Tytherington SCHOOL

YEAR 7

KNOWLEDGE ORGANISERS

Spring Term 2024-2025

Helping you to Master the Minimum!

Contents

What are Knowledge Organisers?

A Knowledge Organiser specifies the essential knowledge that you need to memorise and retain for a unit of work. It is contained on a single A4 page and organised in a way to aid learning. The knowledge they contain are the building blocks of effective learning; it does not include everything you could and should know about a unit of work but the essential knowledge that you need to memorise.

This booklet contains all of the Knowledge Organisers for the units you will study in your subjects between Christmas and Easter.

Why are Knowledge Organisers important?

At secondary school you will study complex ideas and be asked to think in an analytical way; this is what makes learning an enjoyable process. To be able to think about difficult problems and question new ideas, you need know core factual detail to help you think critically. For example, if you have memorised your times tables your brain can focus on a complex Mathematics problem rather than working out 9 x 4. Being confident in your knowledge of the basics frees up your brain to focus on the complex.

Once you have a secure knowledge of a unit of work, future learning is easier. Cognitive Scientists, who study how memory works, have shown us that we learn new information by linking it to knowledge we already have. The more knowledge we have, the easier it is to learn.

Knowledge Organisers are also useful as a reference point if you are struggling to remember information in a lesson or if you have been absent in a lesson. They will help you to be more effective learners.

How to use Knowledge Organisers effectively

Just having a Knowledge Organiser stuck into your exercise book or having this booklet in your bag will not help your learning.

You need to spend time, both in lessons and at home, memorising the content within them. Your teachers will help you do this by using them in lessons and setting homework tasks based upon them. Learning information can be uncomfortable and difficult but that is okay. That is how we improve.

Making sure we remember knowledge in the long term requires some hard work. You are probably confident with your Times Tables because your primary school teachers tested you on them regularly and you played online games to test yourself. The reason this works, is because you have been doing something called **retrieval practice**. Through the act of remembering, our memory is strengthened and forgetting is less likely. Every time you have to remember information it changes the original memory to make it stronger.

Retrieval Practice techniques you can use at home:

Look, Cover, Say, Write, Check

- Exactly as it sounds. Look at a section of the Knowledge Organiser, cover the information you are trying to remember, say it aloud or write it down and then check you are correct. Keep doing this until you consistently get the answers correct. This works particularly well when learning new vocabulary.

Quizzing

- Write your own quiz questions based on the information on your Knowledge Organiser. You could work with your peers or those you live with to quiz you until you have memorised the information.

Flash Cards

- Create your own set of flash cards. Write a question on one side and the answer on the other. You could even create these online using **quizlet.com**

Mind Dump

- Write down all of the key information you can remember on a topic or unit of work. Compare this to your Knowledge Organiser to see if there is anything you have missed.

Make sure that you carry out these memorising strategies regularly. Can you remember what you did last week, last month, last term? The more often you recall information from your memory, the stronger that memory becomes.

YEAR 7
KNOWLEDGE ORGANISER

Art & Design Unit 2: Colour

Pure colours are intense and bright. They include the following:

Red, blue and yellow are **primary colours.** They are used to make all other colours.

Purple, orange and green are **secondary colours.** They are a mix of two primary colours.

Tertiary Colours take mixing colours one step further. They are two-name colours e.g. red-orange

Colour Schemes for beginners

Monochromatic colours are a single colours that use tints, shades, and tones to create form and texture. They work well when paired with a single complementary colour.

Analogous colours sit next to each other and are a kind of family of colours. They create a relaxed harmony. You may need to add a complementary colour to get any particular item to stand out.

Complementary colours stand out and create visual tension because they are opposites/ oppose each other.

Painting skills and techniques

1. **Mixing:**
   - **A smooth consistency**
   - **Secondary colour**
   - **Tertiary colour**
   - **Tints, tones and shades**
2. **Blocking in**
3. **Neat Edges**

Tints, tones and shades help express space, depth, and form.

Starting with pure Colour

Adding **white** to pure colour creates a **tint** (paler/not intense)

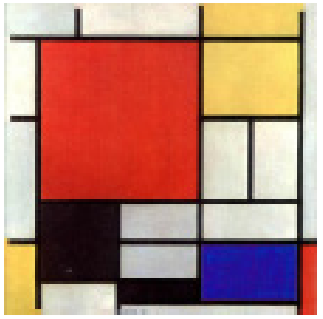
Adding **grey** to pure colour creates **tone** (dull brightness)

Adding **black** to pure colour create a **shade** (darken)

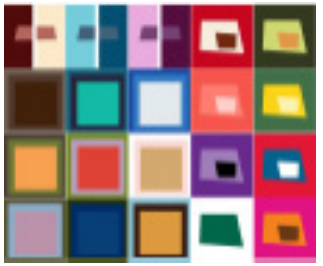
Idea/Context

BAUHAUS

Inspiration for this colour project comes the Bauhaus Art movement.



It can be recognised by it's focus on simple block colours and geometric forms such as the triangle, square, and circle.



Bauhaus Artists:
- Mondrian
- Joseph Albers

YEAR 7
KNOWLEDGE ORGANISER

Classics Heroes

Key Vocabulary – The Heroes

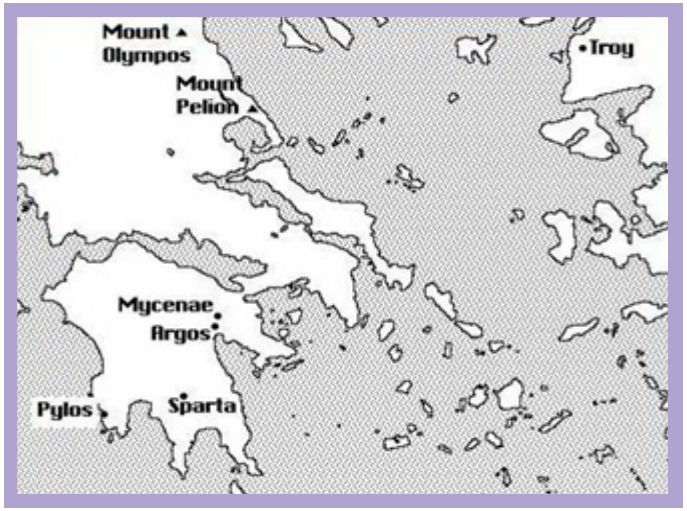
1	**Perseus**	Killed Medusa, saved Andromeda.
2	**Herakles (Hercules)**	Completed the 12 Labours.
3	**Jason**	Retrieved the Golden Fleece.
4	**Theseus**	Killed the Minotaur.
5	**Achilles**	Best of the Greek warriors in Troy.
6	**Odysseus**	Cleverest of heroes, blinded the Cyclops.

Key Vocabulary

1	**Labour**	An task impossible to ordinary mortals.
2	**Immortal**	A god.
3	**Demigod**	A mortal (human) with an immortal (god) parent.
4	**Sacrifice**	A gift of an animal to a god.
5	**Kleos**	Glory or renown.

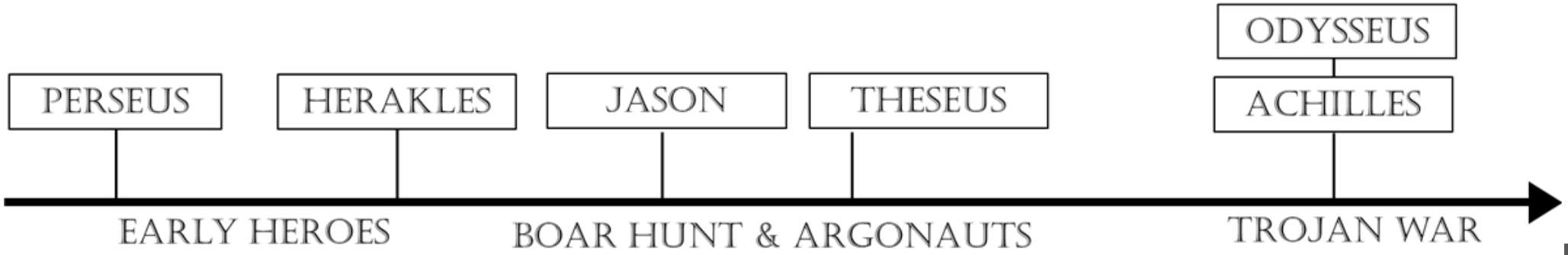
Descriptive Techniques

1	**Sensory description**	Describe what a character senses – 'the acrid stench of the Hydra's lair singed my nostrils'.
2	**Vivid adjectives and verbs**	Use expressive adjectives and verbs – 'the foul coils of the serpentine monster writhed and contorted as I struck off head after head.'
3	**Dramatic adverbs**	Describe how your character is moving and acting – 'The birds swarmed menacingly above...'
4	**Metaphor, simile, personification** (See English Knowledge Organiser)	Use language which creates a clear image in the reader's head – 'My raging club pulsated as I smashed the lion. Night fell upon me when I realised its skin could not be broken, I felt like a soul wandering the fields of mourning; all strength seeped from my limbs.



Analytical Skills P.E.A Paragraphs

1	**P – Point**	Make a point related directly to the question.
2	**E – Evidence**	Back it up with specific evidence from the story or source.
3	**A – Analysis**	Explain what your evidence shows and how it corroborates (backs up) your argument.



YEAR 7
KNOWLEDGE ORGANISER

Computer Science Hardware

The 8 Main Computer Components

1	**Central Processing Unit (CPU)**	The brain of the computer.
2	**Power Supply (PSU)**	Provides power to the computer.
3	**Network Interface Card (NIC)**	Transmits data across a network.
4	**Mother board**	Connects all the computer parts together.
5	**Graphics Processing Unit (GPU)**	Enables better graphics.
6	**RAM (Random Access Memory)**	Stores programs and files that the user is working on.
7	**Secondary Storage / Hard Drive**	Stores programs and files long term.
8	**Monitor**	The screen that shows what's on the computer.

Input/Output Devices

	INPUT		OUTPUT
1	Mouse	1	Monitor
2	Keyboard	2	Printer
3	Scanner	3	Speaker
4	Camera		
5	Microphone		

YEAR 7
KNOWLEDGE ORGANISER

Computer Science HTML

HTML Tags

1	**<p>**	Paragraph.
2	**<Font-Family>**	Font.
3	**<img src=>**	Image.
4	**<body>**	The main part of a website.
5	**<head>**	The top of the website.
6	**<html>**	Defines a webpage.
7	**<a href>**	Hyperlink.

Key Information

1	**HTML**	Hyper Text Markup Language.
2	**Head**	The top part of a website.
3	**Body**	The bottom part of a website.
4	**Pages**	The different parts of a website.
5	**< >**	These symbols are used at the start and end of tags.

Web Browsers

1	Chrome
2	Edge
3	Firefox

YEAR 7

KNOWLEDGE ORGANISER

DT Project: Phone holder & Desk organiser (GC)

Tools

1	**Belt / Rotary sander**	Machine used to remove waste material and smooth wood.
2	**Bench hook**	Used to assist holding wood in place when sawing.
3	**Bevel edge chisel**	Used to cut away and shape wood. Used to create housing joint.
4	**Coping saw**	Cutting curves. Larger blade teeth for wood and smaller teeth for metal/plastic.
5	**Drill press clamp**	Used when drilling to hold work securely for safe drilling.
6	**File**	Removes waste. Can be used to help shape and smooth edges.
7	**Pillar drill**	Machine used for drilling holes.
8	**Steel rule**	Used to measure when marking out in millimetres (mm).
9	**Template**	Used for marking out identical shapes multiple times
10	**Tenon saw**	Cutting wood joints and straight cuts in small section material (for wood only).
11	**Try square**	Used for marking out to ensure straight lines are 90° from the edge of the wood.
12	**Twist drill bit**	General purpose drill bit used on wood, metal or plastic.

Ensure you know how to use all tools and machinery safely. **Follow the machine rules.** Ask if you are unsure.

Wear apron & fasten up

Wear eye protection

Long hair? Wear a hair net

Know where the stop buttons are

Remove jewellery

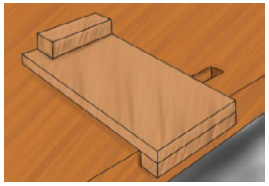
Ensure no one else is in your machine safe zone

Try square

Steel rule

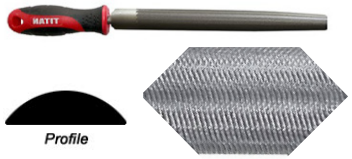
Bevel edge chisel

Tenon saw



Bench hook

Coping saw



File (half round)

Belt sander

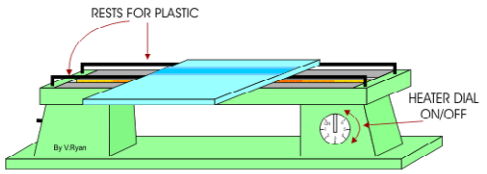
Pillar drill

Drill press clamp

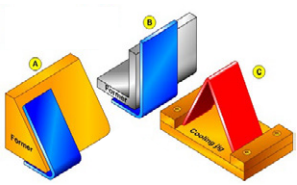
Twist bit

Vacuum Former

Injection moulding machine



Strip heater



Formers / Bending jigs

YEAR 7

KNOWLEDGE ORGANISER

DT Project: Phone holder & Desk organiser (GC)

Key Vocabulary

13	**Client**	Also known as the user; the person or group of people who will buy and/or use the design solution.
14	**Computer-aided design (CAD)**	Using computer software to draw, model and simulate the performance of products.
15	**Computer-aided manufacturing (CAM)**	Using computer software to control machine tools to make products.
16	**Crude oil**	Non-renewable resource obtained from drilling underground/under the sea.
17	**3D printing**	A process that builds up a product layer by layer using a moving printer head that deposits material as it goes
18	**Design brief**	A summary of the design opportunity
19	**Design context**	A general situation where there are problems that need solutions.
20	**Freehand sketching**	A quick way to get initial ideas down on paper.
21	**FSC**	Forest Stewardship Council.
22	**Grain**	The growth rings visible in wood.
23	**Hardwood**	Wood from tress that shed their leaves each autumn.
24	**Iterative design**	A design strategy that follows a cyclic make-test-evaluate approach.
25	**Isometric drawing**	3D drawing method (using lines at a 30 angle)
26	**Manufactured boards**	Materials made by gluing particles or pieces of wood together.
27	**Monomer**	Chemical parts from which polymer can be made.
28	**Seasoning**	Drying wood to remove moisture before its used. Less likely to distort & warp.
29	**Softwood**	Wood from trees that keep their leaves or needles all year round.
30	**Sustainability**	The level to which resources can be used without them becoming unavailable in the future.
31	**Thermoplastic**	Polymers that can be reshaped when heated.
32	**Thermosetting**	Polymers that will not change shape when reheated.
33	**Veneer**	A thin layer of wood, often used to provide an attractive surface on a product.
34	**Virtual model**	A model of a design produced using CAD software.
35	**Wasting**	Removing material that is not needed to achieve a desired shape.

Softwood

(Coniferous)
Scots Pine /
Spruce / Larch

Hardwood

(Deciduous)
Ash / Oak / Elm /
Beech / Mahogany

Forest Stewardship Council.

Timber sourced from a sustainably managed forest means new trees are replanted to replenish supply. Logo appears on wood, wood products and paper/packaging.

FSC

Plywood

Chip board

Manufactured boards - Materials made by gluing particles or pieces of wood together.

Medium density fibreboard

YEAR 7

KNOWLEDGE ORGANISER

D&T Project: Toy Car & Keyfob (CT)

Key Vocabulary

1	**Acrylic**	Rigid and shiny but brittle plastic suited for workshop use.
2	**Assembly**	To put together parts to make a product.
3	**Belt / Rotary sander**	Machine used to remove waste material and smooth wood on **end grain only.**
4	**Bench vice**	Device used to hold job while using hand tools.
5	**Burr**	Sharp edge on metal left after sawing.
6	**BZP**	Bright zinc plated.
7	**Clearance hole**	Hole size larger than screw thread diameter.
8	**Coping saw**	Hand saw used to cut curves in wood, metal and plastic.
9	**Dimensions**	Size (in mm) of length width and height of a product.
10	**Drilling**	Process involving putting holes in a material.
11	**Evaluation**	Reflecting on how well something went and how it could be improved.

Ensure you know how to use all tools and machinery safely and follow protocols. Ask if you are unsure, inform teacher if not well.

Wear apron & fasten up

Wear eye protection

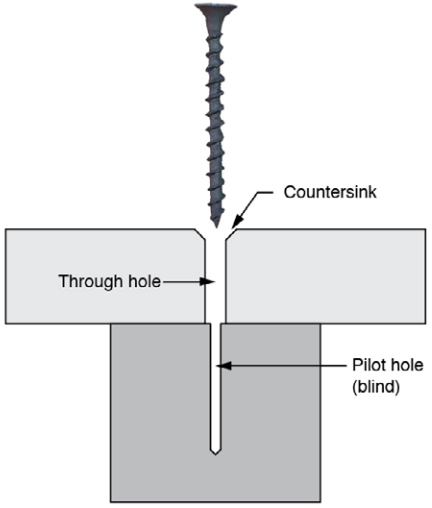
Long hair? Wear a hair net

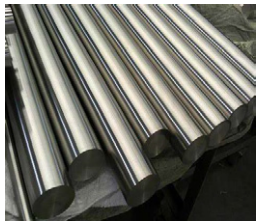
Know where the stop buttons are

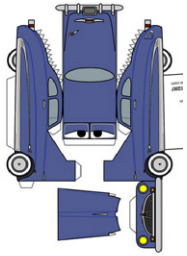
Remove jewellery

Ensure no one else is in your machine safe zone

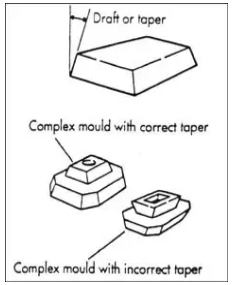
Screw Joint
To join 2 materials with screw – aligning clearance hole with pilot hole and using clearance hole as marking-out jig.



Softwood	Metal
	
(Coniferous) Scots Pine / Parana Pine	Mild steel – alloy of iron and carbon



Template



Pattern

Try square

Steel rule

Junior Hacksaw

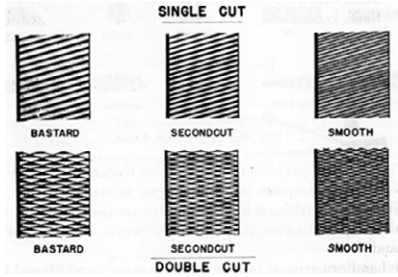
Coping saw

Strip Heater

Sanding block

Vacuum Former

Pillar drill



Files – bastard cut, 2nd and smooth

YEAR 7

KNOWLEDGE ORGANISER

D&T Project: Toy Car & Keyfob (CT)

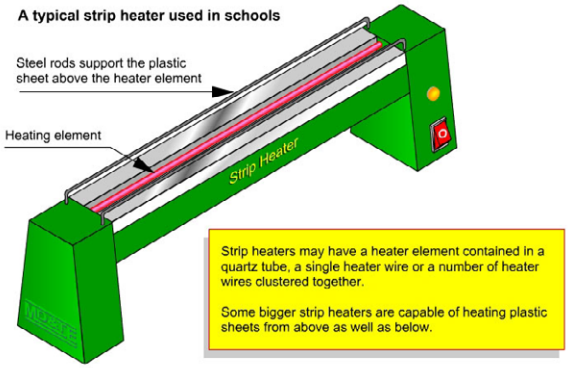
Key Vocabulary

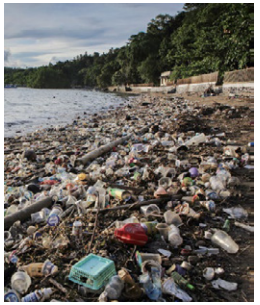
12	**Exploded drawing**	3D drawing used to show how parts fit together.
13	**File**	For plastic and metal only. Trims shape to line after cutting. Use bastard cut first, then 2nd, finish with smooth cut.
14	**Good house-keeping**	Working in a tidy manner.
15	**Health and Safety**	Making with minimised hazard
16	**H&S Colour coding**	4 colour codes recognised internationally to denote specific hazards.
17	**Iterative design**	A design strategy that follows a cyclic make – test – evaluate approach.
18	**Injection moulding**	Process that squirts molten plastic into a mould to make complex shapes.
19	**Interference fit**	Parts holding together using friction.
20	**Job**	The item being worked on.
21	**Junior hack saw**	Cutting small metal sections such as rod - straight cuts only.
22	**Keyfob**	Shape which attaches to the key ring.
23	**Machine guards**	Device to shield user from moving parts on a machine.
24	**Machine Vice**	Used when drilling to hold work securely for safe drilling.
25	**Pillar drill**	Machine used for drilling holes accurately in all materials.

Strip Heater / Line bender

Equipment that directs a narrow focus of heat on plastic to enable it to be bent.

Bending jig used to assist in the accurate bending of acrylic keyfob when heated.





What is plastic?

Crude oil – fossil – based oil as found at source.

Thermosetting – plastic that can only be formed once.

Synthetic – factory made / not natural.

Petrochemical – industry that converts oil into plastics and fuels.

Oil rig – structure used to extract oil from oil field.

Thermoplastic – plastic that can heated and formed repeatedly.

Polymer – engineering term for plastics.

Environmental – issues relating to the natural functioning of the planet.

Why is plastic such a popular material in modern manufacturing?

- Self-finishing: does not require painting as is already coloured.
- One piece design: complex shape created without having to be joined together.
- Efficient: less time energy and resources needed.

YEAR 7

KNOWLEDGE ORGANISER

D&T Project: Toy Car & Keyfob (CT)

Key Vocabulary

26	**Pilot hole**	Hole size matching core of screw but smaller than thread diameter.
27	**Polish and buff**	To apply and remove abrasive polish to create a shiny surface on metal and plastic.
28	**Polypropylene**	Tough plastic used for wheels in project.
29	**Pozidriv**	Cross-shaped screw driving system with extra cross pattern.
30	**Production paper**	Industrial grade abrasive paper.
31	**Quality control**	Checking that work is good enough during the making.
32	**Rod**	Solid metal round bar.
33	**Sanding (sanding block)**	Used to shape wood after cutting using P60 abrasive paper. P120 paper for medium finishing and smoothing, glass paper for extra smooth (block optional).
34	**Screwdriver**	Tool used to turn screws.
35	**Self-tapping screw**	Screw with hardened thread which can be used in metal, plastic and wood.
36	**Steel rule**	Used to measure when marking out in millimetres (mm).
37	**Template**	Marking out tool for irregular shapes. Can be paper, card, wood or metal depending on quantity of product required.
38	**Try square**	Used for marking out to ensure straight lines are 90° from the edge of the wood / checking wood is square.
39	**Vacuum Former**	Machine used to create shell shapes in thin plastics material – use with a wooden pattern.
40	**Vinyl**	Thin flexible plastic used for decals in project.
41	**Wet & dry paper**	Waterproof abrasive paper for plastics and metals.
42	**Working drawing**	Technical drawing showing product from 3 angles with accurate dimensions used to make a product.

Strip Heater / Line bender

High density polystyrene - vacuum forming thermoplastic.

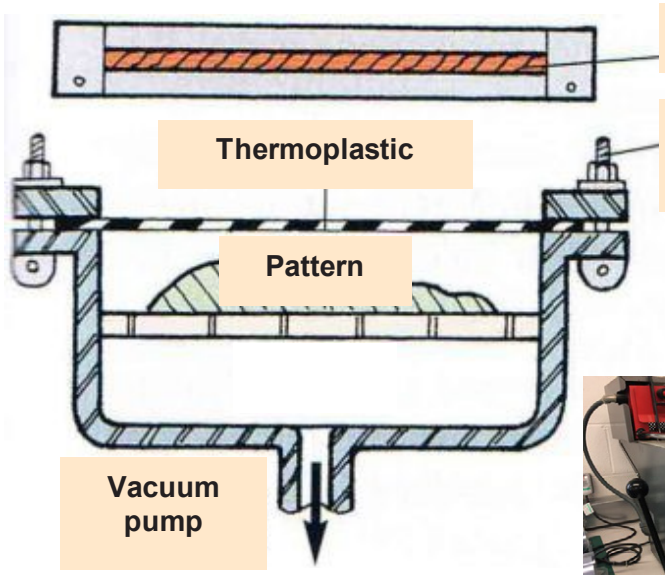
Pattern - solid 3D shape used to form plastic over.

Cycle time – time taken from start to finish of vacuum forming process.

Draft angle – angle on the pattern to allow it to be released after plastic has been moulded.

Atmospheric pressure – pressure in the room utilised to form plastic – 1 bar or 12.5 lbs per square inch.

Vacuum Former



YEAR 7

KNOWLEDGE ORGANISER

Food : Introduction to cooking

Hob

Grill / top oven

Main oven

Chopping and Cooking Techniques

Bridge hold

Claw hold / grip

Fine julienne (Match sticks)

Julienne

Dice

Slices

Lemon juicer

Medium diced chicken

Chicken goujon shape

Enrobing / coating

Rubbing in method

Stewing apples – consistency

Peeler

High risk foods - **defined as a food that contains protein and moisture. Higher risk of food poisoning if not handled, cooked or stored correctly -**
Meat, fish, eggs, cooked rice, gravies, meaty soups, unpasteurised foods.

Basic Safety and Hygiene Rules

- Wash hands before handling food
- Store food in the correct place (Fridge 1-4C)
- Use the correct colour chopping boards to avoid contamination
- Cover cuts with a blue plaster
- Tie back hair and wear a clean apron.
- No nail varnish or false nails

Key Vocabulary – Cooking methods

Water based methods	Dry methods	Fat based methods
Boiling	Baking	Braising
Steaming	Grilling	Stir-frying / Fambe
Poaching		Deep fat frying
Simmering		Roasting

YEAR 7

KNOWLEDGE ORGANISER

Food : Introduction to cooking

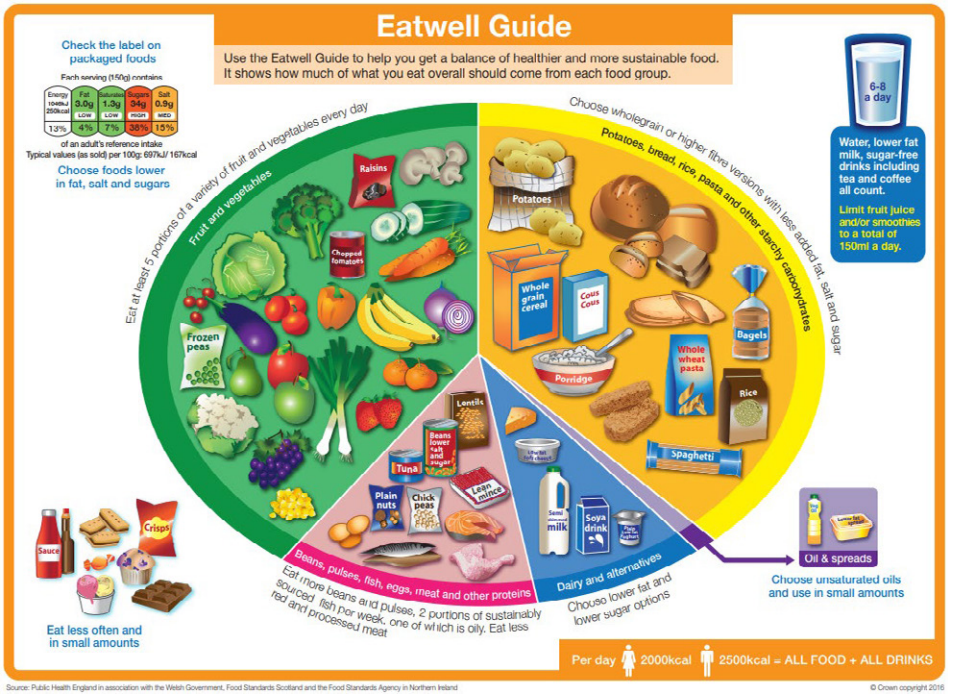
Seasonal foods

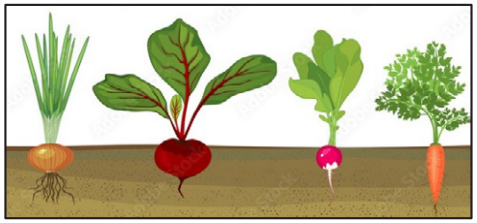
are **fruit** and **vegetables** that are ripe and ready in a particular season E.g., Winter, Spring, Summer, and Autumn.

They will no longer grow when the weather changes.

Advantages

- Rich in flavour
- High in nutrients
- Cheaper in season
- Supports local farmers





Root vegetables grow in the ground

Stone fruits have a hard stone in the middle of them

Flower vegetables come from the 'head' of the plant

Dietary guidelines

Health experts and the Government have worked together and produced a set of **Dietary Guideline and Eatwell Guide** to help people make informed choices when they are deciding what to eat. These are shown below. You will see that there are also guidelines about lifestyle choices as well as what you eat.

1	Base your meals on **starchy** foods e.g. Potatoes, rice, pasta	5	Eat less **salt** – no more than **6g a day** (1 level teaspoon) for adults
2	Lots of **fruit** and **vegetables** (5 a day)	6	Get active and be a healthy weight
3	Don't get thirsty – drink plenty of water	7	Eat more **fish** – including a portion of **oily fish** each week E.g. tuna
4	Cut down on saturated fat and sugar	8	Don't skip breakfast.

YEAR 7

KNOWLEDGE ORGANISER

Food : Introduction to cooking

Key Vocabulary

1	**Adapting recipes**	Altering a recipe to suit a dietary, personal or medical need.
2	**Bacteria**	Micro-organisms that can lead to food poisoning.
4	**Carbohydrate**	A macro nutrient required in large amounts for energy
5	**Cross-contamination**	High risk foods touching others during preparation causing a food poisoning risk
6	**Danger zone**	Range of temperatures between **5°C to 63°C** at which bacteria begin to multiply rapidly
7	**Food Science - Dextrinisation**	Breaking up of the starch molecules into smaller groups of glucose molecules when exposed to dry heat, e.g. toast. 
9	**Food safety**	Handing, preparing, cooking and defrosting/re-heating food safety to prevent food poisoning.
10	**Sensory analysis**	Evaluating the smell, appearance, texture, and mouth feel and how they influence what we select to eat.

Food storage

Different foods need to be stored in different places to slow down the growth of bacteria.

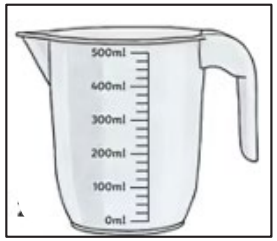
Fruit should be stored in a fruit bowl to ripen

Ambient foods (bread, cereals, pasta etc) should be stored in a cool, dry place such as a cupboard or bread bin.

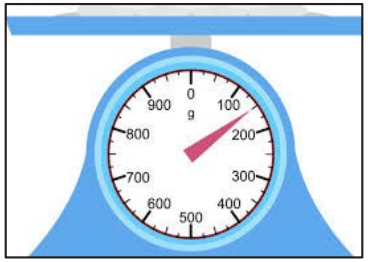
A **fridge (dairy, meat, fish, salad)** should be between a temperature 1 - 5°C

A **freezer** should be kept at -18°C or below.

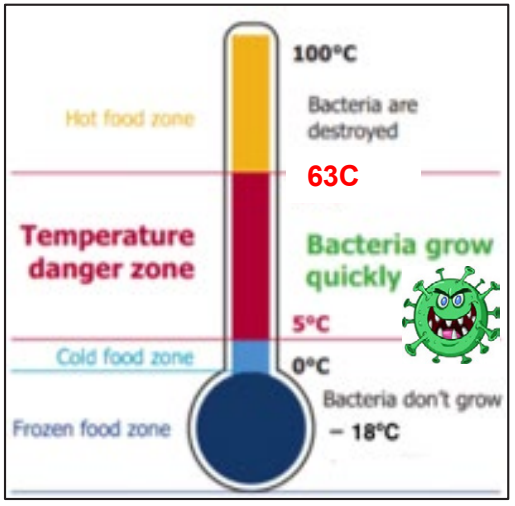
Raw meat and fish should be wrapped up and put at the bottom of the fridge. This will prevent the food dripping onto other foods. (Cross contamination)
Leftovers/cooked foods should be above raw foods in the fridge.



Liquids are measured in mls. E.g. 200mls



Dry foods and solid fats are measured in grams E.g 100g



Key point	Temperature
Fridge	1-5C
Freezer	-18C
Serving hot food should be above	63C
Internal temp of meat/fish for 2 minutes	75C

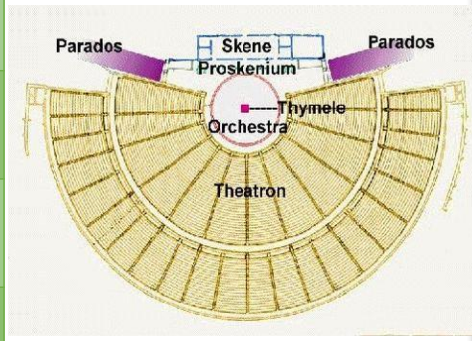
Year 7 Drama : Greek Theatre

Greek Theatre The theatre of Ancient Greece flourished between 550 BC and 220 BC. A festival honouring the god Dionysus was held in Athens, out of which three dramatic genres emerged: **tragedy**, **comedy** and **satyr**.

Key Vocabulary		
1	**Tragedy**	A play in which the hero dies at the end due to a combination of the circumstances and personal flaws.
2	**Comedy**	A play that involves song, dance, rude jokes and makes fun of the politicians and people in power.
3	**Satyr**	A form of Greek tragedy but with a happy atmosphere and a rural setting. A combination of Tragedy and Comedy.
4	**Amphitheatre**	The name of a Greek theatre. Which was large and outdoors.
5	**The Chorus**	A group of actors who describe and comment upon the main action of a play with song and dance.
6	**Thespian**	A name sometimes given to actors.
7	**Orchestra**	The part of the Amphitheatre where the Chorus would perform, speak, sing and dance
8	**Skene**	The part of the Amphitheatre where the actors/characters performed the play.
9	**Theatron**	The part of the Amphitheatre where the audience would sit to watch the play.

Greek Tragedy Structure:		
1	**Prologue**	Characters speak, directly to the audience.
2	**Parados**	Chorus, in unison, tells us what has happened before the beginning of the action of the play.
3	**Episode 1**	Characters, in masks, of course, act out the beginning of the action of the play
4	**Choral Ode 1**	Chorus speaks about something connected with the theme of the story, but not necessarily about the story itself

An Amphitheatre



Top 3 Greek Playwrights	
Aeschylus	Most famous plays: The Oresteia Trilogy
Sophocles	Most famous plays: Oedipus and Antigone
Euripides	Most famous plays: The Trojan Women and Medea

Year 7 Drama : Storytelling

The Story of Ramayana

The **Ramayana** is an ancient Sanskrit epic which follows Prince Rama's quest to rescue his beloved wife Sita from the clutches of Ravana with the help of an army of monkeys. It is traditionally attributed to the authorship of the sage Valmiki and dated to around 500 BCE to 100 BCE.

Dramatic Techniques

1	Improvisation	Performing without a script or rehearsal	
2	Freeze frame	The creation of a still image, there is no sound or movement	
3	Thoughts aloud	saying what a character is thinking	

Key Vocabulary

1	Epic	A story with heroic character over many years
2	Quest	A journey to find someone or something
3	Exile	To be forced to live outside your own country
4	Chastity	Purity. Not having relationships outside of marriage
5	Stimulus	The starting point for the drama that gives a group its ideas
6	Narrator	The person who tells the story, comments on the scene or gives information
7	Climax	The highest point of tension in the piece created by previous events
8	Gesture	Showing meaning through physical movement e.g. hand signal
9	Rehearsal	The repeated acting out of a drama, aimed always at improving the product by considering various ways of presenting it.

Key Characters

Rama	**The hero of the Ramayana epic, the human form of the God Vishnu**
Sita	**Rama's wife and daughter of King Janaka of Mithila**
Laksmana	**Rama's younger brother**
Ravana	**the king of Lanka and has 10 heads and 20 arms**
Dasaratha	**King of Ayodhya, Rama's father**
Bharata	**The second son of Dasaratha**
Kausalya	**Rama's mother, Dasaratha's chief wife**
Kaikeyi	**Dasaratha's wife and Rama's stepmother**

YEAR 7
KNOWLEDGE ORGANISER

English

How do poets use nature to convey meaning in poetry?

Tytherington School ENGLISH

Key Vocabulary

1	**Omnipotent**	Having unlimited power.
2	**Agency**	If someone/something has agency they have power and influence over something.
3	**Naivety**	Showing a lack of wisdom or understanding.
4	**Literal**	The actual, most obvious meaning.
5	**Metaphorical**	A hidden deeper meaning which is often more to do with emotions.
6	**Embedded quotations**	These are quotations that sound like they are part of your sentence: *Hughes suggests the wind is powerful by the way that the winds are 'stampeding the fields'.*

Poetry Structures

1	**Atmosphere**	The feeling created in a text e.g. 'unsettling', 'hopeful', 'mysterious'. Sometimes called 'mood'.
2	**Juxtaposition**	Contrasting two or more things side by side.
3	**Stanza**	Several lines of verse in a poem.

POEMS	'Inheritance' by John Agard	'Wind' by Ted Hughes: 1957	'Death of a Naturalist' by Seamus Heaney: 1966	'Caged Bird' by Maya Angelou: 1983

Key Terminology

1	**Speaker**	The narrator of a poem – the voice speaking.
2	**Subject**	Who the poem is about or addressed to.

Figurative Language (language that creates imagery):

3	**Simile**	Comparing something in order to describe it using 'like' or 'as'.
4	**Metaphor**	A descriptive method which makes use of describing one thing as if it is something else.
5	**Personification**	Giving inanimate objects human characteristics or actions. Example: 'Winds stampeding the field under the window.'
6	**Imagery**	Creating images in the readers' mind using words.
7	**Pathetic Fallacy**	When the weather reflects the mood or atmosphere.
8	**Symbolism**	When a writer uses something to symbolise (represent) something else - Symbols used for ideas or qualities. E.g. The colour 'red' could symbolise anger, danger, violence or passion. A place could symbolise safety.
9	**Conceit**	An extended metaphor.

Sound Effects:

10	**Alliteration**	The repetition of the same letter at the beginning of consecutive words.
11	**Assonance**	The repetition of vowel sounds at the beginning of or within consecutive words.
12	**Plosives**	Letter sounds which sound explosive and harsh (P, T, K, B, D, G)
13	**Onomatopoeia**	Words which sound like the noise they describe.

YEAR 7
KNOWLEDGE ORGANISER

English Gothic Writing

Tytherington School ENGLISH

Key Vocabulary

1	**Desolate**	Bleak, empty
2	**Melancholy**	Sad, gloomy
3	**Petrified**	Unable to move due to fear
4	**Unnerve**	To lose confidence
5	**Eerie**	Strange or frightening
6	**Sinister**	Harmful or evil

EXTRACT	Frankenstein Mary Shelley 1823	Dr Jekyll and Mr Hyde RL Stevenson 1886	Dracula Bram Stoker 1897	Rebecca Daphne du Maurier 1938
PERIOD	Romantic	Victorian	Victorian	Modernist

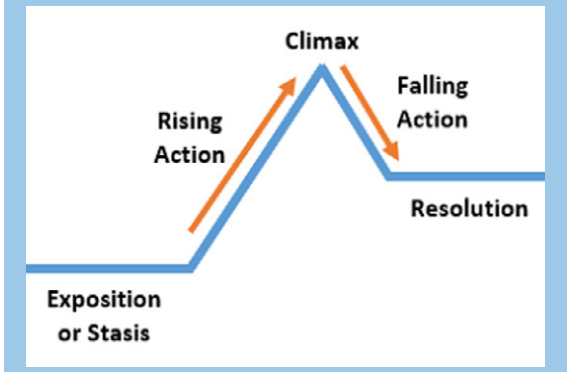
Literary Techniques

1	**Connotation**	An idea or feeling associated with a particular word.
2	**Foreshadowing**	Hinting at something that will happen later.
3	**Motif**	A recurring image; usually a symbol for something else.
4	**Sensory language**	Language that connects to the five senses.
5	**Limited narrator**	The narrator gives us the thoughts and feelings of one character (not using *I*).
6	**Omniscient narrator**	The narrator sees and knows everything that happens, and knows what characters think.
7	**Alternating Narrator**	The narrator moves back and forth between viewpoints.
8	**Pathetic fallacy**	Where human emotions are used to set a mood or tone – often through the weather.
9	**Theme**	An idea that recurs throughout a text, the ideas that the writer wants the reader to think about.

Gothic Genre Conventions

1	**Strange places**	Characters find themselves in a place that is mysterious, dark, lost or secret.
2	**The Past**	The past is not 'over and done with' but comes back to disrupt the present (e.g., ghosts).
3	**Power and violence**	In Gothic stories, you will characters who are trapped, threatened, or isolated.
4	**Doubt and ambiguity**	Gothic stories often involve events and characters that cause other characters and the reader to be confused and uncertain.
5	**The uncanny**	A kind of fear where something is strangely familiar.
6	**Characters in distress**	Characters who suffer or are in pain, often women in gothic texts from the 19th century.
7	**Inexplicable events**	Events that are difficult to believe and cannot be explained, often supernatural.
8	**Supernatural (theme)**	Things or events considered to be unnatural, abnormal e.g. ghosts or strange creatures.

The Narrative Arc



Writing Gothic Stories – Key Elements

1	**Protagonists**	These are the main characters. They could be scientists or priests,men or women, young or old.
2	**Atmosphere**	The feeling created in a text e.g. 'unsettling', 'hopeful', 'mysterious'. Sometimes called 'mood'.
3	**Conflict**	The protagonists have to face some kind of challenge. This is usually another character (Dracula), but it could be the wider world (eg, a zombie apocalypse) or even themselves (Jekyll and Hyde).
4	**Plot**	The protagonists find themselves trapped in a strange place...
5	**Setting**	A strange or unusual place, wild, desolate.

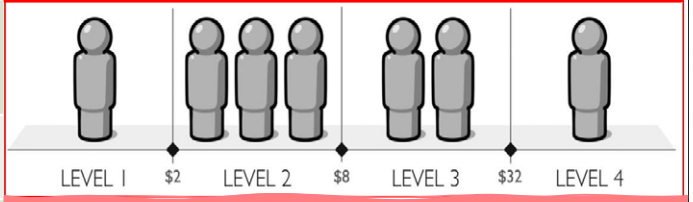
YEAR 7

GEOGRAPHY TOPIC 2: A MODERN WORLD

KEY VOCABULARLY

Infant Mortality Rate	The number of children who die before the age of 1, per 1000 of the population per year
Life Expectancy	How long a person is expected to live from birth
Literacy Rate	The percentage of people that can read and write who are over the age of 15
Birth Rate	The number of live birth per 1000 of the population per year
Calorie Intake	The average number of calories consumed each day
Extreme Poverty	A lack of basic needs e.g. food, water and adequate shelter
Population	The number of people living in a place
Natural Disaster	Extreme natural events that can cause loss of life, extreme damage to property and disrupt human activities
Climate Change	The large-scale, long-term shift in the planet's weather patterns or average temperatures.
Misconception	A false or mistaken view, opinion, or attitude
Stereotype	A stereotype is an idea or belief that many people have about a thing or group.

THE FOUR LEVELS OF DEVELOPMENT



Each figure in the chart represents **1 billion people**, and the seven figures show how the current world population is spread out across four income levels, expressed in terms of dollar income per day.

CAUSES OF UNEVEN DEVLOPMENT

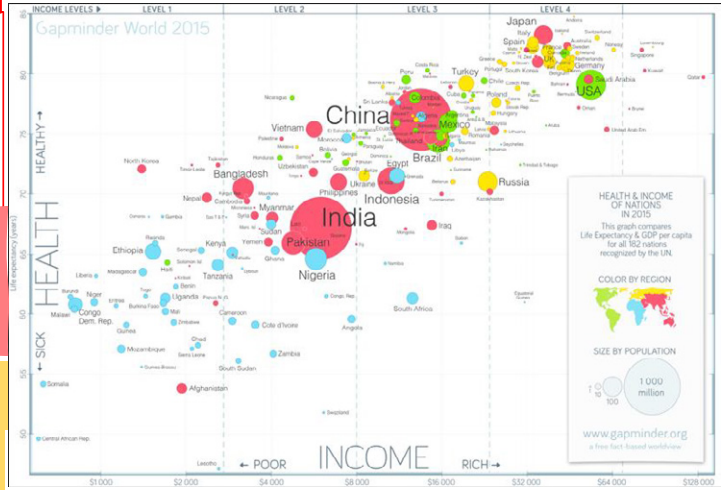
NATURAL:

- Hazards
- Climate
- Location
- Pests and diseases

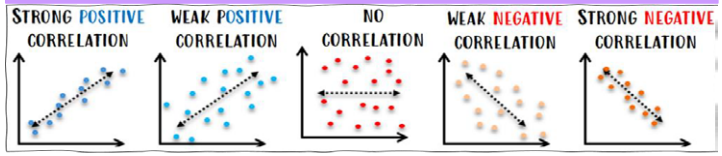
HUMAN:

- Colonialism
- Access to education
- War and conflict
- Corruption

WORLD HEALTH Vs WORLD INCOME (BIG QUESTION)



SCATTER GRAPHS



KEY THEMES FROM FACTFULESS

THE GAP INSTINCT

The belief that the world is split into 2 groups – 'rich or poor'. We know this to be wrong as 75% of people live in middle income countries- so are not rich or poor.

THE NEGATIVITY INSTINCT

The belief that the world is worse than it is. Dr Rosling thinks this comes from how our brains work and our cravings for gossip and drama.

YEAR 7

GEOGRAPHY TOPIC 3: AFRICA

KEY VOCABULARY

1	**Population Density**	The number of people per square kilometre. (Densely or sparsely)
2	**Population Distribution**	How people are spread out over an area. (Even or uneven)
3	**Urbanisation**	The increase in the proportion of people living in cities, resulting in their growth.
4	**Climate Zone**	A climate zone is an area that has its own climate. Countries can have different climate zones located within them.
5	**Hot desert**	Regions of the world with rainfall less than 250mm per year
6	**River long profile**	A line representing the river from its source (where it starts) to its mouth (where it meets the sea) showing how it changes over its course.
7	**Tourism**	Tourism is the activities of people traveling to and staying in places outside their usual environment for leisure and is temporary.

MAP OF KENYA

NAIROBI – OPPORTUNITIES AND CHALLENGES

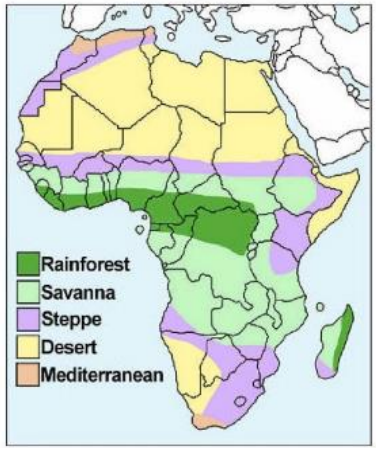
OPPORTUNITIES:

- Nairobi has the regional headquarters of TNCs including General Electric, Google and Coca-Cola.
- 5,000 homes and villas are being constructed in Greenpark, in order to house a growing middle class.

CHALLENGES:

- 86% of the workforce are employed in the informal sector.
- Unemployment is estimated to be at 40%.
- Nairobians spend on average 55 minutes in traffic each day.

CLIMATE ZONES IN AFRICA



Rainforest -- found in regions near the equator. where the climate is hot and wet all year, with temperatures remaining at around 80–82°F.

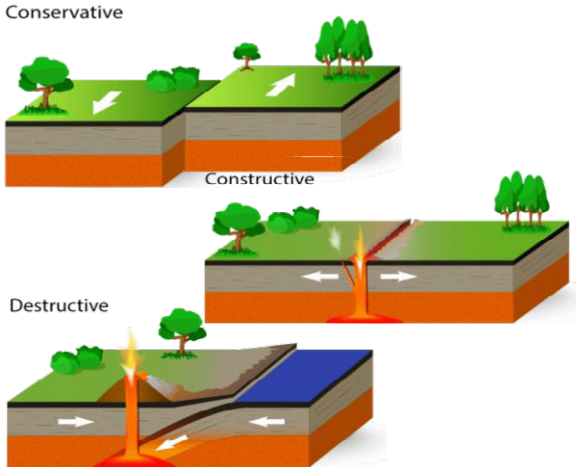
Savanna -- a flat grassland in tropical or subtropical regions.

Steppe -- climate in which precipitation though very slight, is sufficient for growth of short, sparse grass.

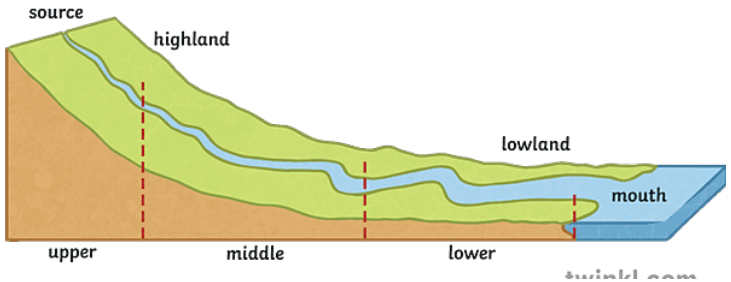
Desert -- an arid region with little or no vegetation.

Mediterranean -- characterized by hot, dry summers and cool, wet winters.

PLATE MARGINS

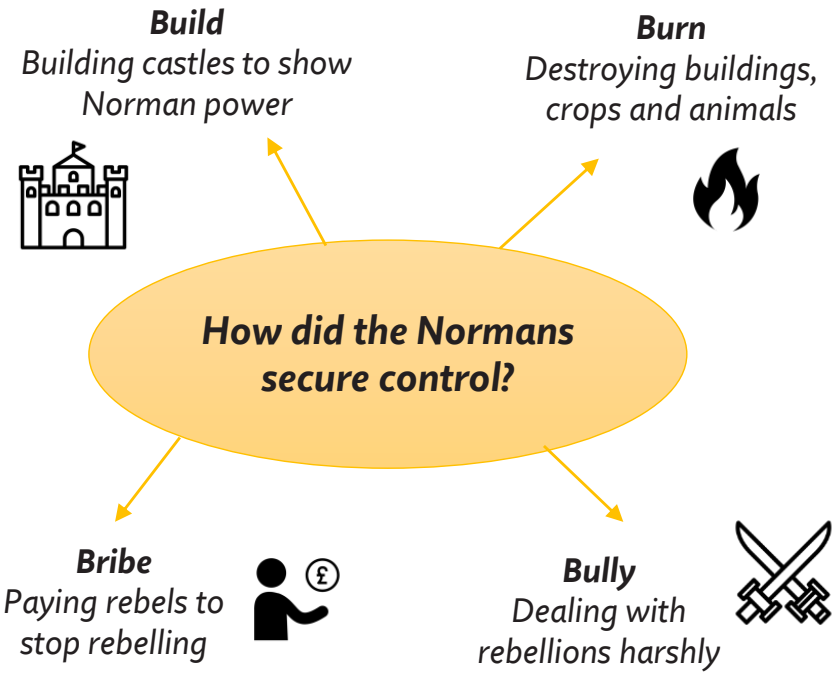


LONG PROFILE OF A RIVER

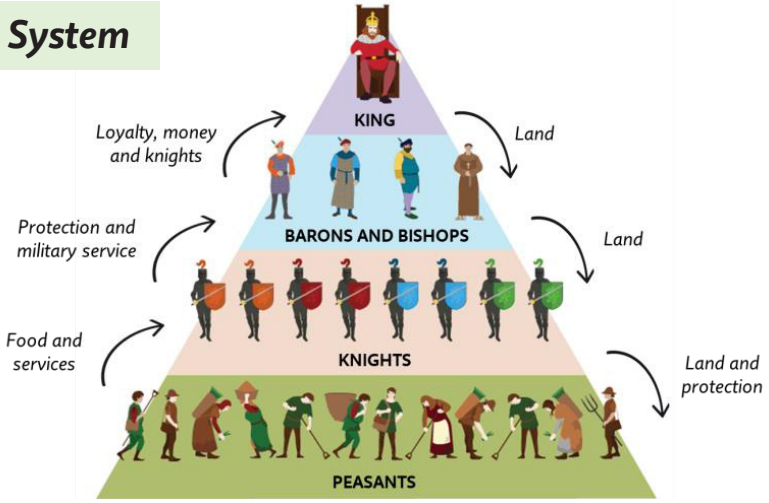


Year 7 History Unit 4: How did the Normans secure their control of England?

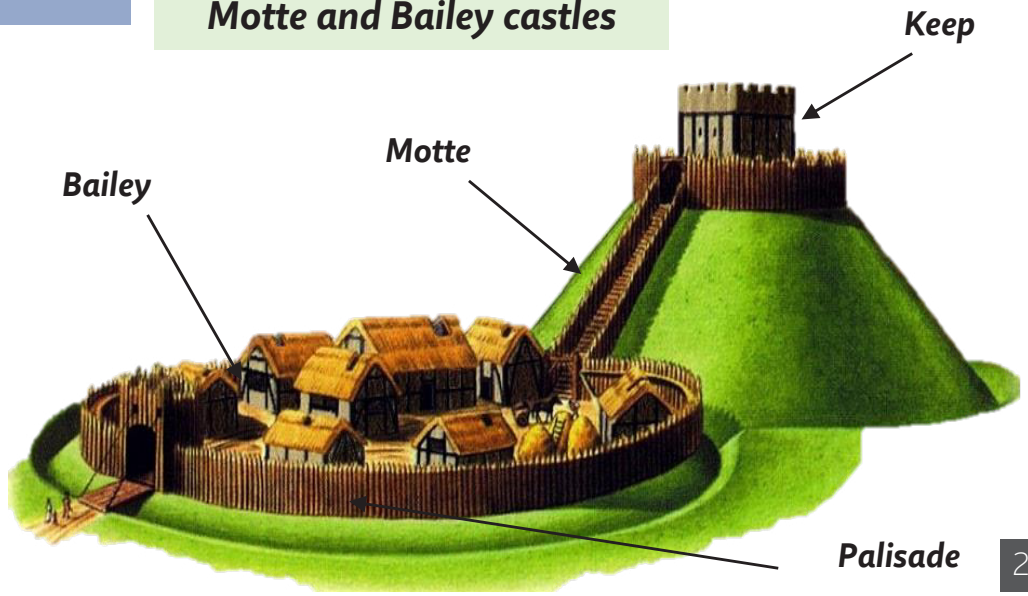
Key Vocabulary		
1	**Baron**	*A Norman landowner who organises the knights*
2	**Coronation**	*The ceremony in which a king is crowned and made a king*
3	**Domesday Book**	*A survey of England in 1086*
4	**Famine**	*Widespread hunger and lack of food*
5	**Feudal System**	*William's system of organising people by giving land in return for work, soldiers and loyalty*
6	**Motte and Bailey**	*A type of castle built by the Normans*
7	**Rebellion**	*When people fight against those in charge*
8	**Saxon**	*In 1066 this word referred to the English*



The Feudal System

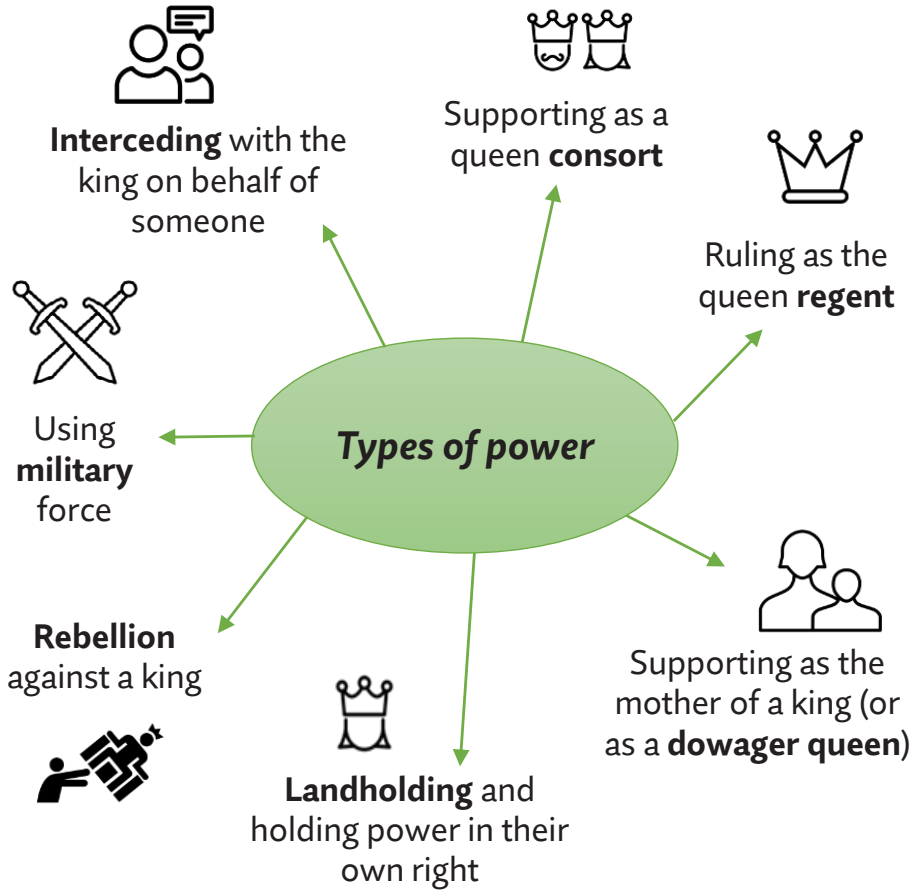


Motte and Bailey castles



Year 7 History Unit 5: How did women hold power in medieval Europe?

	Key Vocabulary	
1	**Monarch**	*The ruling king or queen of a country*
2	**Queen**	*In the medieval era, the queen was the wife or mother of a king*
3	**Consort**	*The wife of a reigning king*
4	**Regent**	*The person chosen to run the country on behalf of the monarch, if that monarch is a still a child, ill or absent*
5	**Dowager**	*The widow of a king; often the mother of the next king*
6	**Intercession**	*Using your influence to intervene on someone's behalf (e.g., to make a king forgive someone)*
7	**Heir**	*The person who should inherit the throne on the death of the previous monarch*
8	**Civil War**	*A war between people of the same country*
9	**Legitimate**	*Acceptable according to law; if someone is legitimate, their rule is accepted and seen as right*
10	**Crusades**	*A series of religious wars between Christians and Muslims, primarily to secure control of holy sites sacred to both groups*



Empress Matilda

- *Daughter of King Henry I- named as his heir*
- *Married to the Holy Roman Emperor and then Geoffrey of Anjou*
- *Fought Stephen for the throne of England in a civil war- known as the Anarchy*
- *Never ruled as queen; her son, Henry, became king (Henry II)*

Eleanor of Aquitaine

- *Duchess of Aquitaine in her own right*
- *Queen Consort to the King of France and then to England's King Henry II*
- *Involved in the Second Crusade*
- *Involved in a rebellion to overthrow Henry II*
- *Mother of King Richard I and King John; had an important role in Richard's reign*

YEAR 7

Mathematics *"Talk like a Mathematician"*

Topic 5 – The Language of Algebra

1	**Term**	A single number or variable, such as x, 3y or $4y^2$.
2	**Expression**	A collection of terms grouped together. Such as 5x+3-2y.
3	**Collect**	Put together (usually adding or subtracting terms).
4	**Simplify**	To write in the most efficient way, such as x+x+x simplified would be 3x.

Topic 7 – Percentages

1	**Convert**	To change a value or expression from one form to another.
2	**Equivalent**	Of equal value.
3	**Multiplier**	The number that you are multiplying by, in this case the decimal equivalent of a percentage.
4	**Percentage**	Parts per 100 (%).

Topic 6 – Area & Perimeter

1	**Area**	The amount of space inside a shape.
2	**Perimeter**	The distance around the outside of a shape.
3	**Formula**	A rule written with mathematical symbols to help you calculate something, such as a rule to find the area of a triangle.
4	**Compound shape**	A shape that can be split up into smaller shapes for easier calculations.
5	**Height**	Perpendicular distance to the base, vertical length.
6	**Width**	A distance, the shorter side of a rectangle.
7	**Length**	A distance, the longest side of a rectangle.

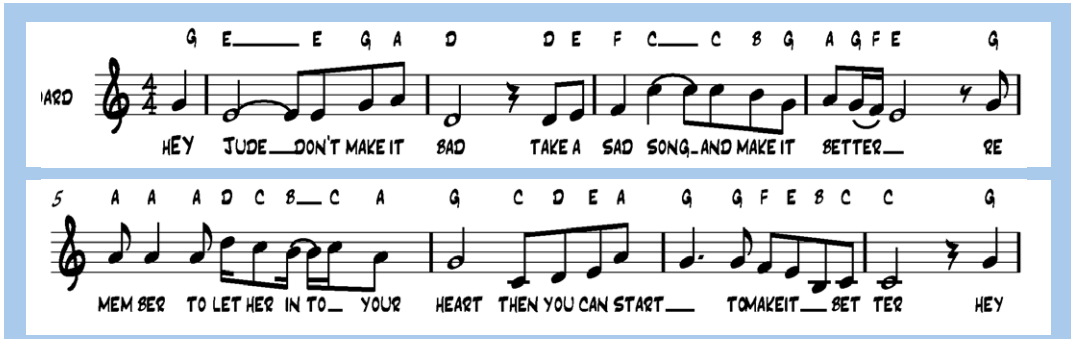
YEAR 7
KNOWLEDGE ORGANISER

Music The Beatles

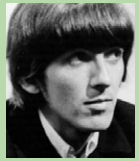
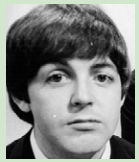
Key Vocabulary

1	**Melody**	The main tune. Most likely the bit you sing.
2	**Harmony**	Sound created by chords and melody together.
3	**Chord**	A chord is 2 or more notes played at the same time.

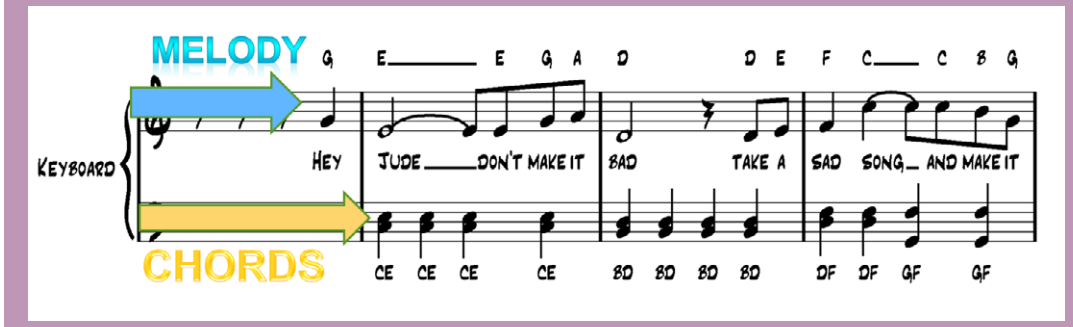
Hey Jude - Melody Only

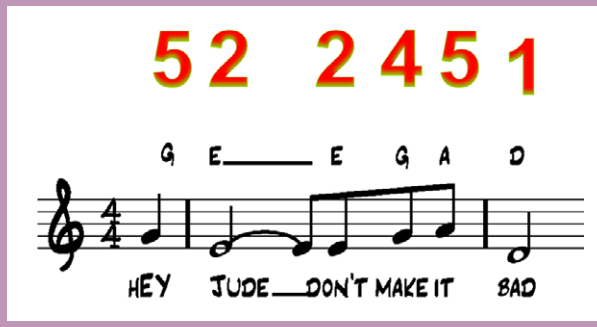


Members of the Beatles

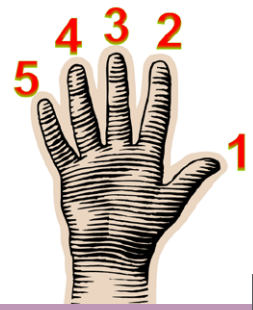
1	**George Harrison**	- Lead Guitarist. - The youngest and known as 'The Quiet One'. - Wrote a few songs such as Here comes the Sun. - Died from cancer in 2001.	
2	**Paul McCartney**	- Bass and backing vocals. - Also played guitar and piano. - Wrote most of the songs along with John. - Was in several other bands after The Beatles split up.	
3	**Ringo Starr**	- Drummer. - Sang a few songs such as Yellow Submarine and Octopus's Garden. - Became the voice of Thomas the Tank Engine.	
4	**John Lennon**	- Lead singer. - Also played guitar and piano. - Wrote most of the songs along with Paul. - Shot dead in New York in 1980.	

Hey Jude - Harmony





Improve your playing fluency by using all of your fingers



YEAR 7
KNOWLEDGE ORGANISER

Music Instruments of the Orchestra

Key Vocabulary – Strings

1	String instruments provide the backbone of the orchestra.
2	The bigger the instrument, the lower the pitch.
3	There are more string players in the orchestra than any other family.
4	Examples: Violin, Viola, Cello, Double Bass, Harp.

Key Vocabulary – Woodwind

1	Some woodwind instruments are very different from others – most use a mouthpiece which is blown to vibrate a reed which produces the sound.
2	Woodwind instruments provide colour in the orchestra. This means they add lots of varied sounds which can make music more interesting.
3	Examples: Piccolo, Flute, Clarinet, Oboe, Bassoon, Saxophone.

Key Vocabulary – Brass

1	Brass instruments can fit in anywhere: orchestras, brass bands, big bands, pop groups.
2	The brass family adds a huge amount of power to the orchestral sound.
3	Brass instruments all use a mouthpiece.
4	Examples: Cornet, Trumpet, French Horn, Trombone, Tuba.

Key Vocabulary – Percussion

1	Percussion instruments make their sound by being hit.
2	Many percussion instruments use sticks or beaters.
3	Percussion instruments are usually made of wood or metal.
4	There are 2 types of percussion: Tuned and Untuned.
5	Examples: Snare Drum, Bass Drum, Cymbals, Timpani, Xylophone.

Composition Structure

1 String instruments. Bars 1-4

2 Brass instruments. Bars 5-8

3 Woodwind instruments. Bars 9-12

4 Percussion instruments. Bars 13-16

5 All instruments families. Bars 17-24

Personal Development - Year 7

Spring Term 2025 – Relationships and Safety

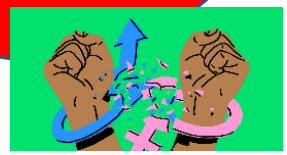
Characteristics of healthy relationships

- Trust – you can rely on them
- Respect – admire them. Think about their feelings before acting
- Honesty – tell the truth.
- Consent – to give permission freely.
- Boundaries – respect their limits.
- Kindness – sharing, generous
- Acceptance – respect them for who they are.

Prejudice – a negative **attitude/opinion** about someone because they are part of a certain group.

EXAMPLES

Sexism –prejudice or discrimination based on sex or gender.
Racism –prejudice or discrimination based on race or ethnicity.
Homophobia - prejudice or discrimination based on sexual orientation.



Discrimination – **treating** someone differently because they are part of a certain group.

What is bullying?	Repeated, on purpose, intended to cause harm, usually related to a power imbalance.
Physical bullying	Using actions to hurt someone (e.g., hitting, kicking, punching etc)
Verbal bullying	Using words to cause upset/hurt to someone.
Emotional bullying	Damaging a person's feelings, self-esteem, confidence.
Cyberbullying	Bullying that happens online.
Social bullying	Deliberately excluding someone from a group and/or spreading rumours about them

Who you are romantically/physically attracted to

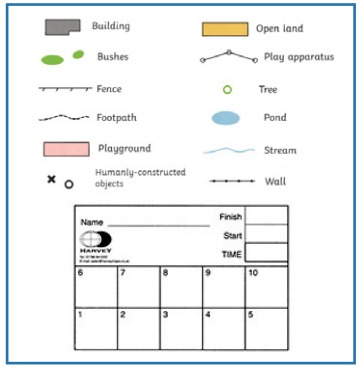
YEAR 7
KNOWLEDGE ORGANISER

Physical Education Orienteering

Key Vocabulary

1	**Orienting the Map**	Positioning the map so you know where you are on the map and can look in a certain direction for landmarks.
2	**Control points**	Plaques to be found containing crucial information to be accurately recorded.
3	**Star course**	Method of completing an orienteering course in a relay style, visiting one control at a time and returning to starting position after each one.
4	**Track course**	Method of completing an orienteering course visiting consecutive controls until all controls on the course have been visited before heading to finishing position.
5	**Symbols**	Pictures which visually represent features on the map.
6	**Route planning**	Planning a way to get from your starting position to the designated controls and to your finishing position.
7	**Map to ground**	Orientate the map so it corresponds directly with the ground.
8	**Control cards**	A card which is marked with the information from each control point to show that the course has been completed correctly.
9	**Boundaries**	Lines on the map which indicate the limits of an area.
10	**Location**	Understanding the position of something in relation to your surroundings.

Orienteering is a sport in which participants use a map to navigate their way to a series of different points in order to complete a course. It can be completed as an individual or team activity and can be both competitive and non-competitive.



Cross Curricular Vocabulary

These are words which you are/will become familiar with when studying different sports:

1	**Resilience**	The ability to recover quickly from difficulties.
2	**Feedback**	Information received to help you improve in future.
3	**Diligence**	Careful and persistent work.
4	**Communication**	Sharing information with others
5	**Teamwork**	Working cooperatively with others.
6	**Tactics**	A plan to gain advantage or success.
7	**Cardiovascular fitness**	The ability to exercise without tiring too quickly.

Key Knowledge

1 **Key information for success**

- Use landmarks such as school buildings to help you orientate your map.
- Consider the topography of the course before route planning to avoid areas which may slow you down e.g. muddy.
- Pace yourself so you can be fast around the whole course without tiring.
- Use the symbols to help you identify the exact location of a control.
- Work closely as a team in order to solve the problems more quickly.

2 **Rules**

- Star course – you must return to your starting position and check your answer before continuing.
- Teams – you must not stray from your partner/team mates during completion of a team challenge.
- You must visit every control in the fastest possible time but ensure all answers are correct to win!
- All answers must be recorded on the control card.

YEAR 7
KNOWLEDGE ORGANISER

Physical Education Invasion Games

Key Vocabulary

1	**Passing**	An intentional transfer of the ball from one player to another. Can be over different distances.
2	**Receiving**	Obtaining the ball from another player or from an interception and controlling it.
3	**Dribbling**	(not used in netball or rugby) The method a player uses to progress up the court/pitch as well as a way to maintain possession of the ball.
4	**Tackling**	(not used in netball)An attempt to take the ball off an opposing player. In rugby this involves stopping the player with the ball by bringing them to the ground.
5	**Marking**	Organised system which the defending players use to prevent the opposing team advancing with the ball.
6	**Track back**	This is when an opposing player will follow an opponent back and tries to tackle them or intercept the ball.
7	**Close down**	As soon as an opposing player has the ball, a player moves towards them in an attempt to stall or win the ball via a tackle or interception.
8	**Possession**	This is the amount of time a team has the ball. The more possession a team has, the more likely they are to control the game.
9	**Interception**	An opposing player gets to the ball when it's being passed and prevents the completion of the pass.
10	**Positions**	Each invasion sport is made up of defensive and attacking players and creates a tactical formation.

(Hockey, Football, Rugby, Basketball, Handball, Netball, Lacrosse, Ultimate Frisbee). An invasion game is where the objective is to attack the opposition's territory and score a goal or points. Fundamental skills and tactics across invasion games are often the same.

Cross Curricular Vocabulary

These are words which you are/will become familiar with when studying different sports:

1	**Resilience**	The ability to recover quickly from difficulties.
2	**Feedback**	Information received to help you improve in future.
3	**Diligence**	Careful and persistent work.
4	**Communication**	Sharing information with others
5	**Teamwork**	Working cooperatively with others.
6	**Tactics**	A plan to gain advantage or success.
7	**Cardiovascular fitness**	The ability to exercise without tiring too quickly.

Key Knowledge

1 **Key information for success**

- Invasion games are played on a pitch or court and teams need to establish attacking and defending positions in order to ensure they effectively cover the space. Certain players will suit certain positions and should play to their strengths. In order to win the game you need to be able to score a goal or points and so being able to move the ball in to the attacking part of the pitch/court is important. Maintaining possession of the ball is a good way to control the game and means you will be more likely to score. You can maintain possession by dribbling or making accurate passes to team mates.
- When the opposition has the ball it is important that you close down the player to limit their options to pass and to put pressure on them. If you lose the ball you should track back to try and win the ball back through tackling or an interception.
- Invasion games all require you to mark players and this can be done using player-to-player marking or using a system of zonal defence which involves players defending a danger area e.g. the semi circle in netball and hockey, the key in basketball or the 18 yard box in football.

YEAR 7
KNOWLEDGE ORGANISER

Religious Studies Judaism

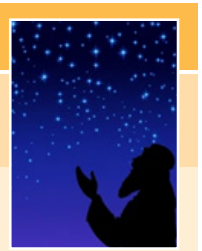
Key Vocabulary

1	**Judaism**	10th largest religion. Around 4,000 years old.
2	**Jew**	Jews are people that follow Judaism.
3	**Synagogue**	The Jewish place of worship.
4	**Torah**	The main holy book of Judaism.
5	**Shabbat**	The Jewish day of rest, from sunset on Friday to sunset on Saturday.
6	**Yad**	Pointer used when reading the Torah.
7	**Bimah**	The raised platform in the synagogue from which the Torah is read and services led.

Jewish Festivals

1	**Passover**	• The Exodus of the Israelites from Egypt, after the 10 plagues. • Festival takes place in March /April. • Modern Jews remember this with the symbolic Passover meal.
2	**Rosh Hashanah**	• Jews reflect on their year, looking at both their good and bad actions. • Festival takes place in September/October.
3	**Yom Kippur**	• The holiest day of the year. • Asking for G_d's forgiveness • Festival takes place in September/October.

Abraham 2000 BCE



1	Abraham is known as the founder of Judaism which means that Jewish people strive to follow his example.
2	He is vital to Jewish history as the first point of contact between G_d and the Jews.
3	It was through Abraham that the idea of the Promised Land or a homeland for Jewish people was created.
4	Abraham was the recipient of the first covenant, promises with G_d. Abraham was born in the city of Ur (located in the country now called Iraq).
5	G_d promises Abraham a homeland Cana and a son. Abraham would become the father of many nations; as many as the stars in the sky.

Moses 1391-1271 BCE

1	Moses was born in Egypt during the enslavement of the Jews, Pharaoh wished to kill all baby boys under the age of two.
2	The daughter of Pharaoh saves the baby from the river Nile and names him Moshe, meaning ('he was drawn') since the baby came from the water.
3	Moses grew up in the house of Pharaoh. Once, he observe an Egyptian taskmaster violently striking an innocent Jewish slave.
4	Moses killed the taskmaster. Moses left Egypt and went on to have many amazing adventures helped by G_d.
5	First encounters G_d through the burning bush.
6	He freed the Jews after the Ten plagues: Passover.
7	Moses crossed the Red Sea and saved the Israelites.
8	Moses was given the Ten Commandments in 1270 BCE.
9	The Israelites wonder in the desert for 40 years before reaching Cana, the promised lan

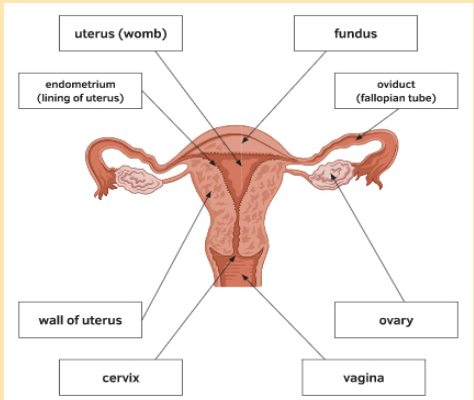
YEAR 7
KNOWLEDGE ORGANISER

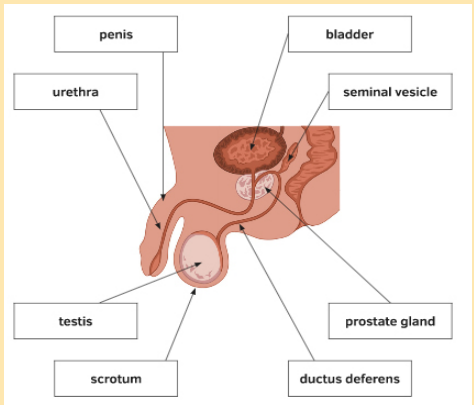
Science Genes 1: Human Reproduction

Key Vocabulary

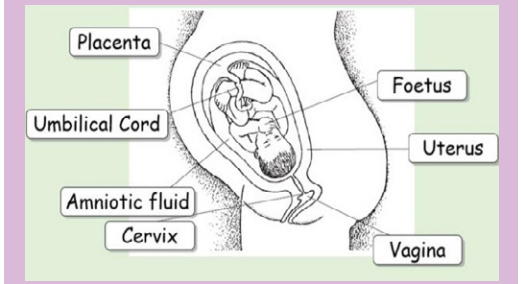
1	**Gamete**	The sex cells. In animals the male sex cell is sperm and the female sex cell is the egg.
2	**Ovary**	Organ which contains eggs.
3	**Testes**	Organ where sperm are produced.
4	**Oviduct**	(Fallopian tube) Carries an egg from the ovary to the uterus and is where fertilisation occurs
5	**Uterus**	Where a baby develops in a pregnant woman.
6	**Ovulation**	Release of an egg cell during the menstrual cycle which may be met by a sperm (day 14).
7	**Menstruation**	Loss of the lining of the uterus during the menstrual cycle.
8	**Reproductive System**	All the male and female organs involved in reproduction.
9	**Penis**	Organ which carries sperm out of the male's body.
10	**Vagina**	Where the penis enters the female's body and sperm is received.
11	**Foetus**	The developing baby during pregnancy.
12	**Gestation**	Process where the baby develops during pregnancy.
13	**Placenta**	Organ that provides the foetus with oxygen and nutrients and removes waste substances.
14	**Amniotic fluid**	Liquid that surrounds and protects the foetus.
15	**Umbilical Cord**	Connects the foetus to the placenta.
16	**Contraception**	Methods of preventing pregnancy
17	**Embryo**	A ball of cells that forms after the egg is fertilised
18	**Cervix**	A ring of muscle at the bottom of the uterus
19	**Puberty**	Changes that occur due to hormones that cause children to develop into adults.

Animal reproduction





Pregnancy

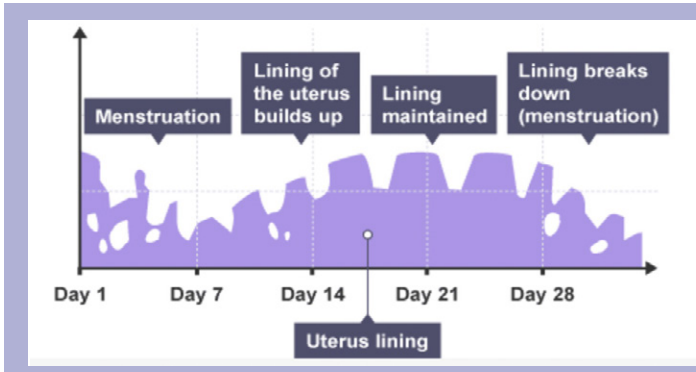


Contraception

Contraceptives are designed to prevent pregnancy. Examples include:

- Condoms – stop the sperm from reaching the egg.
- Contraceptive pill – stops the woman from ovulating (releasing an egg).

Menstrual Cycle



- **Day 1:** Menstruation (the period). Bleeding from the vagina occurs due to the lining of the uterus breaking down.
- **Day 5:** The period ends. The lining of the uterus begins to regrow.
- **Day 14:** Ovulation – an egg is released from the ovary and travels down the oviduct.
- **Day 28:** If the egg is not fertilised, the uterus lining starts to break down again. The cycle repeats.

Key Idea – Sexual & Asexual

Sexual Reproduction	Asexual Reproduction
Two parents	One parent
Fusion of gametes (sperm and egg or pollen and ovule)	No fusion of gametes
Mixing of genetic information	No mixing of genetic information
Variation – non-identical	Identical – clones

YEAR 7
KNOWLEDGE ORGANISER

Science Reactions 1: Types of Reaction

Key Vocabulary

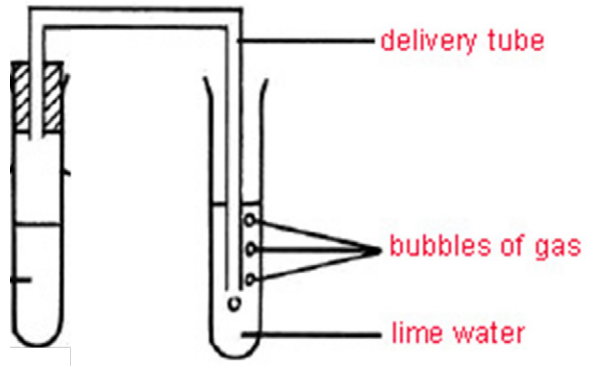
1	**Acid**	A substance that turns litmus red. Has a pH less than 7.
2	**Physical change**	A reversible process which involves a change of state or a substance dissolving. No new product is made.
3	**Chemical reaction**	A reaction where atoms are rearranged to form a new product.
4	**Carbon dioxide**	One of the gases released in combustion reactions.
5	**Oxygen**	The gas used in combustion reactions and respiration.
6	**Reactant**	A substance that takes part in and undergoes change during a reaction.
7	**Product**	A product is a substance that is formed as the result of a chemical reaction.
8	**Fuel**	Material such as coal, gas, or oil that is burned to produce heat or power.
9	**Catalyst**	A substance which speeds up a chemical reaction.
10	**Exothermic**	A reaction that gives out energy.
11	**Endothermic**	A reaction that takes in energy.
12	**Combustion**	Another name for burning
13	**Hydrocarbon**	A substance (compound) made of hydrogen and carbon only.

Signs of a chemical reaction

1	Gas released (bubbles)
2	Colour change
3	Temperature change (increase or decrease)

Key idea – Testing for gases

GAS	GAS TEST
Oxygen	Will relight a glowing splint
Carbon dioxide	Will turn limewater cloudy
Hydrogen	Will produce a 'squeaky pop' sound with a lit splint

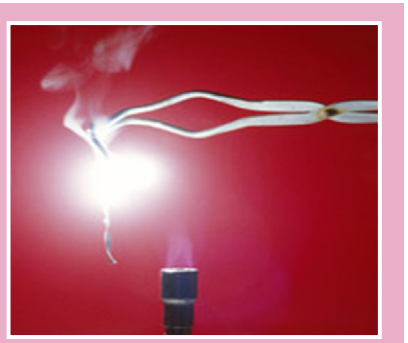


Key idea – Products of combustion of a hydrocarbon

hydrocarbon + oxygen → water + carbon dioxide

Oxidation

- When a metal burns, it reacts with oxygen in the air.
- The equation for this reaction is:
  Metal + oxygen ➡ metal oxide



Thermal decomposition

- Thermal means heat.
- Decomposing is the process of breaking down.
- Thermal decomposition is a chemical reaction that happens when a compound breaks down when heated.

Conservation of mass

1	In a reaction, atoms are not made or destroyed. The total mass of reactants before a reaction is the same of the mass of products.
2	Mass of reactants = mass of products.

Endothermic and exothermic reactions

1	In an exothermic reaction, energy is transferred to the surroundings. The temperature of the surroundings increase.
2	In an endothermic reaction, energy is taken in from the surroundings. The temperature of the surroundings decrease.

YEAR 7
KNOWLEDGE ORGANISER

Science Energy 1: Energy Stores & Transfers

Key Vocabulary

1	**Absorb**	To take in radiation.
2	**Conduction**	Transfer of energy to nearby particles.
3	**Conductor**	A material that allows heat to pass through easily.
4	**Conservation of energy**	Energy cannot be made or destroyed. It can only be transferred from one store to another.
5	**Convection**	Transfer of energy when the particles in a fluid(liquid or gas) rise.
6	**Efficiency**	A measure of how much energy is transferred to a useful store.
7	**Emit**	To give out radiation.
8	**Energy transfer**	Energy passing from one energy store to another.
9	**Insulator**	An object that doesn't allow heat to pass through easily.
10	**Joule**	The unit of energy (J).
11	**System**	An object or group of objects.
12	**Radiation**	Transfer of energy as a wave.
13	**Temperature**	A measure of how hot or cold an object is, measured in degrees Celsius (°C).
14	**Useful energy**	Energy that is transferred to where it is wanted (to the correct energy store).
15	**Wasted energy**	Energy that is not usefully transferred. Wasted energy is usually given out to the surroundings.
16	**Vacuum**	An area with no particles.

Key idea - Stores of energy

1	**Electrostatic**	Energy stored by electrically charged objects attracting or repelling.
2	**Internal (thermal)**	Energy stored in moving particles in an object.
3	**Kinetic**	Energy stored in moving parts.
4	**Magnetic**	Energy stored in magnets attracting or repelling.
5	**Nuclear**	Energy stored in atoms.
6	**Chemical potential**	Energy stored food, fuel and batteries.
7	**Elastic potential**	Energy stored in stretched or compressed objects.
8	**Gravitational potential**	Energy stored in objects raised above the ground.

Key idea - Conservation of energy

Energy cannot be created or destroyed; it can only be transferred from one store to another.

The total energy we have at the start we have at the end.

Appliance	Energy input	Useful output	Wasted output
Kettle	1000 J of electrical	990 J of heat	10 J of sound
Radio	20 J of electrical	15 J of sound	5 J of heat

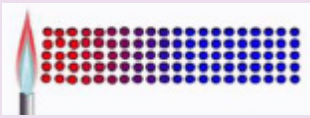
Key idea - Energy pathways

Energy can be transferred from one store to another through the following pathways:

1	**Heating**	Energy is transferred from hotter regions to colder regions.
2	**Mechanically**	When a force makes an object move.
3	**Electrically**	When electrical current flows around a circuit.
4	**Radiation**	Energy is transferred as light or sound waves.

Conduction

How does conduction work?



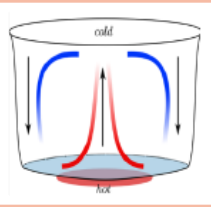
As an object is heated, the particles vibrate more and gain energy, transferring energy to nearby particles.

Conduction takes place easily in solids because the particles are close together.

Convection

Convection occurs when particles with a lot of heat energy in a fluid (liquid or gas) move and take the place of particles with less heat energy.

How does convection work?

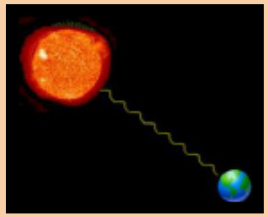


When fluids are heated, the particles gain energy and spread out. The particles become less dense and rise. As particles cool, they lose energy, become more dense, move closer together and sink. This forms a convection current.

Radiation

Radiation is described as the transfer of heat energy by electromagnetic waves without involving particles.

How does radiation work?



When infrared radiation e.g. from the sun is absorbed.

Black material is the best at absorbing radiation. White material is the best at reflecting.

Special infrared cameras can be used to show the amount of radiation given off by a substance. Yellow regions are the warmest and purple regions are the coolest.

YEAR 7
KNOWLEDGE ORGANISER

Spanish Super 7s

The little words you use a lot

THE SUPER 7

TIME PHRASES
Specify **when** something is **happening** – in the **present**, **past** or **future** or whether we would like something to happen in an ideal world (**conditional**).

VERBS
Describe an **action**, state or occurrence – i.e. a doing, being or happening word.

OPINIONS
Explain **what we think** about the action or state of being – **positive** or **negative**.

JUSTIFIERS
Allow us to answer the question 'why?' to **give a reason** for our opinions... usually using '**because**'.

QUALIFIERS
Words that make our describing words even **more interesting**.

ADJECTIVES
Words that **describe** nouns (people, places or things).

CONNECTIVES
Words which **join together** two different, but related, parts of a sentence. They allow us **to extend** and develop our sentences.

1. Time Phrases

1	**normalmente**	normally
2	**siempre**	always
3	**a veces**	sometimes
4	**a menudo**	often
5	**todos los días**	every day

2. Verbs

1	**tener**	to have
2	**tengo**	I have
3	**tiene**	s/he is
4	**ser**	to be
5	**soy**	I am
6	**es**	s/he is
7	**hay**	there is/are
8	**estar**	to be (location)
9	**está**	it is (located)

3. Opinions

1	**me gusta(n)**	I like
2	**no me gusta(n)**	I don't like
3	**me encanta(n)**	I love
4	**odio**	I hate
5	**en mi opinión**	in my opinion
6	**me gustaría**	I would like to

4. Justifiers

1	**porque (es/son)**	because (it is/they are)
2	**ya que**	because

5. Qualifiers

1	**muy**	very
2	**bastante**	fairly
3	**un poco**	a bit
4	**demasiado**	too (much / many)
5	**más...que**	more...than
6	**menos...que**	less...than

6. Adjectives

1	**interesante**	interesting
2	**aburrido**	boring
3	**divertido**	fun
4	**bueno / malo**	good / bad
5	**guay**	cool

7. Connectives

1	**y**	and
2	**e**	and (before h, i, hi)
3	**pero**	but
4	**también**	also
5	**con**	with
6	**sin embargo**	however

YEAR 7
KNOWLEDGE ORGANISER

Spanish Infinitives

Can I understand what an infinitive is and use it in different tenses?

Infinitives

1	**escuchar**	to listen
2	**jugar**	to play
3	**visitar**	to visit
4	**hablar**	to speak
5	**comer**	to eat
6	**beber**	to drink
7	**correr**	to run
8	**escribir**	to write
9	**vivir**	to live
10	**ir**	to go
11	**subir**	to upload

Near future tense

To say what you are going to do

1	**voy**	I am going
2	**va**	he/she is going
3	**vamos**	we are going
4	**van**	they are going

+ a + infinitive

e.g. Voy a jugar al fútbol
Va a beber Coca Cola

The Weather

1	**Hace calor**	It is hot
2	**Hace frio**	It is cold
3	**Hace sol**	It is sunny
4	**Hace buen tiempo**	It is good weather
5	**Hace mal tiempo**	It is bad weather
6	**Si hace sol, voy a ir al parque**	If it's sunny, I'm going to go to the park

Saying what you can do

1	**Se puede + infinitive**	You can ...
2	**Se puede ir al museo**	You can go to the museum
3	**Se puede comer en un restaurante**	You can eat in a restaurant

Connectives

1	**Y**	and
2	**Pero**	but
3	**También**	also
4	**Porque**	because

Opinions with infinitive

1	**Me gusta**	I like
2	**No me gusta**	I don't like
3	**Me encanta**	I love
4	**Odio**	I hate

e.g. Me gusta ver la tele
No me gusta correr

The conditional – used to say what you 'would' do

Take the infinitive and add the following endings:

1	**Visitaría**	I would visit
2	**Visitaría**	He/she would visit
3	**Visitaríamos**	We would visit
4	**Visitarían**	They would visit

Photo descriptions

1	**En la foto hay**	in the photo there is
2	**En el centro hay**	in the centre there is
3	**Una chica**	a girl
4	**Un chico**	a boy
5	**A la izquierda**	on the left
6	**A la derecha**	on the right

YEAR 7
KNOWLEDGE ORGANISER

Spanish Topic 2: Local Area

UNIT 1: DESCRIBING A TOWN & GIVING OPINIONS

Core intent:

To be confident and competent in using the verbs 'to live' and 'to be' with adjectives in the present tense.

Key Vocabulary

1	**en un pueblo**	in a village/town
2	**en una ciudad**	in a city
3	**en el campo**	in the countryside
4	**en las montañas**	in the mountains
5	**en la costa**	on the coast
6	**mi pueblo/ ciudad es...**	my town/city is...
7	**mi pueblo/ ciudad no es...**	my town/city is not...

Key Question

1	**¿Cómo es tu pueblo/ciudad?**	How is your town/village/city? (What is it like?)

Challenge - Superlatives

1	**Lo mejor es que es...**	The best is that it's...
2	**Lo peor es que es...**	The worst is that it's...

Common phrases

1	**Vivo en un pueblo. Mi pueblo es muy bonito.**	I live in a village/town. My town is very pretty.
2	**Me gusta mi pueblo porque es muy bonito y tranquilo.**	I like my village/town because it is very pretty and quiet.
3	**En mi opinión, Madrid es bastante grande pero menos importante que Londres.**	In my opinion, Madrid is quite big but less important than London.

Comparatives

1	**más + adjective + que**	more + adjective + than
2	**menos + adjective + que**	less + adjective + than
3	**tan + adjective + como**	as + adjective + as
4	**Macclesfield es más histórico que Manchester**	Macclesfield is more historic than Manchester
5	**Manchester es menos bonito que Madrid**	Manchester is less pretty than Madrid
6	**Madrid es tan importante como Londres**	Madrid is as important as London

Present Tense

Subject	Present - vivir (to live)	Present - Ser (to be)
Yo = I	vivo	soy
Tú = you	vives	eres
Él/Ella = he/she	vive	es
Nosotros = we	vivimos	somos
Vosotros = you all	vivís	sois
Ellos/Ellas = they	viven	son

Adjectives

1	**histórico/a**	historic
2	**moderno/a**	modern
3	**pequeño/a**	small
4	**tranquilo/a**	quiet
5	**turístico/a**	touristy
6	**bonito/a + lindo/a**	pretty
7	**feo/a**	ugly
8	**industrial**	industrial
9	**importante**	important
10	**grande**	big

YEAR 7
KNOWLEDGE ORGANISER

Spanish Topic 2: Local Area

UNIT 2: SAYING WHAT BUILDINGS/ PLACES ARE IN MY TOWN

Core intent:

To be confident and competent in using the verbs 'there is/are' and 'to be' with nouns and adjectives in the present tense.

Key Vocabulary

1	**Hay**	there is/there are...
2	**No hay**	there is not/are not any...
3	**un castillo**	a castle
4	**un centro comercial**	a shopping centre/ mall
5	**un cine**	a cinema
6	**un estadio**	a stadium
7	**un hospital**	a hospital
8	**un mercado**	a market
9	**un museo**	a museum
10	**un parque**	a park
11	**un polideportivo**	a sports centre
12	**una estación de trenes/autobuses**	a train/bus station
13	**una piscina**	a swimming pool
14	**una playa**	a beach
15	**una plaza**	a town square
16	**una plaza de toros**	a bull ring
17	**una tienda**	a shop
18	**unos/muchos museos**	some/lots of museums
19	**unas/muchas tiendas**	some/lots of shops

Common phrases

1	**Vivo en el pueblo de Macclesfield. En Macclesfield hay un parque.**	I live in the town of Macclesfield. In Macclesfield there is a park.
2	**Me gusta Macclesfield porque hay muchas tiendas.**	I like Macclesfield because there are lots of shops.
3	**En mi opinión, Macclesfield es bastante grande y muy divertido porque hay muchas tiendas.**	In my opinión, Macclesfield is quite big and very fun because there are lots of shops.

Present Tense

Subject	Present – vivir (to live)
Yo = I	vivo
Tú = you	vives
Él/Ella = he/she	vive
Nosotros = we	vivimos
Vosotros = you all	vivís
Ellos/Ellas = they	viven

Key Question

1	**¿Qué hay en el pueblo/la ciudad?**	What is there/are there in the town/city?

Adjectives

1	**histórico/a**	historic
2	**moderno/a**	modern
3	**pequeño/a**	small
4	**tranquilo/a**	quiet
5	**turístico/a**	touristy
6	**bonito/a + lindo/a**	pretty
7	**feo/a**	ugly
8	**industrial**	industrial
9	**importante**	important
10	**grande**	big

Challenge

1	**habría**	there would be
2	**sería**	it would be
3	**En mi pueblo ideal habría una playa, y sería muy grande.**	In my ideal town there would be a beach and it would be very big.

YEAR 7
KNOWLEDGE ORGANISER

Spanish Topic 2: Local Area

UNIT 3: SAYING WHERE PEOPLE ARE GOING TO IN A TOWN

Key Vocabulary – Time Phrases

1	mañana	tomorrow
2	normalmente	normally
3	por la mañana	in the morning
4	por la tarde	in the afternoon
5	por la noche	at night
6	a veces	sometimes
7	a menudo	often

Core intent:

To be confident and competent in using the verb 'to go' in the present tense.

Grammar

Ir a = to go to. **With a noun: Voy... (I go)**

A + el = al	to the
A + la = a la	
A + los = a los	
A + las = a las	

With an infinitive (verb)

Voy a + infinitive (verb) = near FUTURE tense: I'm going to....

E.g. Mañana voy a ir al estadio	Tomorrow I'm going to go to the stadium.
Mañana no voy a ir a la piscina	Tomorrow I'm not going to go to the pool.

Challenge:

Será	it will be
Va a ser	it's going to be

Key Question

1	¿Adónde vas normalmente?	Where do you go normally?

Present Tense

Subject	ir (to go)
Yo = I	voy
Tú = you	vas
Él / Ella = he/she	va
Nosotros = we	vamos
Vosotros = you all	vais
Ellos / Ellas = they	van

Common phrases

1	Voy al estadio, el estadio es muy grande.	I'm going to the stadium. The stadium is very big.
2	Normalmente voy al estadio porque es muy grande, pero es bastante ruidoso.	Normally I go to the stadium because it is very big but it is quite noisy.
3	Mañana voy a ir al estadio con mis amigos porque será muy divertido.	Tomorrow I'm going to go to the stadium with my friends because it will be very fun.

YEAR 7
KNOWLEDGE ORGANISER

Spanish Topic 2: Local Area

UNIT 4: SAYING WHERE PLACES ARE IN A TOWN

Key Vocabulary –

1	está	it is
2	no está	it is not
3	encima de	on
4	a la derecha de	to the right of
5	a la izquierda de	to the left of
6	debajo de	under
7	delante de	in front of
8	al lado de	next to / beside
9	detrás de	behind
10	entre	between
11	cerca de	close to / near
12	lejos de	far (away) from

Key Question

1	¿Dónde está (n) _____?	Where is (are) _____?

Core intent:

To be confident and competent in using the verb 'estar' – 'to be' with prepositions of place.

Common phrases

1	El parque está al lado del estadio.	The park is next to the stadium.
2	Las tiendas están al lado del estadio.	The shops are next to the stadium.
3	Me gusta Macclesfield porque hay muchas tiendas, y están cerca de la piscina.	I like Macclesfield because there are lots of shops and they are close/near to the swimming pool.

Present Tense

Subject	estar (to be)
Yo = I	estoy
Tú = you	estás
Él/Ella = he/she	está
Nosotros = we	estamos
Vosotros = you all	estáis
Ellos/Ellas = they	están

Grammar

Estar = to be + a place / location.

If we want to describe where something or some one is (situated) in Spanish we use the verb 'estar' (to be).

Using the word 'de', at the end of a preposition, e.g. 'al lado de' (next to).

Prepositions of place in Spanish are usually followed by the word 'de'. They are usually followed by a noun, e.g. 'el estadio' (the stadium).

de + el = del	of the / to the
de + la = de la	
de + los = de los	
de + las = de las	

E.g. El parque está al lado del estadio. the park is next to the stadium.

Your notes

Tytherington SCHOOL

Year 7 Knowledge Organisers

Spring Term 2024-2025