allowed...
 to have a part-time job.
 to leave school.
 to donate blood. / to marry.
 to have a piercing./ to ride a moped.
 I think, that is right/wrong.
 I find that great.
 That is wholly acceptable.
 That is not good.

2. Was ist dir (nicht) wichtig?

Geld/ Mode/ Musik/ Freizeit
 Meine Familie/ Mein Handy
 Gute Noten
 Meine Haustiere/ Meine Freunde
 ... ist/sind mir total/extrem/sehr/
 ziemlich/nicht wichtig.
 (Musik) ist mir wichtig, weil ...
 sie mich glücklich macht.
 ich in einer Band spiele.

What is (not) important to you?

Money / fashion / music / free-time
 My family / My mobile phone
 Good grades
 My pets / my friends
 ... are totally/ extremely / very
 quite/ not important to me.
 (Music) is important to me, because...
 it makes me happy.
 I play in a band.

3. Wo hast du bisher gewohnt?

Ich wohne jetzt in ...
 Ich habe früher in ... gewohnt.
 Mein Haus hier ist ...
 Mein Haus in ... war ...
 Ich finde die Schule hier ...
 Die Schule in ... war ...
 Jetzt fahre ich ... zur Schule.
 Ich bin früher ... zur Schule gegangen.
 Hier ist jeder Tag (sonnig und heiß).
 Ich vermisse (die Sonne).
 Es ist ziemlich kalt hier!
 Früher war es oft (kalt) ...
 Nächste Woche werde ich ...

Where have you lived until now?

Now I live in...
 I used to live in...
 My house here is...
 My house in ... was...
 I find the school here...
 The school in... was...
 Now I go... to school.
 I used to go ... to school.
 Here, every day is (sunny and hot)
 I miss (the sun).
 It is quite cold here.
 It used be often (cold)...
 Next week I will...

4. Wie können wir Spenden sammeln?

Wir können ...
 Autos waschen.
 einen Kuchenverkauf organisieren.
 einen Benefizlauf machen.
 ein gesponsertes Schweigen machen.
 eine Modenschau organisieren.
 ein Benefizkonzert organisieren.

How can we collect donations?

We can...
 wash cars.
 organise a cake sale.
 do a charity run.
 do a sponsored silence.
 organise a fashion show.
 organise a charity concert.

5. Was kann man machen?

Man kann ...
 umweltfreundliches Papier kaufen.
 mit dem Rad zur Schule fahren.
 einen Kapuzenpulli zu Hause tragen.
 duschen statt baden.
 Obst und Gemüse selbst kultivieren.
 den Müll sortieren.

What can you do?

You can...
 buy environmentally friendly paper
 go to school by bike.
 wear a hoodie at home.
 take a shower instead of a bath.
 grow your own fruit and vegetables.
 sort the rubbish.

1. Was für ein Film ist „Das Wunder von Bern“?

Ich denke „Das Wunder von Bern“ ist...
 ein Gruselfilm
 ein Liebesfilm
 ein Science-Fictionfilm
 ein Dokumentarfilm
 ein Abenteuerfilm
 ein Zeichentrickfilm
 ein Actionfilm
 ein Drama
 eine Komödie

What kind of film is 'The miracle of Bern'?

I think 'The miracle of Bern' is...
 a horror film
 a romantic film
 a science fiction film
 a documentary
 an adventure film
 a cartoon
 an action film
 a drama
 a comedy

2. Wie war das Leben nach dem Krieg?

Das Leben war/hart/schwierig/nicht einfach
 besonders für Kinder / Frauen /Familien
 Es gab.....
 viel Armut
 viel Arbeitslosigkeit
 viel Obdachlosigkeit
 Kriminalität
 wenig Geld
 wenig Männer
 wenig Essen
 Viele Kinder/Leute hatten keine Hoffnung,
 deswegen waren viele Menschen
 verzweifelt
 unzufrieden
 schlecht gelaunt
 gestresst
 traurig
 deprimiert
 hungrig

What was life like after the war?

Life was hard / difficult /not easy
 particularly for children / women /families
 There was....
 a lot of poverty
 a lot of unemployment
 a lot of homelessness
 crime
 not a lot of money
 not a lot of men
 not a lot of food
 Lots of children/people had no hope,
 for this reason lots of people were
 desperate
 dissatisfied
 in a bad mood
 stressed
 sad
 depressed
 hungry

3. Vor dem Krieg war...

ich/ mein Bruder/meine Schwester...
 waren wir.....
 war das Leben.....
 glücklicher/ schöner/ einfacher/ unbeschwerter
 zufriedener/ entspannter/ leichter/
 lebendiger/ sorgenfreier
 Nach dem Krieg war das Leben...
 stressiger/ unglücklicher/ schwerer
 unzufriedener/ härter/ einsamer/
 blöder /liebloser/ trauriger/ ernster
 , weil es viel Streit /Gewalt gab

Before the war.... was....

I / my brother was / my sister
 we were
 life was....
 happier/ nicer/ easier/ more carefree
 more satisfied/ more relaxed/ easier/
 more lively/ more carefree
 After the war, life was...
 more stressful/unhappier/more difficult
 more unsatisfied/harder/lonelier/
 more stupid/ loveless/sadder/ more serious
 because there were lots of arguments/violence

4. Beschreib deinen Lieblingsdarsteller.

Mein Lieblingsdarsteller ist...
 Er/Sie ist...
 Ich finde ihn/sie...
 Aber manchmal war er/sie...
 Es wäre besser, wenn er/sie.... wäre.
 Alles in allem war der Film...
 Ich würde den Film (nicht) empfehlen.

Describe your favourite character.

My favourite character is...
 He/she is...
 I find him/her...
 But sometimes he/she was...
 It would be better if he/she was...
 All in all the film was...
 I would (not) recommend the film.

Second Year German – Summer Term

Kleider/ Klamotten Clothes

der Rock	<i>skirt</i>
der Mantel	<i>coat</i>
der Anzug	<i>suit</i>
der Kapuzenpulli	<i>hoodie</i>
die Jeanshose/ die Jeans	<i>jeans</i>
die Hose	<i>trousers</i>
das Kleid	<i>dress</i>
das Hemd	<i>shirt</i>
das T-Shirt	<i>T-shirt</i>
die Schuhe	<i>shoes</i>
die Stiefel	<i>boots</i>
die Sandalen	<i>sandals</i>

Was trägst du? *What do you wear?* *What are you wearing?*

ich trage...	<i>I wear/ I am wearing</i>
einen kurzen Rock	<i>a short skirt</i>
einen langen Mantel	<i>a long coat</i>
einen lockeren Kapuzenpulli	<i>a casual hoodie</i>
eine weite Hose	<i>a baggy pair of trousers</i>
eine schmale Jeanshose	<i>a pair of skinny jeans</i>
ein kariertes Hemd	<i>a checkered shirt</i>
ein gepunktetes Kleid	<i>a spotty dress</i>
ein gestreiftes T-Shirt	<i>a stripy T-shirt</i>
schicke Stiefel	<i>smart boots</i>

Five key words

die Schuhe	<i>the shoes</i>
trendig	<i>trendy</i>
ich ziehe mich an	<i>I get dressed</i>
einige Leute	<i>some people</i>
viele Kinder	<i>many children</i>

Wie ist es? *What is it like?*

kurz	<i>short</i>
lang	<i>long</i>
weit	<i>wide-leg/ baggy</i>
schmal	<i>slim-leg/ skinny</i>
schick	<i>smart</i>
locker	<i>casual</i>
kariert	<i>checkered</i>
gepunktet	<i>spotty/ polka dot</i>
gestreift	<i>stripy</i>
glänzend	<i>glittery</i>

ein erstes Date

Was wirst du machen?
ich werde...
die Karten im Voraus kaufen
einen guten Film auswählen
früh ankommen
abholen
etwas Schickes anziehen
genug Geld mitnehmen
mit dem Bus in die Stadt fahren
ins Kino gehen
essen gehen

A first date

<i>What will you do?</i>
<i>I will...</i>
<i>buy the tickets in advance</i>
<i>choose a good film</i>
<i>arrive early</i>
<i>pick up</i>
<i>put on something smart</i>
<i>take enough money with me</i>
<i>go by bus to town</i>
<i>go to the cinema</i>
<i>go out to eat</i>

Wie ist dein Stil? *What is your style?*

lässig	<i>informal</i>
trendig	<i>trendy</i>
sportlich	<i>sporty</i>
klassisch	<i>classic</i>

ich mache mich fertig

ich style mir die Haare
ich mache mir die Haare
ich putze mir die Zähne
ich schminke mich
ich ziehe mich an
ich sehe mich im Spiegel an
ich benutze ein Deo
ich wähle meine Kleider aus

I get myself ready

<i>I style my hair</i>
<i>I do my hair</i>
<i>I brush my teeth</i>
<i>I put on make-up</i>
<i>I get dressed</i>
<i>I look at myself in the mirror</i>
<i>I put on deodorant</i>
<i>I choose my clothes</i>

High frequency words

wenn	<i>when/ if</i>
immer	<i>always</i>
zum Beispiel	<i>for example</i>
zuerst	<i>first of all</i>
seit	<i>since/ for</i>
für	<i>for</i>
möglich	<i>possible</i>
pro Jahr	<i>per year</i>
nächstes Jahr	<i>next year</i>
teuer	<i>expensive</i>
alle	<i>all/ everyone</i>
um... zu	<i>in order to</i>

Diskussion und Debatte

Viele/ Einige Leute sagen
Meiner Meinung nach
Erstens
Zweitens
Schließlich
Du hast gesagt ... aber ich denke
Auf der einen Seite

Discussion and debate

<i>Many/some people say</i>
<i>In my opinion</i>
<i>Firstly</i>
<i>Secondly</i>
<i>Finally</i>
<i>You said... but I think</i>
<i>On the one hand</i>

HISTORY KNOWLEDGE ORGANISER

Chronology		Key Words	Definition
1902	Balfour Act	National Front	Far right political group – Anti immigration
1906	Free School Meals	SS Empire Windrush	The ship that brought the first immigrants to Britain from the Caribbean in 1948
1907	School Medical checks	Immigration	The policy of people moving to one country from another country for work or to settle
1908	Children's Charter / Pension	Immigrant	A person or group of people who emigrate to another country for work or to settle
1911	National Insurance Act	Labour	Another term for 'work' or 'working'
14 Apr 1912	Titanic Disaster	Act	Another term for 'Law' passed by Parliament
1914-18	World War One	Race	A physical, behavioural or cultural aspect defining a group of people
1939-45	World War Two	Racism	Acts of violence, intimidation, prejudice or discrimination towards a particular Race
1939	Child evacuees	Discrimination	Treating people differently based on their race, gender, sexuality
1944	Education Act	Trade Union	Fights for improvement in worker's rights
5 July 1948	Introduction of NHS	Beatlemania	The influence of the Beatle's music on society
1948	British Nationality Act	Equality	All races, genders & people treated the same
1948	Empire Windrush	Industry	Manufacturing output of a country
1948	Children's Act	Women's Land Army	Women who stepped into the gaps left by the men who went off to war and farmed the food
1958	Campaign for Equal Pay	Rationing	The limits on some food products during war
1958	Summer of Violence	Liberation	Another term for being freed
May 1960	Battle of the Beach(es)	Women's Lib	A movement fighting for women to have more equal status and more freedom / choices
1961	The pill available	Nationality	Where a person comes from eg English
1967	Abortion Act	Gender Pay Gap	A gap where men are paid more than women
1968	Rivers of Blood speech	Colour Bar	A social system in which black / other non-white people are denied access to that of white people
1969	Divorce Act	Liberal Reform	Laws introduced to deal with poverty in Britain
1975	Equal Pay Act	Poor Relief	Financial support for people in deep poverty
1975	Sex Discrimination Act	Poor Law	Workhouses / outside work set up by the government providing food and shelter
1977	Battle of Lewisham	Labour Party	Political party with socialist ideology
1978	Winter of Discontent	Conservative Party	Political party a more nationalist ideology
1979-90	Thatcher first female PM	Liberal Democrats	Political party with a moderate central ideology
Apr 1981	First Brixton Riot	Socialism	A political ideology where the wealth of the country is fairly divided amongst all citizens
July 1981	Toxteth Riots	Cradle to Grave	Being looked after from birth to death by NHS
1983-85	Miner's Strikes	Welfare State	The state tries to protect the health and wellbeing of its citizens, supporting in difficult times
2013	#Blacklivesmatter movement		
2018	Windrush Scandal		

Topics Key


Youth Women Education Tech

Poverty & Reform


Immigration / protest

Important image(s)

Services offered **free** at the point of use by the NHS



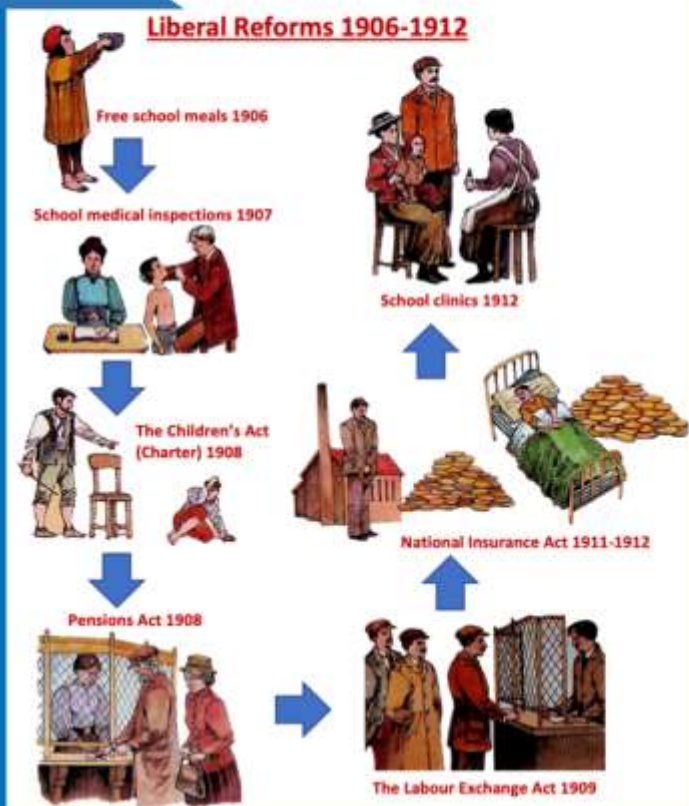
Margaret Thatcher:
Britain's first Female PM



Nye Bevan – Health Minister
Introduced NHS July 5th 1948

Key People	Role
Enoch Powell	Politician who delivered Rivers of Blood racist speech
Arthur Scargill	Union leader in charge of the coal miner's strikes
Nye Bevin	Labour Health Minister introduced NHS
Charles Booth	Investigated poverty in London, reported conditions
William & Catherine Booth	Started the Salvation Army
Seebohm Rowntree	Investigated poverty in York, reported conditions
Margaret Thatcher	First female Prime Minister 1979-1990
Clement Attlee	Prime Minister straight after WW2
William Beveridge	Identified '5 giants' and proposed a welfare state
David Lloyd George	Chancellor during Liberal Reforms, later Prime Minister
Winston Churchill	Prime Minister during WW2

HISTORY KNOWLEDGE ORGANISER



Key discoveries / Ideas
Beatlemania: A popular craze for youngsters following the Beatles
Mods, Rockers & Teddy Boys: Different groups for teenagers to join and identify with. The beginnings of challenging authority
NHS: An organisation that will look after ever citizen from birth to death for free (at the point of use - paid for in extra taxes)
Technology: Titanic, The Pill, items for the home (washing machines, hoovers, cookery equipment), Television, Cars, Motorbikes, Video

Core Knowledge
As the economic situation improved after WW2, almost everyone had a job and their own money including teenagers. This led to a new freedom creating their own identities.
Music & pop culture became a massive influence in people's lives, especially teenagers.
The introduction of the pill gave women more freedom in the choices they could make contributing to a more independent woman not having to settle for being a housewife.
The Boer war and WWI highlighted to the government how poverty was affecting Britons sewing the seeds for it to intervene more and help people which would be the Welfare State.
The damage both physically and economically of WW2 meant Britain had to change. This led to the building of new towns and cities, the welfare state and the NHS. This in turn meant there was a huge need for labour leading to a large influx of immigrant workers.
The Liberal Reforms came about because the government realised Britain was falling behind on the global scale. The USA and German economies were much healthier and their armies much stronger. The investigations by Rowntree and C. Booth highlighted how terrible life was for those in poverty prompting the Liberal Government to act.
The 5 Giants of society causing a lot of the problems were identified as 'Want' 'Ignorance' 'Disease' 'Squalor' and 'Idleness'. The Labour government after WW2 believed if they got rid of these issues in society Britain would be healthier, fairer and stronger
The British Nationality Act of 1948 offered immigrants from the Commonwealth of old colonies British Citizenship and a passport if they came to Britain. The first migrants arrived on the SS Empire Windrush from the Caribbean. Many came from India & Pakistan, bringing new cultures, foods, music and attitudes to Britain leading to our multicultural society of today.
The influx of foreigners to Britain led to some extreme political views and racial violence particularly in the black community. Many Britons felt that the immigrants were taking their jobs and it was time to send them home, leading to the creation of the National Front and political speeches like Enoch Powell's Rivers of Blood. Riots and protests grew more violent in the 1980s in London and Liverpool.
Education changed dramatically from just boys getting a basic education, to the promotion of grammar schools and comprehensives to finally compulsory education for boys and girls up to the age of 18. There is still some inequality in education today that many are fighting

Common misconceptions
Not all teenagers chose to join rebel gangs. Not all women wanted the new freedoms, they felt pressurised.
Immigrants who came from the former colonies of the British Empire classed themselves as British, especially after fighting for Britain in both World Wars.
Lots of men supported the Women's Lib movement and equality for all too.
Although the immigrants faced lots of abuse and prejudice, most of Britain welcomed them and supported them.

Books / Articles / Films / websites
Brassed off – poverty & Miner's strikes
Liberal Reforms BBC Bitesize
Back in Time for School BBC iPlayer
Andrew Marr's Modern Britain Book/TV
Key Themes
Government, Protest, Democracy, Military, Empire, Migration, Technology, Women

Year 9 Knowledge Organiser

SEQUENCES

Key Concepts

Arithmetic or linear sequences
increase or decrease by a common amount each time.

Geometric series has a common multiple between each term.

Quadratic sequences include an n^2 . It has a common second difference.

Fibonacci sequences are where you add the two previous terms to find the next term.

Linear/arithmetic sequence:



a) State the nth term

$$3n + 1$$

Difference The 0th term

b) What is the 100th term in the sequence?

$$3n + 1$$

$$3 \times 100 + 1 = 301$$

c) Is 100 in this sequence?

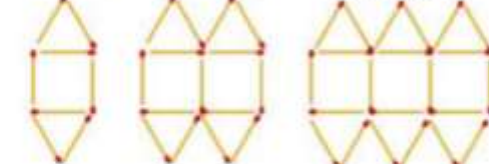
$$3n + 1 = 100$$

$$3n = 99$$

$$n = 33$$

Yes as 33 is an integer.

Examples



Linear sequences with a picture:

State the nth term.

Hint: Firstly write down the number of matchsticks in each image:

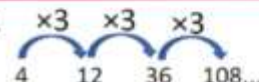
Pattern 1	Pattern 2	Pattern 3
8	15	22

$+1$

-7 $+7$ $+7$

$$7n + 1$$

Geometric sequence e.g.



Quadratic sequence e.g.

$n^2 + 4$ Find the first 3 numbers in the sequence

First term: $1^2 + 4 = 5$

Third term: $3^2 + 4 = 13$

Second term: $2^2 + 4 = 8$

hegartymaths
198, 247-250, 264

Key Words

Linear
Arithmetic
Geometric
Sequence
Nth term

1) 1, 8, 15, 22,

a) Find the nth term b) Calculate the 50th term c) Is 120 in the sequence?

2) $n^2 - 5$ Find the first 4 terms in this sequence

ANSWERS: 1a) $7n - 6$ b) 344 c) 18 so yes as n is an integer 2) -4, -1, 4, 11

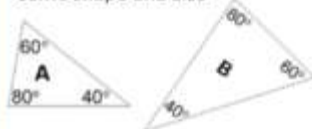
Year 9 Knowledge Organiser

Transformations

Key Concept

Properties of congruent shapes:

- The shapes will be exactly the same shape and size



Properties of similar shapes:

- The corresponding angles will be the same if shapes are similar.

- Corresponding edges must remain in proportion.



Key Words

Transformation: This means something about the shape has 'changed'.

Reflection: A shape has been flipped.

Rotation: A shape has been turned.

Translation: A movement of a shape.

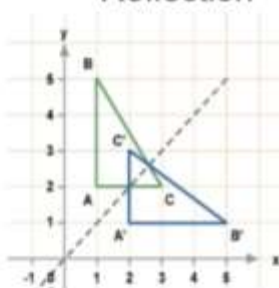
Enlargement: A change in size, either bigger or smaller.

Congruent: These shapes are exactly the same shape and same size but can be in any orientation.

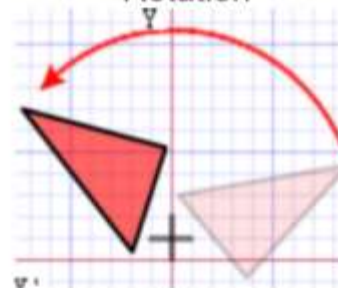
Similar: Two shapes are mathematically similar if one is an enlargement of the other.

Examples

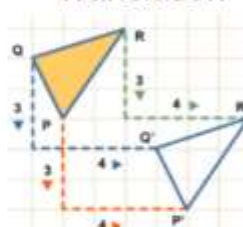
Reflection



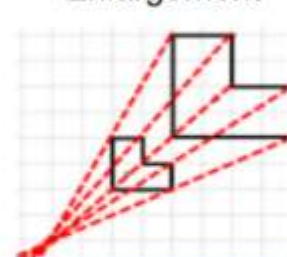
Rotation



Translation



Enlargement



hegartymaths
Clip Numbers
614-618, 637-649

Tip

You can find the centre of enlargement connect the corresponding vertices.

Questions

- Can you fully describe each of the transformations above?
- Which of the shapes have stayed similar? Which are congruent?

ANSWERS: 1) Reflection in the line $y=x$, Rotation of 120° anti-clockwise about $(0,1)$, Translation of $(\begin{smallmatrix} 4 \\ 3 \end{smallmatrix})$, Enlargement: scale factor 2 (or $\frac{1}{2}$) centre isn't known! 2) Reflection, Rotation and Translation make congruent shapes, Enlargement makes similar shapes (only congruent if scale factor is -1)

Year 9 Knowledge Organiser

EXPANDING AND FACTORISING

Key Concepts

Expanding brackets
Where every term inside each bracket is multiplied by every term all other brackets.

Factorising expressions
Putting an expression back into brackets. To "factorise fully" means take out the HCF.

Difference of two squares
When two brackets are repeated with the exception of a sign change. All numbers in the original expression will be square numbers.

Examples

Expand and simplify:

$$\begin{aligned}
 1) \quad & 4(m+5) + 3 \\
 & = 4m + 20 + 3 \\
 & = 4m + 23 \\
 2) \quad & (p+2)(2p-1) \\
 & = p^2 + 4p - p - 2 \\
 & = p^2 + 3p - 2 \\
 3) \quad & (p+3)(p-1)(p+4) \\
 & = (p^2 + 3p - p - 3)(p+4) \\
 & = (p^2 + 2p - 3)(p+4) \\
 & = p^3 + 4p^2 + 2p^2 + 8p - 3p - 12 \\
 & = p^3 + 6p^2 + 5p - 12
 \end{aligned}$$

Factorise fully:

$$\begin{aligned}
 1) \quad & 16at^2 + 12at = 4at(4t + 3) \\
 2) \quad & x^2 - 2x - 3 = (x - 3)(x + 1) \\
 3) \quad & 6x^2 + 13x + 5 \\
 & = 6x^2 + 3x + 10x + 5 \\
 & = 3x(2x + 1) + 5(2x + 1) \\
 & = (3x + 5)(2x + 1) \\
 4) \quad & 4x^2 - 25 \\
 & = (2x + 5)(2x - 5)
 \end{aligned}$$



160-166, 168,
169,223-228

Key Words

Expand
Factorise fully
Bracket
Difference of two squares

A) Expand:

1) $5(m-2) + 6$ 2) $(5g-4)(2g+1)$ 3) $(y+1)(y-2)(y+3)$

B) Factorise:

1) $5b^2c - 10bc$ 2) $x^2 - 8x + 15$ 3) $3x^2 + 8x + 4$ 4) $9x^2 - 25$

ANSWERS: A 1) $5m - 4$ 2) $10g^2 - 3g - 4$ 3) $(x-3)(x-5)$ B 1) $5b^2c - 10bc$ 2) $(x-2)(x+2)$ 3) $(3x+2)(x+2)$ 4) $(3x+5)(3x-5)$

Year 9 Knowledge Organiser

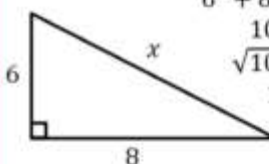
PYTHAGORAS' THEOREM

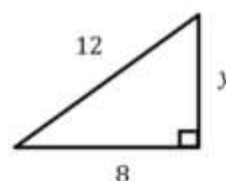
Key Concepts

Pythagoras' theorem only works with right angled triangles.

Pythagoras' Theorem – used to find a missing length when two sides are known
 $a^2 + b^2 = c^2$
c is always the hypotenuse (longest side)

Examples

$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 6^2 + 8^2 &= x^2 \\
 100 &= x^2 \\
 \sqrt{100} &= x \\
 10 &= x
 \end{aligned}$$




$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 y^2 + 8^2 &= 12^2 \\
 y^2 &= 12^2 - 8^2 \\
 y^2 &= 80 \\
 y &= \sqrt{80} \\
 y &= 8.9
 \end{aligned}$$

Key Words

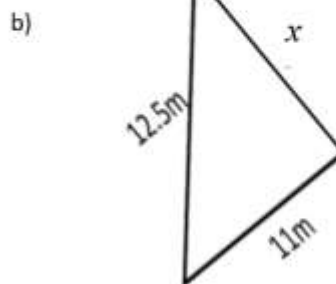
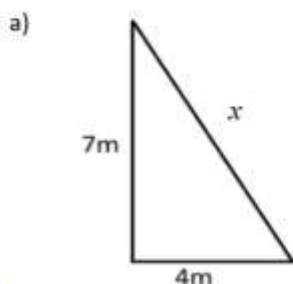
Right angled triangle
Hypotenuse
Opposite
Adjacent
Sine
Cosine
Tangent



498-499, 509-515

Questions

Find the value of x.



ANSWERS: a) 8.06m b) 5.94m

YEAR 9— UNIT 3

ELECTRONIC DANCE MUSIC (EDM)

EDM is an Acronym that stands for 'Electronic Dance Music'. Also known as "Dance Music", "Club Music" or simply "Dance" it was made largely for night-clubs and festivals. A constant speed (usually 120bpm) allows DJs to create a seamless 'mix' by joining several tracks together without a gap.

D Minor Chord



A Minor Chord



Bb Major Chord



C Major Chord



Sampling

A 'sample' is an extract recorded directly from a pre-existing song. The most sampled song ever is the drum break from 'Amen, Brother' by The Winstons (1969) This sample is so famous it is known as the 'Amen Break'.
The original tempo is 136 BPM

KEY EDM ARTISTS



AVICII

Tracks include:
'Levels'
'Wake Me Up'
'Tracks of My Tears'



SKRILLEX

Tracks include:
'With You Friends'
'Where Are U Now?'
'Bangarang'



DAVID GUETTA

Tracks include:
'Titanium'
'Shot Me Down'
'Heartbreak Anthem'



CALVIN HARRIS

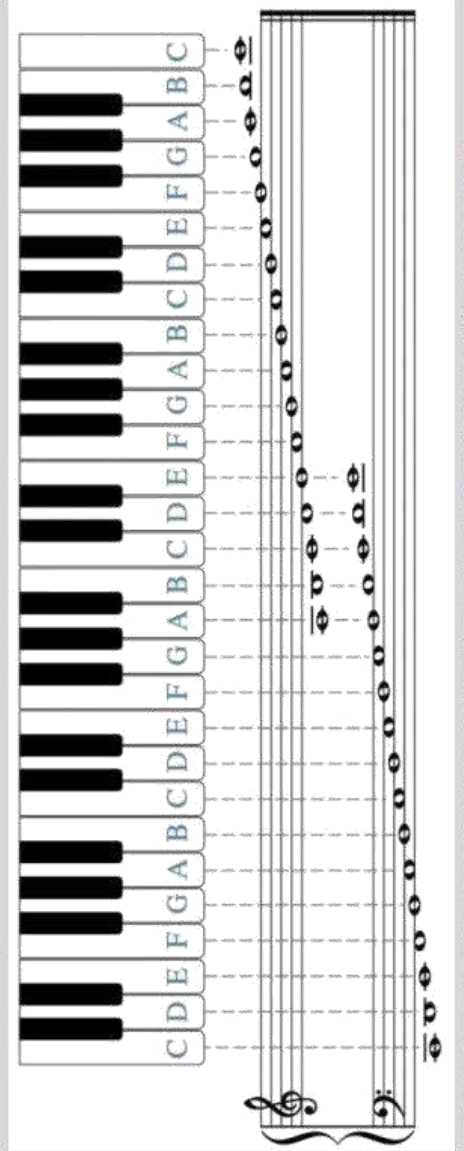
Tracks include:
'Promises'
'We Found Love'
'One Kiss'



DAFT PUNK

Tracks include:
'One More Time'
'Get Lucky'
'Da Funk'

Rhythm in Music: Note Values—UK		
Term	Symbol	Value
semibreve		4 beats
minim		2 beats
crotchet		1 beat
quaver		1/2 beat
pair of quavers		1/2 + 1/2 = 1
semiquaver		1/4 beat
joined semiquavers		1/4 + 1/4 + 1/4 + 1/4



Rhythm in Music: Rest Values—UK		
Term	Symbol	Value
semibreve rest		4 beats of silence
minim rest		2 beats of silence
crotchet rest		1 beat of silence
quaver rest		1/2 beat of silence
semiquaver rest		1/4 beat of silence

YEAR 9 – UNIT 4 PODCASTING

Radio broadcasting has been around since the 1800s, with the first ever commercial radio stations being established in the 1920s. Radio waves allow live broadcasting from location to others, either on a local or national scale. Thanks to the internet, broadcasting no longer relies on radio waves, and can easily be spread globally; however traditional radio stations still remain popular today.

Radio Station

A radio station is a 'live stream' of information.



Up to date weather & traffic alerts
Live phone-ins and competitions
Live commentary



Listener cannot 'skip' adverts / songs
Risk of signal loss (especially in a car)
Limited choice of radio stations



Podcast

A podcast is a 'pre-recorded' radio show.

Listeners choose which episodes to listen to
Always available to re-listen
Listeners can skip dialogue and music
Can be made 'available offline'



No possibility of 'live' up to date information
No sense of 'company' compared to a live broadcast



Lots of podcasts are now video-recorded and available to watch on YouTube.



Features

Music

The main aspect of a radio station. Different styles of music are played on various stations nationwide.

Traffic

Particularly important for those listening while driving, to keep up to date with accidents and road closures. **Not possible on a podcast.**

Interviews

An interview is when a special guest is invited on to the show, either a radio show or podcast, to be asked questions on a chosen topic.

Adverts

Because radio is free to listen to, it relies on advertising to run. Likewise unless you pay for YouTube / Spotify Premium, you will also receive ads.

Phone-ins

This can be a general phone-in such as 'first caller of the day' or for competition purposes such as a live quiz to win money. **It allows direct audience interaction and participation.**



Radio Waves

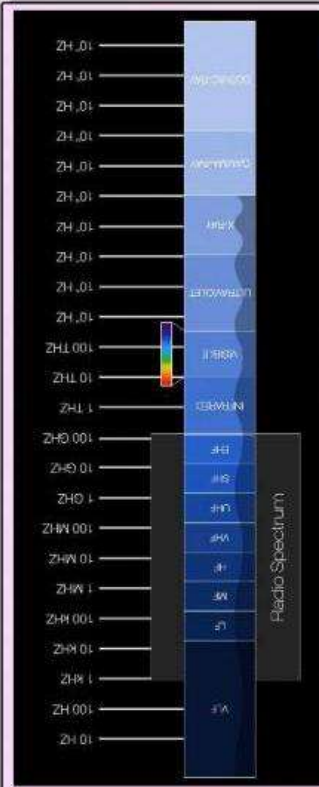
KHz - Thousand oscillations per second
MHz - Million oscillations per second
GHz - Billion oscillations per second
THz - Trillion oscillations per second

LW - Long Wave
MW - Medium Wave
SW - Short Wave
VHF - Very High Frequency
UHF - Ultra High Frequency
FM - Frequency Modulation

Broadcasters

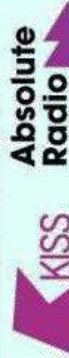
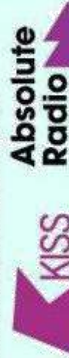
A Broadcaster's job involves talking on live radio, in order to be successful they must:

- Be sociable and chatty
- Show empathy towards guests
- Be expressive and exciting
- Be 'tech-savvy' to operate equipment
- Respond effectively to awkwardness
- Be professional



Popular Stations

Radio stations can cover either nationally or locally.
Nationwide = a whole country for example England
Local = a region such as Wisbech or Peterborough



Popular Podcasts

The Joe Rogan Experience

Launched 2009

Over 10m YouTube subscribers
Joe Rogan interviews celebrities on many topics such as conspiracy theories, politics, and current affairs.



Hot Ones

Launched 2015

Over 10m YouTube subscribers
Hot Ones invites celebrities to be interviewed while eating increasingly hot chicken wings.



9.5 KS3 Core PE Knowledge Organiser: Energy use, Diet, Nutrition & Hydration

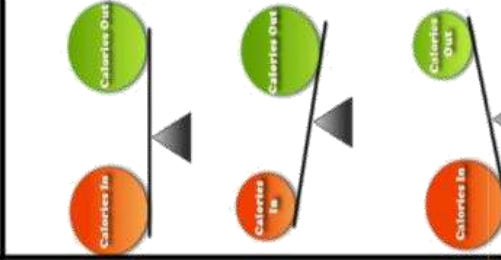
Diet:
 A **balanced diet** is described as eating the right foods in the right amounts, our diet needs to also be varied in order to provide the nutrients that we need. A balanced diet will allow us to exercise and work properly.

- The 7 components of a balanced diet are:
- **Carbohydrates** – a macronutrient that provides energy (in foods such as bread, rice, pasta and potatoes)
 - **Proteins** – a macronutrient that aids the growth and repair of muscles (in foods such as cheese, milk, eggs, lean meat, fish)
 - **Fats** – a macronutrient which provides energy but in excess can lead to weight gain (in foods such as butter, oil, fatty meat, fried food)
 - **Vitamins and minerals** - help keep our body healthy and can improve our immune system (vitamins in fresh fruit and vegetables, minerals in vegetables and meat)
 - **Fibre** (aids digestion – in cereals, vegetables and nuts) and **water** (prevents hydration)

Dietary manipulation can aid both training and performance.
 Q - *Which athletes may need to carefully think about the timing of protein intake and why?* Q - *Which athletes may need to partake in carbohydrate loading in preparation for their event?*

Energy balance:
 If the calories you intake matches the calories you expend you would have an **energy balance**.

Optimum weight:
 An individual's optimum weight is dependent on their **bone structure, height, gender** and **muscle girth**. These factors would also dictate which sport or position an individual would be more suited to excel in.



Key Vocabulary:
 Balanced diet, energy balance, macronutrients, carbohydrates, fats, proteins, micronutrients, vitamins, minerals, fibre, water, optimum weight, hydration



The eat well guide shows the recommended proportions of different types of food that we should eat to maintain a balanced diet.
 Q - *What might 'macro' and 'micro' mean in terms of quantities?*

Common Misconceptions:

- **Water** does not just mean actual water in terms of dietary intake. It can be in the form of other drinks and there is also water contained in many foods.
- A **balanced diet** and **energy balance** are not the same thing. A balanced diet refers to what should be included in your diet and energy balances refers to the quantities that we consume (energy in) in relation to how much energy we use through exercise (energy out)

Command word: Identify
 Can require a selection from a given stimulus or resource, for example an option from a multiple-choice question

Q) **Identify** the athlete that is **least likely to worry about the timing of their protein intake**.

- Sprinter
- Shot putter
- Long-distance cyclist**
- Power lifter

Can you work out why?

9.6 KS3 Core PE Knowledge Organiser

The Consequences of a Sedentary Lifestyle

A sedentary lifestyle is a lifestyle that is seriously lacking in physical exercise or activity.

Key Words

Sedentary lifestyle
Obesity, Diabetes, Overfat, Overweight

Impact on a sedentary Lifestyle on weight

Overweight

The term **overweight** means **you weigh more than the expected weight for your height and sex.**

You can be overweight but not over fat. Elite athletes may be overweight due to muscle girth and bone density. Being overweight is not harmful unless it is accompanied with being overfat.

More People leading a Sedentary Lifestyle - Why?

More people use cars and public transport than cycle or walk

More jobs are computer based and therefore sedentary

Large amount of time at school or work is spent sitting

Large amount of time at home is spent sitting playing computer games and watching TV

Overfat

The term **overfat** means **you have more body fat than you should have.**

It is possible to be overfat but not overweight. Inactive people may have little muscle girth and a low bone density.

Health risks associated with a sedentary lifestyle

Health Risk	Explanation
Obesity	Due to inactivity and a reduction in metabolic rate
Depression	Being overweight or obese can lead to poor self-esteem and lack of confidence
Osteoporosis	Due to lack of weight bearing exercise
Poor muscle tone and posture	Due to inactivity muscles are weak
Type 2 diabetes	Being overweight can increase the risk of developing type 2 diabetes
Heart disease and stroke	High blood pressure and cholesterol increase the risk of a heart attack and a stroke

Obese

The term **obesity** is used to describe people who are very **overfat.**

Body fat has increased to a level that is seriously unhealthy. High levels of body fat can lead to: mobility issues, lack of flexibility, stress on bones and joints, heart disease, type 2 diabetes, depression and a low self-esteem.

The Impact on sustained involvement in physical activity

Health problems such as heart disease will prevent you from taking part in strenuous exercise.

If you become too tired, immobile or have difficulty walking or running, this will affect your ability to take part in physical activity.

Command Word – Explain (Explain means Justify a point. The answer must contain some linked reasoning)

Question – Explain how a sedentary lifestyle can lead to various health risks and how they may affect participation in physical activity (3 marks).

Point 1 – explain an example of a health risk associated with a sedentary lifestyle (A01). Point 2 – explain a possible cause of health risk (A02). Point 3 – explain how this may affect your ability to take part in physical activity (A03).

Words you could use: **heart disease, diabetes, weight gain, poor sleep, poor self-esteem, osteoporosis, loss of muscle tone, depression, high blood pressure, weak muscles, lack of flexibility, damaged blood vessels.**

Year 9 Topic 3: Ethics



'God is dead and we have killed him'
(**Nietzsche**)



'Nature has placed mankind under the governance of two sovereign masters, pain and pleasure.'
(**Jeremy Bentham**)



'the banality of evil'
(**Hannah Arendt**)

KEY PEOPLE

Hannah Arendt – German philosopher, attended the trial of Adolf Eichmann, wrote about the 'banality of evil'.

Jeremy Bentham – English philosopher, founder of utilitarianism, argued that pleasure and pain are the same as good and bad.

Philippa Foot – English philosopher, designed the runaway train thought experiment.

John Locke – English philosopher, argues that when we are born our mind is like a blank slate.

John Stuart Mill – English philosopher, developed utilitarianism, argued that the quality of pleasure and pain is more important than the quantity.

Friedrich Nietzsche – German atheist, said humans no longer need the idea of God.

Robert Nozick – American philosopher, argued that humans value more than just pleasure.

John Searle – American philosopher, argued against the claim that computers can think.

Peter Singer – Australian philosopher and utilitarian, popularised the term 'speciesism', prejudice and discrimination against animals.

Alan Turing – English computer scientist and philosopher, designed a test to show whether a computer can think.

Key Word	Definition	What is ethics? Ethics is deciding what is right and wrong, good and bad. Morality is influenced by where you live. Some people say some things are always good or bad, whereas other people say different things are good or bad depending on the situation.
Absolutism	The view that certain actions are inherently good or bad.	
Altruism	Selfless actions done without thought or expectation of reward.	
Ethics	The philosophical study of right and wrong.	What did Nietzsche believe?
Morality	Ideas or principles about what is right and wrong.	Freidrich Nietzsche believed that all humans have a natural desire for strength and power. He believed people who were selfless and caring and forgiving were weak
Relativism	The view that whether an action is good or bad depends on the situation.	Are goodness and pleasure the same?
The will to power	A term used to describe a natural human desire for strength and power.	Utilitarianism is the theory says that the best action in any situation is the one which creates the greatest amount of good for the greatest number.
Hedonic calculus	Bentham's way of calculating which actions are right and which are wrong.	The runaway train dilemma
Utilitarianism	The theory that the best action in any situation is the one which creates the greatest amount of good for the greatest number.	This was a thought experiment invented to examine a philosophical idea. The philosopher Philippa Foot thought morality should not be based on the consequences of an action. It is a philosophical problem that looks at whether it is right to deliberately kill one person to save the lives of many people.
Thought experiment	An imaginary scenario invented to examine the consequences of a philosophical idea.	The banality of evil
The banality of evil	A phrase used by Hannah Arendt to describe how evil can result from ordinary, thoughtless behavior.	Adolf Eichmann was a senior Nazi during WW2. His job was to transport Jews in the most efficient way to the concentration camps. He did not actually kill anyone but he was an important part of the process. Hannah Arendt said the frightening thing about him was that he was an ordinary man who carried out orders without thinking for himself. She said people should think for themselves, and speak up when we see that something is evil.
Holocaust	The killing of six million Jews by the Nazis in Germany between 1933 and 1945.	

Religious Studies: Christianity Beliefs and Teachings

What do Christians believe about the nature of God?

Christians are monotheists, they believe in one God who is eternal, omnipotent and omnipresent, loving, just and forgiving. They say God created the universe, but they may accept that he started the process of the Big Bang and evolution rather than accepting the traditional Bible stories in Genesis.

What about the Trinity?

Christians believe there are three sides to God, the three persons of the Trinity. Like a triangle, one shape but three sides. The Trinity is God the Father, God the Son (Jesus) and the Holy Spirit. Each person is fully God, they are separate but one being.

What about Jesus?

Jesus is seen as God incarnate, God on earth, he is very important for Christians. The incarnation is celebrated at Christmas when his birth is remembered. Jesus was a human who walked earth as a physical person; he also shows Christians what God is like. He did this by telling parables, and by the way he treated others – with compassion. He could perform miracles. He was baptised in the River Jordan by John the Baptist, was popular with many but also disliked by some. He was crucified and died, this is remembered on Good Friday. On the Sunday he is believed to have resurrected from the dead, and he appeared to his disciples. This is remembered at Easter. 40 days later Jesus ascended to heaven where he 'is seated at the right hand of the father'. At his last supper before he died Jesus shared bread and wine with his disciples, telling them to 'do this in remembrance of me', which many Christians still do today calling it Holy Communion or the Eucharist. Stories of Jesus are found in the 4 gospels (good news) in the Bible.

What about the Holy Spirit?

Everywhere but unseen, Christians say the Holy Spirit was sent to the disciples on the Day of Pentecost, after Jesus had ascended to heaven. It is seen as inspiring, a comforter. Christians talk about the 'fruits of the spirit', and at creation 'the spirit of God hovered over the waters'.

Key quote on God:

"In the beginning God created the heavens and the earth... God created man in his own image, in the image of God he created him, male and female he created them..." *Genesis 1*

Key quote on Jesus:

"For God so loved the world he gave his only son, that everyone who believes in him may not die but have eternal life..." *John 3:16*

Key quotes on the Holy Spirit:

"The fruits of the Spirit are love, joy, peace, patience, kindness, goodness, gentleness, faithfulness, gentleness and self control." *Galatians 5:22*

Key Terms	Definitions
Monotheism	One God – Christians believe in the oneness of God
Trinity	Three sides to the one God (Father, Son, Holy Spirit)
Omnipotent	All-powerful
Loving	Kind and caring
Just	Fair
Omnipresent	Everywhere
Forgiving	Pardoning someone when they have done wrong
Jesus Christ	God incarnate, God on earth
Incarnation	God comes down to earth as Jesus to help the world
Crucifixion	Jesus was killed on a cross
Resurrection	Christians believe Jesus rose from the dead
Ascension	After his resurrection, Jesus ascended to heaven.
Parables	A story with a meaning.
Miracles	Events that break the laws of nature?
Baptism	Jesus was baptised, so are many Christians.
The Last Supper	Jesus shared bread and wine, Christians today remember this with Holy communion / the Eucharist.
The Lord's Prayer	Jesus taught his disciples to pray 'Our Father'.
The Word	Jesus is seen as the word of God.
Holy Spirit	Third person of the Trinity, God unseen but present
Pentecost	When the Holy Spirit came to the disciples.
Easter	Remembers Jesus' death and resurrection.
Christmas	Remembers Jesus' birth and incarnation.

Religious Studies: Christianity Beliefs and Teachings

What do Christians believe about the afterlife?

Christians say death is not the end, as Jesus was resurrected so humans can be into heaven, seen as paradise, a place with God. The Bible also talks about hell, the opposite to heaven, a place of torment and suffering where people can be punished. Judgement by God takes place after death.

While all Christians believe in heaven, some question whether a loving God would ever send anyone to eternal punishment. Catholics talk about purgatory, a place in between heaven and hell.

What about salvation?

To get to heaven you need to be saved, this is the idea of salvation, saved from sin and its consequences and granted eternal life with God. Christians say people can be saved by obeying God's laws, and 'by works', actions to help others. However, no one is perfect, so salvation by grace through faith in Jesus is seen as God's loving gift. Jesus (the second Adam) atones / makes up for original sin and allows humans a way back to God and heaven. This is why some Christians (but not all!) say you have to believe in Jesus to be saved, and they see evangelism as very important as it is a way to 'spread the good news' of Jesus. Christians say the Holy Spirit gives grace and guidance which leads to salvation.

What is Original Sin?

Adam and Eve sinned by disobeying God's command, this is the fall from grace, the Original Sin, which separated humans and God, bringing evil and suffering into the world. The devil tempted humans, they sinned. However, Original Sin is not just seen as this one act, it is also the in-built tendency humans have to do wrong and disobey God. Some Christians say we are born in this state of sin and baptism removes this sin, one reason for infant baptism.

What is the Problem of Evil and Suffering?

The Problem of Evil challenges belief in God. If God is all-loving, why does he let people suffer, and hurt others? If God is omnipotent he could stop this, especially as Christians say he is all-knowing. If God is just he will want to stop unfair things happening – so why doesn't he? Christians say human free will means we sin, we follow the devil's temptations. They also say that our suffering ends and is rewarded in heaven.

Key quotes on heaven/hell:

The Parable of the Sheep and the Goats
Matthew 25

Key quote on salvation:

Jesus said "In my Father's house there are many rooms." *John 14:2*

Key quotes on salvation:

Jesus said 'I am the way, the truth and the life. No one comes to the Father except through me.' *John 14:6*

Key Terms	Definitions
The Afterlife	The idea of a life after death, death is not the end.
Heaven	Paradise, a place with God.
Hell	Eternal punishment, a place away from God.
Judgement	Who goes to heaven? People are judged by God.
Purgatory	Roman Catholic belief, an inbetween state.
Resurrection	Jesus was resurrected, so can humans be.
(Reincarnation	<u>Not a Christian belief.</u>
Souls	The spiritual side of the body said to survive death.
Creation	Where did the universe come from?
Problem of Evil and suffering	How does an omnipotent, all-loving and just God allow bad things to happen? Why do we suffer?
Free will	Humans can choose how they behave and act.
Sin	A thought or action that separates humans from God.
Original Sin	Adam and Eve's sin, shared by all humans.
The Devil	Satan, Lucifer. A source of temptation and bad.
Salvation	Being saved.
Means of salvation	How to be saved and reach heaven.
Salvation by law	Salvation by following rules like the 10 commandments
Salvation by grace	Salvation by the grace of God / Jesus.
Salvation by spirit	Salvation through the Holy Spirit.
Atonement	Humans and God being brought back together.
Evangelism	Telling others the good news of Jesus.

Biodiversity is the variety of different species of organisms within an ecosystem.

Biodiversity can be reduced by: altering habitats, hunting species to extinction, introducing toxic compounds into food webs, introducing foreign species to new environments.

Biodiversity can be increased by: breeding programmes, protecting rare habitats, reintroduction of hedgerows around field margins, reducing the use of landfill, reducing CO₂ emissions.

Habitat – the area where an organism lives.

Community – a group of organisms living together

Ecosystem – the interaction between living organisms and the non-living environment.

Interdependence – when two or more organisms rely on each other for food, shelter etc.

Animals compete for: food, mates and space

Plant compete for: light, water, minerals and space

Abiotic factor – **non-living factor** that can have an effect on a species. **Examples:** light intensity, temperature, moisture levels and carbon dioxide concentration.

Biotic factor – a **living factor** that can have an effect on a species. **Examples:** availability of food, new predators, new pathogens, being outcompeted.

Adaptation – **features that allow an organism to survive in its habitat.**

Structural adaptation – physical features e.g. Bright colours to attract a mate

Behavioural adaptation – the way an organism acts, e.g. Hibernation

Functional adaptation – how the organisms body operates, e.g. photosynthesis in plants

Example:



Behavioural Adaptations

Curis into ball when threatened (exposes quills)

Digs burrows in which to nest and rest

May hibernate during winter in very cold regions

Structural Adaptations

Sharp quills for protection from predators

Protruding snout (for accessing termite mounds)

Sharp claws for digging / burrowing

Physiological Adaptations

Ears sensitive to low frequencies (detect ant sounds)

Well developed olfactory system (used for detection)

Tongue can stiffen and penetrate soil due to blood flow

Year 9 Topic 3 Biology Knowledge Organiser

Tier 2 Vocabulary

Biodiversity Pollution Deforestation

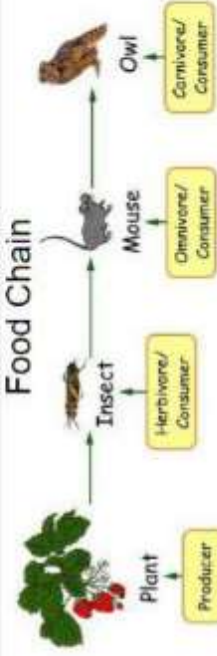
Tier 3 Vocabulary

Habitat Producer
 Community Consumer
 Ecosystem Food chain
 Interdependence Food web
 Biotic Organism
 Abiotic Extinction
 Adaptation Quadrat
 Extremophile Decomposer
 Predator Eutrophication
 Prey



Producer:

Always a Photosynthesising plant

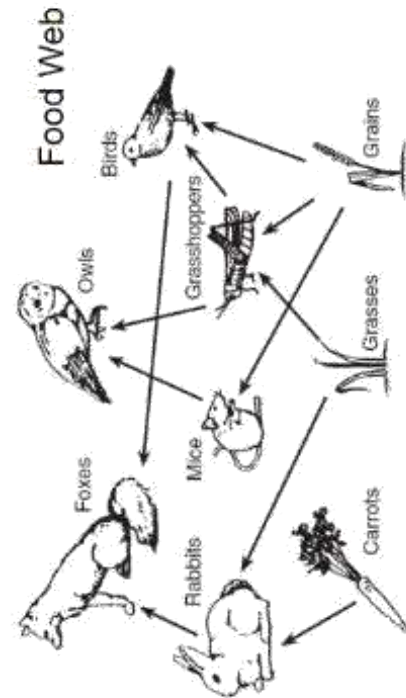


Predator – an animal that kills and eats other animals

Prey – an animal that is killed and eaten by other animals.



Extremophile – an organism that is adapted to live in an extreme environment, e.g. very high temperature, acidity, very salty



Food Web
 Food webs show how lots of food webs connect and interact.

Random Sampling (estimate the organisms in an area)

1. Place quadrat randomly, using a random number generator.
2. Count the organisms in the quadrat
3. Repeat at least 10 times across the whole sample area.
4. Calculate the number of organism in the whole area using the calculation:

$$\text{Est. population size} = \frac{\text{total area}}{\text{area sampled}} \times \text{number of organisms}$$

Uses of Land

- Mining – habitat destruction
- Building – habitat destruction, road divide habitats
- Farming – pollution from fertilisers, less nesting sites
- Landfill – toxic chemicals enter food chains, soil and water, reducing biodiversity, loss of habitats

Peat Bogs

Wet environments formed of partially decomposed plant material. Act as a carbon store.
 Destruction leads to – reduced biodiversity, release of carbon into the atmosphere.



Water Pollution

Causes – fertilisers, pesticides and herbicides, toxic chemicals from landfill, untreated sewage

Effects – eutrophication, death of water organisms, reduction of biodiversity

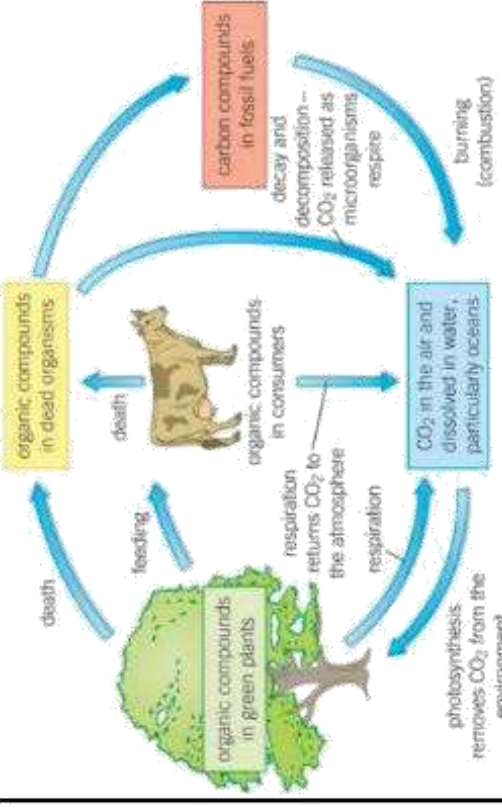


Figure 2 The carbon cycle in nature

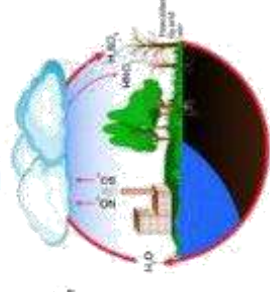
Land Pollution

Causes – landfill sites
Effects – toxic chemicals in soil, reduction of biodiversity, toxic chemicals build up in food chains

Air Pollution

Causes – burning fossil fuels
Effects – plants covered in soot, acid rain

ACID RAIN



Deforestation – cutting down trees on a large scale

Advantages - Provide land for cattle and rice fields, grow crops, clear space for building

Disadvantages – release of carbon dioxide into the atmosphere, reduction in carbon dioxide being taken in from the atmosphere, reduction in biodiversity, increased methane.

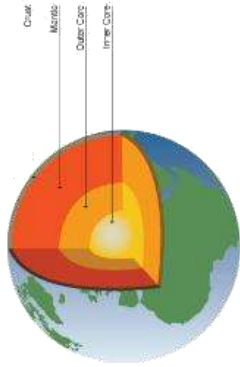
Global Warming – the increase in average global temperature

Causes – increased carbon dioxide and methane in the atmosphere
Effects – changes in migration patterns, survival of well-adapted organisms, extinction, increased sea levels, changes in weather

Gene Bank – a site where genetic material is stored to be used later to increase the numbers of endangered plants and animals.

Earth's structure:

Plate tectonics is where the Earth is split into pieces known as plates.



Pangea - was a supercontinent that existed millions of years ago.

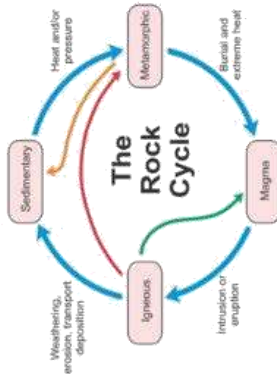
Rock Formation

Sedimentary Rock- Sediments settles is compacted, and then cement together.

Igneous Rock –

From volcanoes, slow cooling gives big crystals for example granite known as intrusive igneous rock. Fast cooling gives little crystals for example Basalt, known as extrusive igneous rock

Metamorphic Rock – Formed by heat and pressure acting on existing rocks. They do not melt the particles are just rearranged. For example marble was limestone.



Rock types and properties:

Sedimentary Rock - soft, porous, have layers and may contain fossils.
Examples: Sandstone and limestone.

Igneous Rocks – Hard and durable, crystals and non porous – NO fossils.
Examples: Pumice, basalt and granite.

Metamorphic Rock – Striped appearance, contain crystals, non porous – NO fossils.
Examples: Gneiss, slate and marble.

Earth's atmosphere – present day

Earth's early atmosphere was probably like Mars and Venus today, consisting of mainly CO₂ with little or no O₂

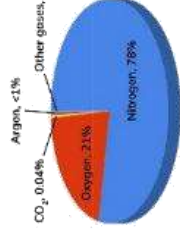
Volcanic activity released the gases that formed our early atmosphere.

Theories about the Earth's atmosphere have changed because of lack of evidence.

Algae and plants produced the oxygen that is now in our atmosphere by photosynthesis.



The oceans formed as the Earth's temperature cooled, causing rain to fall and the ocean's to form.



Year 9

Topic 3 Chemistry Knowledge Organiser

Tier 2 Vocabulary

Carbon dioxide
Rock formation
Global warming
Theories
Evidence

Tier 3 Vocabulary

Combustion
Incomplete combustion
Atmosphere
Sedimentary
Igneous
Metamorphic
Photosynthesis
Volcanic
Greenhouse effect
Pollution
Plate tectonics
Particulates
Global dimming

Earth's atmosphere – Early

The early atmosphere	
Gas	% in atmosphere
Carbon dioxide	92
Nitrogen	4
Methane	2
Ammonia	2

Complete combustion

Burning – the reaction of a fuel burning with oxygen in the air.

Fuel – can be coal, oil, gas or wood.

Hydrocarbon – a fuel which contains the elements hydrogen and carbon only.



Incomplete combustion

Where combustion (burning) takes place with **not enough oxygen**.

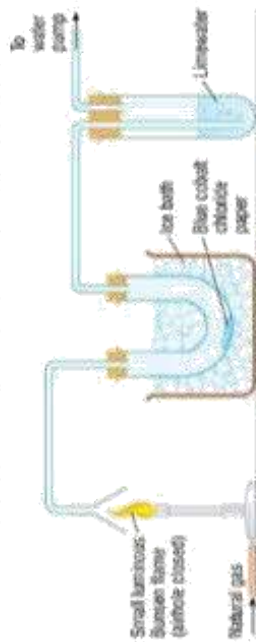
Products from incomplete combustion are Carbon monoxide (toxic) And Water

If there is very little oxygen the products are:

Soot – black particles (cause breathing issues)



The Products of Combustion



How does the apparatus show that water is produced?

The blue cobalt chloride paper turns pink

How does the apparatus show that carbon dioxide is produced?

The limewater turns cloudy

Global Warming

Carbon dioxide going into the atmosphere as an environmental impact known as Global warming

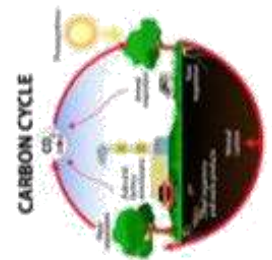
Global warming causes the following:

- Temperatures rise
- Sea levels can rise
- Flooding
- Polar ice caps melt
- Animals lose their habitats
- Extreme weather such as storms



Carbon Cycle:

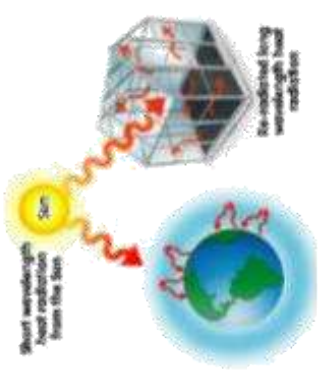
Carbon is absorbed from the atmosphere by being dissolved into the oceans and by plants photosynthesising. It is released by burning of fossil fuels and respiration.



Greenhouse Effect

Three greenhouse gases are:

Water vapour (H₂O), carbon dioxide (CO₂) and methane (CH₄)



Without the greenhouse effect Earth would be too cold to support life. However humans are increasing the levels of greenhouse gases in the atmosphere which is warming the Earth too much.

Pollution in the atmosphere

Human activities can increase carbon dioxide in the atmosphere, these are:

- Using fuel for transportation
 - Deforestation
 - Burning fossil fuels in power stations.
- Farming and land fill can also increase the levels of methane in the atmosphere.

Acid Rain - When fossil fuels are used sulphur dioxide is produced and when dissolved in water in the clouds produces acid rain.

Acid Rain can have a huge impact on lakes, plants and animals.

Global dimming – when lots of particulates (soot) go into the atmosphere, reflecting the sunlight back up into space so that less light reaches Earth.

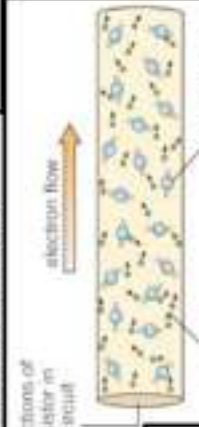
Potential difference (p.d.) is a measure of how much energy is transferred between two points in a circuit measured in volts.

Ohm's law states that current through a resistor at constant temperature is directly proportional to the potential difference across the resistor

Resistance occurs when electrons move through a circuit, they collide with the ions and atoms of the wires and components in the circuit. This slows down the flow of charge. Measured in ohms Ω

Tier 2 Vocabulary

- Component
- Conduct
- Parallel
- Series

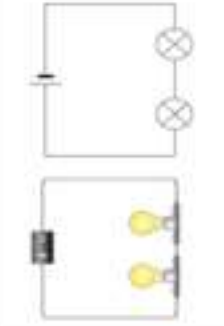


Tier 3 Vocabulary

- Ammeter
- Voltmeter
- Diode
- LED
- Cell
- Fuse
- Thermistor
- LDR
- LED
- Resistor
- Ampere
- Charge
- Coulomb
- Current
- Potential difference
- Electric field
- Resistance
- Filament
- Insulation
- Ohmic conductor
- Non-ohmic conductor
- Electrostatic force
- Alternating current
- Direct current

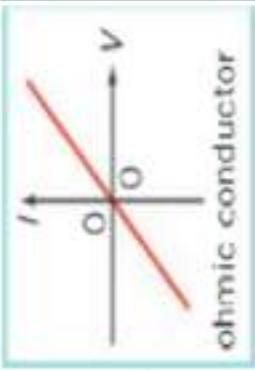
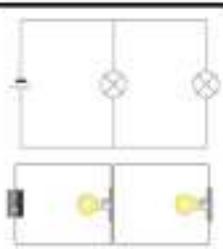
Series Circuit

Same charge/current passes through each component. If the resistance of a component increases the current will decrease. The p.d. is shared by the components. Resistance of the circuit = the total resistance of all components.



Parallel Circuit

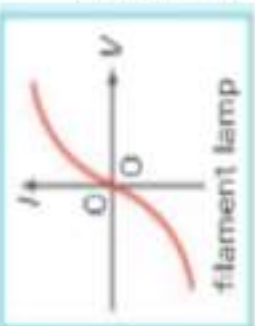
Current splits at junctions. Total current = sum of current on each branch. The p.d. is same on each branch as the battery. Resistance in parallel is decreased.



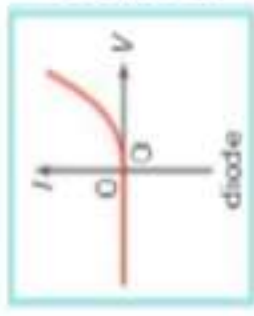
Resistance is constant as current and p.d. are directly proportional

Current-potential difference graphs

As current flows through filament, its temperature increases, causing the resistance to increase. An filament bulb is a non-ohmic conductor

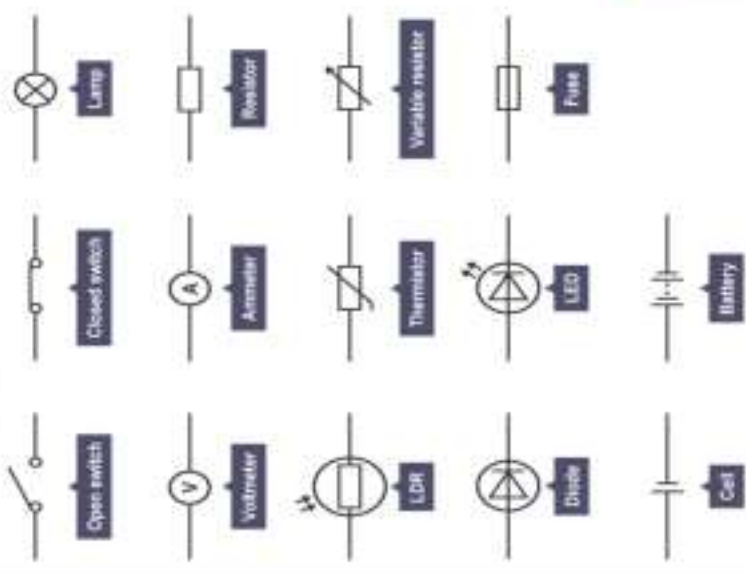


Current flow in only one direction - called the forward direction. Diode is a non-ohmic conductor



Symbols

The following symbols show the different components that can be found in an electrical circuit.



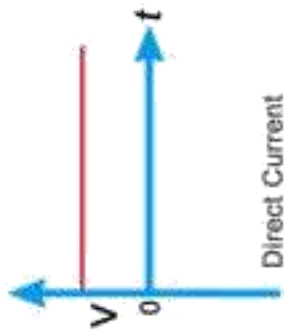
Electric current is when charge (carried by the electrons) flows. In metal wires, electrons move and cause a current. Measured in amperes (A) Charge is measured in coulombs (C)

charge flow, Q = **current, I** × **time taken, t**
(coulombs, C) (amperes, A) (seconds, s)

potential difference across a component, V (volts, V) = **energy transferred, E** (joules, J) / **charge, Q** (coulombs, C)

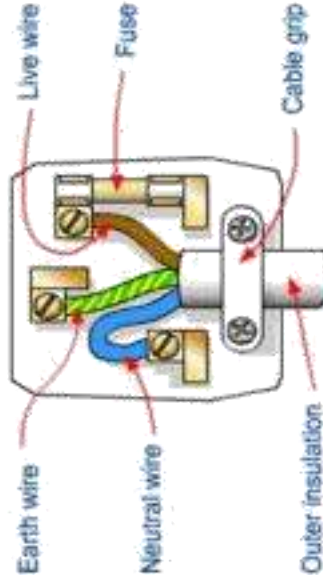
resistance, R = **potential difference, V** (volts, V) / **current, I** (amperes, A)
(ohms, Ω)

Direct current: (DC) Supplied by batteries and only flows in one direction.

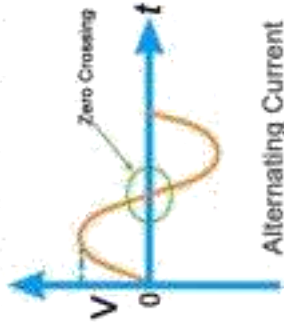


Plugs

Neutral wire is BLUE and always 0 Volts.
Live wire is BROWN and 230 Volts.
Earth wire is GREEN/YELLOW and always 0 Volts



Alternating Current: (AC) Constantly changing direction. UK mains supply is 230V and has a frequency of 50 hertz (Hz)



Circuit Breaker:

A circuit breaker is a resettable fuse. These are automatically operated electrical switches that protect electrical circuits from overloading or short circuiting. They detect faults and then stop the flow of electricity.

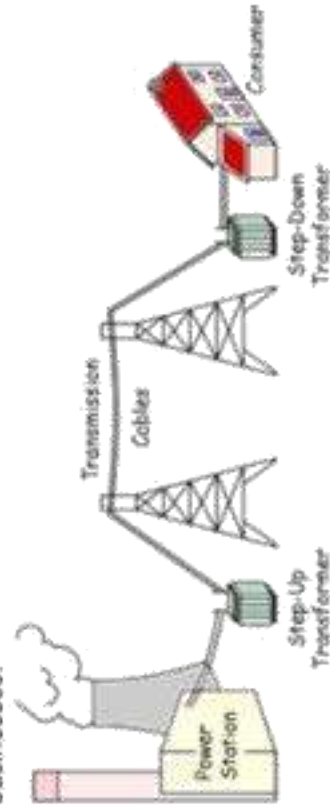


Cost of Electricity:

electricity is charged per kilowatt hours (kWh)
 Energy transferred = power x time $E = Pt$
 E – energy (kilowatt hours kWh)
 P = Power (kilowatt, kW)
 T = time (hours, h)

The National Grid:

How electricity gets from the power station to your homes and businesses.



The National Grid is a system of cables and transformers. They transfer electrical power from the power station to where it is needed. Power stations are able to change the amount to electricity that is produced to meet demand.

Step-up transformers – increase the voltage as the electricity flows through the cables.

Step-down transformers – decrease the voltage to make it safe.

Fuses:

Fuses are a safety feature in many plugs and appliances.

They contain a very thin wire filament.

When the current gets too high, the wire gets hot and melts breaking the circuit.



Spanish

Y9 Summer Term Knowledge Organiser

Unit 5: Una aventura en Madrid – Talking about a trip

Key spellings 5	
Learn these spellings, they will be really useful for this unit and you will be tested on them.	
1. fue increíble	it was incredible
2. si hace buen tiempo	if the weather is good
3. ¿cuánto es?	How much is it?
4. voy a ir de compras	I'm going to go shopping
5. visité el zoo	I visited the zoo

Mi último día en Madrid	My last day in Madrid
Si...	If...
hace buen tiempo/hace mal tiempo	the weather is good/bad
hace frío/hace sol/hace viento	it's cold/sunny/windy
llueve	it rains
voy a...	I'm going to...
ir de compras/sacar fotos/ver un partido	go shopping/take photos/see a match

La casa del tesoro	The treasure hunt
¿Adónde hay que ir?	Where do you have to go?
Hay que...	You have to...
ir al estadio Santiago Bernabéu	go to the Santiago Bernabéu Stadium
ir al parque del Retiro	go to the Retiro Park
visitar el Museo Reina Sofía	go to the Reina Sofía Museum
coger el teleférico	take the cable car
comer...	eat...
los churros más ricos del mundo	the best churros in the world
comprar una postal de...	buy a postcard of...
dibujar...	draw...
sacar fotos de...	to take photos of...
ver...	to see...
el campo de fútbol más famoso de Madrid	the most famous football field in Madrid
el cuadro más famoso de España	the most famous painting in Spain.
el león más feroz del parque	the fiercest lion in the park
los monumentos más interesantes de Madrid	the most interesting monuments in Madrid

Mi día favorito	My favourite day
Mi día favorito fue (el martes)	My favourite day was (Tuesday)
Por la mañana/tarde	In the morning/afternoon
bebí/bebimos horchata	I/we drank horchata
comí/comimos un bocadillo de calamares	I/we ate a fried squid sandwich
compré/compramos una gorra	I/we bought a cap
fui/fuimos a la cafetería	I/we went to the café
hice/hicimos muchas cosas	I/we did many things
monté/montamos en una montaña rusa	I/we rode on a rollercoaster
saqué/sacamos fotos	I/we took photos
vi/vimos los delfines	I/we saw the dolphins
visité/visitamos el parque de atracciones	I/we visited the theme park
Fue increíble/divertido/flipante	It was incredible/fun/awesome
¡Qué miedo/rico/guay!	How scary/tasty/cool!

Key grammar – The near future	
Use the near future to talk about what is going to happen	
This tense is formed by 3 parts, make sure you have all of them to use it correctly.	
<ol style="list-style-type: none"> 1. The present tense of IR (the verb to go) 2. 'a' 3. An infinitive verb (ending in -ar/er-ir) 	
Voy	ir de compras I am going to go shopping
Vas	probar un cocido You are going to try a stew
Va	sacar fotos (S)he is going to take photos
Vamos	tomar el sol We are going to sunbathe
Vais	ver un partido You (pl.) are going to watch a match
Van	visitar el museo They are going to visit the museum

En la tienda da recuerdos	In the souvenir shop
¿Qué vas a comprar?	What are you going to buy?
¿Qué quiere usted?	What do you want?
Quiero (comprar) algo para mi (madre).	I want (to buy) something for my (mum)
Creo que voy a comprar...	I think I'm going to buy...
un abanico un collar un llavero	a fan a necklace a keyring
una taza un imán una camiseta	a mug a magnet A t-shirt
una figurita turrón	a figurine nougat
Me gusta...pero prefiero...	I like...but I prefer...
Es...	It is...
barato/a caro/a bonito/a	cheap expensive pretty
típico feo/a útil	typical ugly useful
precioso/a demasiado caro/a	lovely too expensive
¿Cuánto es?	How much is it?
Son...euros	It is...euros
No, gracias	No, thanks.
Perfecto, gracias	Perfect, thanks

Spanish Y9 Summer Term Knowledge Organiser Unit 6: Repaso y habilidades claves - Revision and key skills

Key spellings 6

Learn these spellings, they will be really useful for this unit and you will be tested on them.

1. después	afterwards
2. además	furthermore
3. creo que	I think that
4. por ejemplo	for example
5. sin embargo	however

Writing skills

- Use connectives like **y (and), pero (but), también (also)** and **además (furthermore)** to extend your sentences, link them together and make them more interesting.
- Use sequencers to organise your writing: **primero (first), luego (then), después (afterwards), más tarde (later)**.
- Remember to add your opinions using phrases like **me gusta (I like), and no me gusta (I don't like)**. Don't forget to justify your opinions using **porque... (because...)**.
- Add adverbs of frequency to your work like **todos los días (every day)** and **a veces (sometimes)**.

Listening skills

- When taking notes as you listen, try to write down key words.
- Focusing on the five Ws (Where? Who? What? When? Where?) will help you answer questions when listening.
- Predicting what you are going to hear is a very useful skill.
- Sometimes speakers don't say exactly what they are talking about and you have to work it out from clues.
- Use TRAPS (below) to help you pick out important details.

Remembering **TRAPS** will help you to listen out for important detail:

T = Tense/Time frame

R = Reflect, don't Rush!

A = Alternative words/synonyms

P = Positive or negative?

S = Subject (person involved)

To understand when something happens,

T is important. Listen for time markers,

e.g. **el fin de semana que viene**, but also

for verb forms. Are speakers using the

present or the near future tense?

Palabras muy frecuentes High-frequency words

casi	almost, nearly	hasta	until
cada	each, every	ahora	now
todo / toda / todos / todas	all	hoy	today
mucho / mucha / muchos / muchas	a lot (of)	ayer	yesterday
primero	first	anoche	last night
luego	then	para	(in order) to, for
después	afterwards	creo que	I think / believe that
finalmente	finally	por eso	so, therefore
por lo general	in general	sin embargo	however
		donde	where

Reading skills

- It's a good idea to start by skimming a text and reading for gist, without trying to understand all the details.
- You don't need to understand every word in a text, scan it for the specific information you need.
- This means that you don't need to look up every word. Ask yourself if you need to know what a word means to answer the question. If you do, look it up. If not, move on.
- Use the four Cs to understand a text in more detail and to try to work out the meaning of new words.

SKILLS

Using the four Cs when reading for detail

Sometimes you have to

understand the detail of a text.

To work out the meaning of

new words, use the four Cs!

- Clues (e.g. questions in English)

- Cognates and near-cognates

- Context of the sentence/text

- Common sense!

Speaking skills

- Use the advice in the writing skills box to make your spoken sentences more interesting and extended.
- Learn Spanish question words to help you understand what is being asked of you.
- If you don't understand a question, say "**repite, por favor**".
- Practise the pronunciation of difficult words and use intonation in your voice to match the tone of what you're saying.

Question words

Pay close attention to the question words when translating questions.

¿Cómo? How/What? ¿A qué hora? At what time?

¿Qué? What? ¿Por qué? Why?

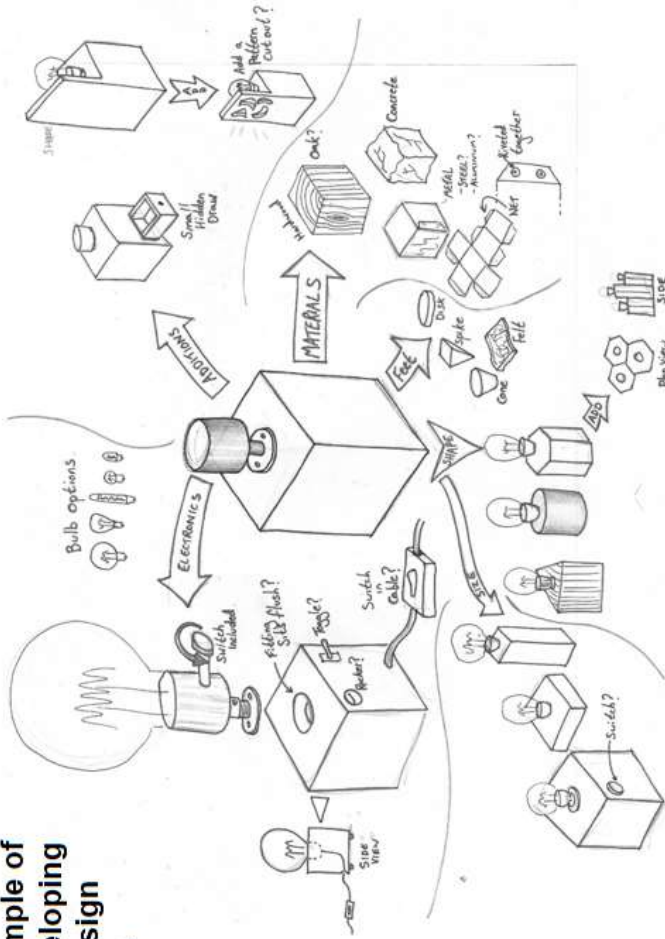
¿Cuál? Which/What? ¿Quién? Who?

¿Dónde? Where? ¿Con quién? With whom?

¿Cuándo? When?

Design and Technology Specific Language and Terms	
Design Brief	A statement of intent for a project, created with an end user in mind. A design brief should primarily focus on the results and outcomes of the design.
Specification	A list of rules to follow when designing, a specification point is the result of research into the requirements of a project
Influenced by...	To use existing designers, media, products, time periods etc. to create, change and adapt a design. To be influenced by.
Design Movement	A period in time where a certain style was prevalent. (see examples below)
Initial Ideas	The creation of multiple ideas, considering different ways of fulfilling the design brief
Development	To work on, add to, an improve an idea via ongoing research, and seeking further influence or understanding of an outcome.

Example of developing a design idea



DESIGN MOVEMENTS

Design movements are periods in time where a certain style of design was prevalent, it's important to know about these movements as they provide a starting point to base your product on or just provide inspiration.



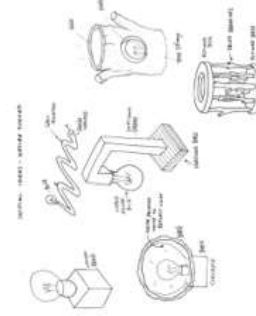
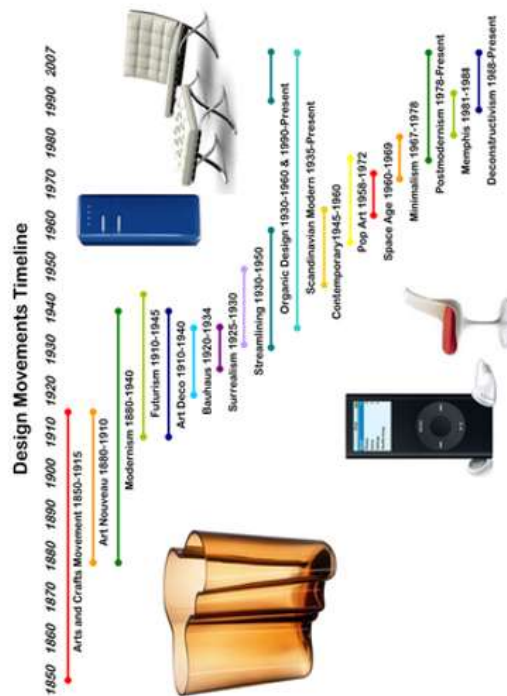
Organic design is a style of product design which takes as its starting point organic, flowing natural forms. Undulating lines, dynamic curves, and powerful arches stand in contrast to the geometric, functional style as represented by functionalism



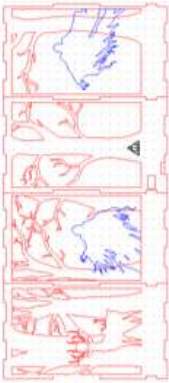
Art Deco is a style of architecture and design that first appeared in France just before World War I. Art Deco influenced the design of buildings, furniture, jewellery, fashion, transport, and everyday objects.

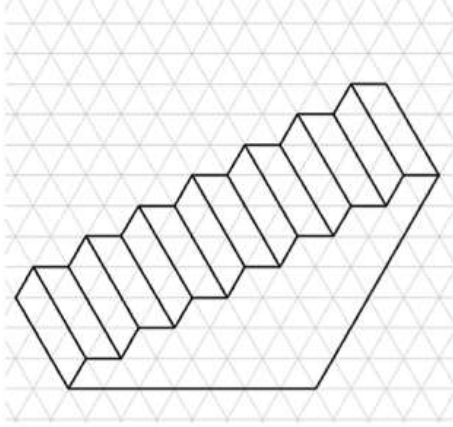


Postmodernism is one of the most controversial movements in art and design history. Over two decades, Postmodernism shattered established ideas about art and design, bringing a new self-awareness about style itself.

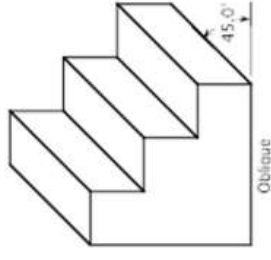
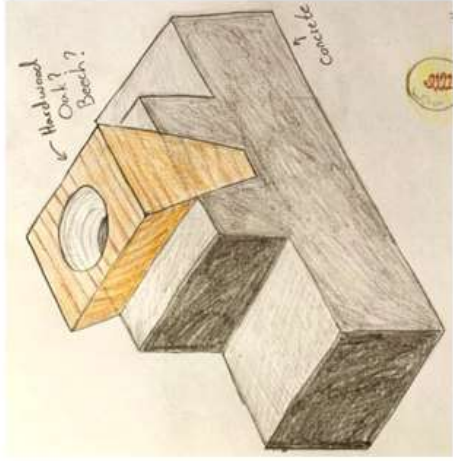


An Initial ideas page

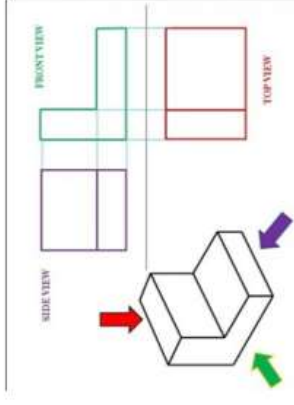
Design and Technology Specific Language and Terms	
CAD	 <p>Computer Aided Design</p>
Isometric Drawing	<p>An isometric drawing is a type of 3D drawing that is set out using 30-degree angles. It's a type of drawing in which the same scale is used for every axis, resulting in a non-distorted image.</p>
Oblique Drawing	<p>A item is drawn in 2D in the correct proportions, it is then forced into 3D by projecting lines out at 45 degrees.</p>
Orthographic Drawings	<p>2D drawings drawn in detail and to scale. Orthographic projections provide 3 views, front, side and plan.</p>
Working Drawing	<p>An accurate drawing providing all information required to make a product. Usually presented as an isometric or orthographic drawing.</p>
Parts List	<p>Goes with a working drawing and breaks a design down into its individual parts, stating what it is to be made from and the quantity required of each part</p>



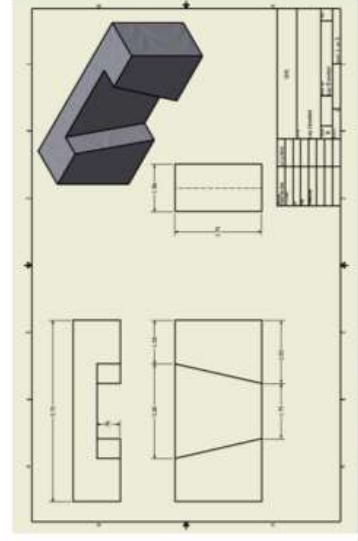
Isometric Drawings




Oblique Drawing








Orthographic Drawing




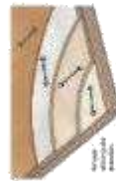


Working Drawing

HAND TOOLS		MACHINERY		CUTTING	
	Bench Hook		<ul style="list-style-type: none"> Removes material a thin layer at a time Can be used to ensure an absolutely flat surface. Very accurate 		<ul style="list-style-type: none"> Thin blade allows for intricate curves to be cut in timber a plastic sheet material
	Coping Saw (timber/plastic)		<ul style="list-style-type: none"> Used to 'turn' material (rotates) A tool or bit is used to shape the rotating material There are wood and engineers (metal) lathes 		<ul style="list-style-type: none"> Spinning cutting tool removes wood as it moves along a surface Used to create slots, grooves or fancy edges
	Tennon Saw (timber)		<ul style="list-style-type: none"> Used to polish metal or plastics to a high shine 		<ul style="list-style-type: none"> Used to make straight or curved cuts in all materials Blades and speed can be changed to suit material
	Hacksaw (metal)		<ul style="list-style-type: none"> Rotating abrasive disc removes material Used for timber and plastics 		<ul style="list-style-type: none"> Blade is one continuous flexible loop Mainly used for timber but blades can be changed to cut plastics Can cut straight or curved lines
	G Clamp		<ul style="list-style-type: none"> Used to apply heat along an area of thermofoming plastic allowing it to be bend along a line Process is called line bending 		<ul style="list-style-type: none"> Circular blade rotates through the table surface Used to make straight cuts only Mainly used to cut boards to size
	Woodwork Vice		<ul style="list-style-type: none"> A rotating drill bit can be lowered into a work piece to create holes Work must be secured to the table. 		<ul style="list-style-type: none"> Can be used for multiple thin materials Requires designs to be created on a computer first
	Hand Clamp				
	Glass Paper				

Plastics			
Type	Example of	Advantages	Disadvantages
Acrylic 	Thermo-forming (shaped with heat)	Available in many colours and styles Weather proof Can be laser cut	Brittle Scratches easily Made from oil - unsustainable
Epoxy Resin 	Thermo-Setting (Can only shape once)	Hard wearing Can be mixed with pigments/powders to create effects Will not burn	Non recyclable Gives off fumes Made from oil - unsustainable

Metals			
Type	Example of	Advantages	Disadvantages
Steel 	Ferrous (Contains iron)	Relatively cheap Widely available Strong/Tough	Rusts Requires a surface finish
Aluminium 	Non-Ferrous (Does not contain iron)	Does not rust Lightweight Easy to cut and shape	Relatively expensive
Copper 	Non-Ferrous (Does not contain iron)	Good conductor of heat and electricity	Corrodes Relatively expensive
Pewter 	Alloy (Mix of multiple metals)	Does not rust Low melting point for easy casting Polishes to a high shine	Relatively expensive Heavier than alternatives

Timber			
Type	Example of	Advantages	Disadvantages
Pine 	Softwood	Cheaper More sustainable as faster growing Widely Available	Knotty Can be weaker than hardwoods Less durable
Oak 	Hardwood	Good aesthetic Extremely durable Easy to maintain High strength	Generally harder to cut and shape More expensive Less sustainable as slower growth rate
Mahogany 	Hardwood		
Plywood 	Manufactured Board	Available in large sheets Good strength and durability Can be laser cut	More expensive than other board options Edges can splinter



3D Printing uses PLA or PVC plastic on a reel. This is heated and used to print a thin layer at a time



Health & Safety



Design and Technology Specific Language and Terms	
Health and Safety	Anything to do with a person's wellbeing in any given situation. From sitting at a computer for long periods to operating machinery.
Risk Assessment	A document that considers all risk to a person/s carrying out a task, and all control measure put in place to minimize or remove risk to health, this could be training, following certain rules or using PPE
PPE	Personal Protective Equipment Goggles, aprons, dusk masks, gloves
Extraction	Can be dust extraction when using machinery or fume extraction when gluing or painting.

Shaping Plastics

<p>vacuum bed moves up air sucked out vacuum bed moves down on a vacuum bed</p>	<ul style="list-style-type: none"> A mould is placed onto the vacuum bed A thermoforming sheet or film (usually HIPS) is clamped above the bed and heated until soft <ul style="list-style-type: none"> Bed is lifted into the heated plastic All air is sucked out creating a vacuum, pulling the plastic over the mould Moulded plastic then cools and becomes rigid.
<p>Mould (or die) Plastic granules Heater Pressure Mould cavity</p>	<ul style="list-style-type: none"> Molten material is forced into a mould Tool steel moulds have the negative shape within them. Used to create items like; plastic buckets and school chairs.



Two leaves cast in pewter

Bending Materials




	Sheet metal folder	<ul style="list-style-type: none"> Used to shape aluminium and tin Flat sheet material is marked up and bent one fold at a time. Joins can be riveted, soldered, brazed etc. Process is called Line Bending
	Strip Heater	<ul style="list-style-type: none"> A heating element softens a thermoforming plastic (acrylic) along a line. This can then be bent to shape and held in place until cooled
	Lamination	<ul style="list-style-type: none"> Woods can be bent by laminating Thin strips are glued together and held in a jig to keep them in the desired shape. Once set the item is removed from the jig and trimmed to size.

Casting



Die Casting	<ul style="list-style-type: none"> Used to cast metals or thermoforming plastics <ul style="list-style-type: none"> Material is melted and pours into a mould Once cooled it can be removed and any seems tied up Thermosetting plastics are mould by mixing two part which set through a chemical reaction. <ul style="list-style-type: none"> Often referred to as Resin
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COMPUTER AIDED MANUFACTURE

MACHINERY	
	Laser Cutter
	3D Printing
	Vinyl Stickers

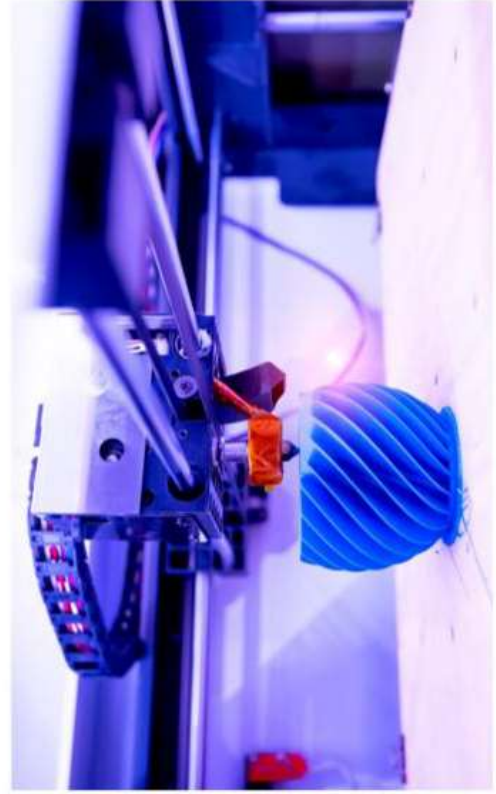
Advantages	Disadvantages
Accurate to low tolerances	Expensive to set up
Quick – rapid prototyping	Requires Specialist Training
Multiples can be produced easily	Job loss to automation



Interlocking laser cut toy in plywood




Sticky back vinyl cut to shape




3D printer using thin layers to create a 3D shape


Materials suitable for laser cutting:
Acrylic – Thermofforming Plastic
MDF – Manufactured Board
Plywood – Manufactured Board
Card/Paper – Paper/Board
Felt – Fabric




Acrylic




MDF



Plywood



Card/Paper



Felt

Some materials such as **glass** can be engraved but not cut.



Black = Laser engrave

- Laser moves quickly at a low power

Red = Laser cut

- Laser moves slowly at high power

Other colours can be set up and used as required



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