The John of Gaunt School
A Community Academy

Name TG

Year 7

Knowledge Organisers

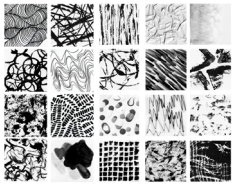
Term 1 - 2024

Art and Design Knowledge organiser term 1

Drawing

When drawing you need to consider these three main areas – tone, texture (using mark making) and proportions.

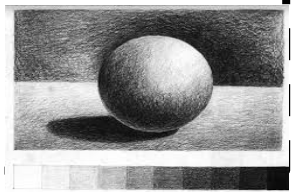
Texture refers to the surface quality in a work of **art**. We associate **textures** with the way that things look or feel. Everything has some type of **texture**. We describe things as being rough, smooth, silky, shiny, fuzzy and so on.



Proportion refers to the dimensions of a composition and looks at height, width and depth. **Proportion** also describes how the sizes of different parts of a piece of **art** or design relate to each other.

Tone means how light or dark something is. The tones artists and designers use and the contrast between them can create very different moods and visual effects.

Further reading: https://www.bbc.co.uk/bitesize/guides/z2thmsg/revision/1



Key Words - definitions
Shading - the darkening or colouring of an illustration or diagram with parallel lines or a block of colour.
Depth - The apparent distance from front to back or near to far in an artwork. Techniques of perspective are used to create the illusion of **depth** in paintings or **drawings**.
3D – three dimensional - and object having or appearing to have length, breadth, and depth.
Still life - a painting or drawing of an arrangement of objects, typically including fruit and flowers and objects contrasting with these in texture, such as bowls and glassware.
Shape - the external form, contours, or outline of someone or something.
Scale - If you refer to the **scale** of something, you are referring to its **size**
Colour – this refers to the full ranges of colours you may use, colour comes in different shades
Complimentary colour - Complementary colours are pairs of colours which are opposite each other on the colour wheel -When placed next to each other, they create the strongest contrast
Harmonious colours – are groups of colours that are next to each other on the colour wheel

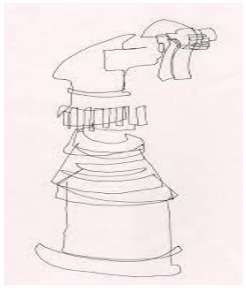
Observational drawing
Observational drawing is **drawing** what you see. ... But it's **drawing** what you see in front of you as realistically and as true to life as possible.

Art history
https://www.ducksters.com/history/art/
https://www.bbc.co.uk/bitesize/subjects/z6f3cdm

Tonal drawings

A drawing that focuses on showing the shadows, creating a 3D feel

Blind drawing

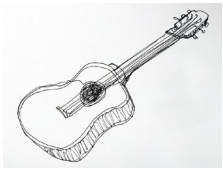


Drawing an object without looking at the paper while completing it

Wrong hand drawing

A drawing completed with your non dominate hand

Continuous line drawings



An unbroken line drawing from the beginning to the end.

Computer Science

Hardware & Software

Key content

What is a computer?

A computer is any device take takes an input, processes it and then outputs infor-

CPU (Von Neumann)

The CPU has two main parts: **ALU & CU**

Arithmetic and Logic Unit

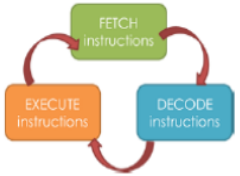
The ALU carries out all of the arithmetic and logical operations including addition, subtraction and comparisons (for example, equal to, less than, greater than).

Control Unit

The **Control Unit** uses electrical signals to direct the system to execute the instructions in stored programs.

Fetch, Decode, Execute

The main function of the CPU is to run an endless fetch-execute cycle.



The speed of the **FDE** cycle is measured in cycles per second (**hertz**). This is known as the **clock speed.**

Processors are usually measured in **giga-hertz (GHz)**

1GHz = 1 billion instructions processed.

Why do computers use binary numbers?

ON corresponds to 1 and OFF corresponds to 0.
All computer programs, must therefore be translated into binary code for the computer to understand and execute the instruction.
Note : Humans cannot use this system easily.

Converting from binary to denary

To convert a **binary** number to denary, start by writing out the binary place values. In denary, the place values are 1, 10, 100, 1000, etc – each place value is 10 times bigger than the last. In binary, each place value is 2 times bigger than the last (i.e. increased by the power of 2). The first few binary place values look like this:

16	8	4	2	1
1	0	0	1	1

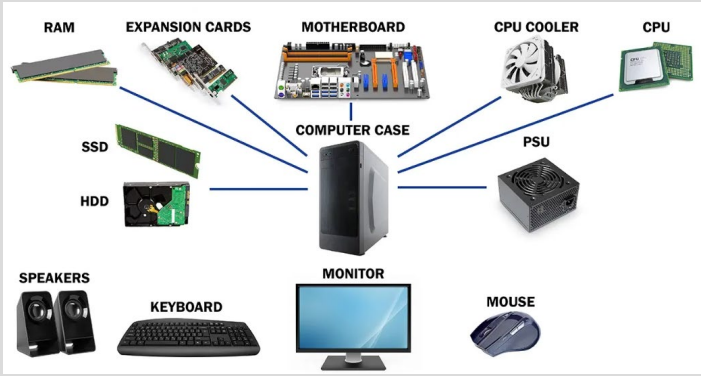
16 + 2 + 1 = 19

To convert a binary number into a denary number, add the *numbers in the column headings* for the columns that contain a **1.**

There is a **1** in 16, 2 and 4 columns, so add these together to find the denary number of 19.

Diagrams:

Parts of a computer system



Key Vocab

Word	Definition
Peripheral	A device which can add extra functionality to a computer system. Peripherals can either input or output data from the computer.
Utility Software	Utilities allow the user to manage, fix and optimise the computer. Can include: • Disk cleaner (to make more space on the disk) • Disk defragmentation (to make the disk more efficient) • Security utilities (to clean up malware on the computer)
Clock Speed	The speed at which a CPU executes instructions. The faster the clock speed, the faster the processor.
Storage	A storage device is used for storing and extracting data files, it can be internal or external to a computer.
Motherboard	Connects all components in the computer together.
RAM	Short-term storage, stores instructions for the CPU. Stands for Random Access Memory.
ROM	Read Only Memory – Fixed Memory that cannot be changed. Used when the system starts up to know what order to load.
Output Device	An **output device** is a piece of hardware or peripheral **that receives** data from a computer. e.g. printer, monitor, Speakers
Input Device	An **input device** is a peripheral **that enters** data into a computer. e.g. keyboard, Scanner, microphone, mouse, keyboard
Software	A collection of instructions that enable the user to interact with a computer.
Cores	There are single core, dual and quad core processors. The more cores the more efficient and faster it will be.
CPU	Central Processing Unit. Performs calculations & processes instructions.
Hard Drive	Stores information in long-term memory. Contains a magnetic disk or solid-state drive inside to store data on.

More info can be found here:

BBC BiteSize Digital devices, Software, CPU:
https://www.bbc.co.uk/bitesize/topics/zmpsgk7

DESIGN TECHNOLOGY YEAR 7.1 Graphic Communication

Typography This is the study of **Type** and **Text** on a page, it is how it add impact or set the scene for a page. You can change the style of text (font), its size, colour and space around the text to give you different appearances.

Serif: These typefaces have a tail and are mainly used in the body of a text.

Sans Serif: This typeface has no tail and is mainly used for headings as it is plain and clear to read.

Script: These typefaces tend to look handwritten and have a more personal feel.

Stylised: These are more decorative and are aimed at attracting attention or giving some meaning or association.

Analysing products

This is where we look at an existing product and say what we think is good and bad about the product

A Aesthetics :- what the product looks like?

C Cost:- How much would it cost to make or buy?

C Client:- Who would buy it?

E Environment:- How and where will it be used? What impact will it have on the environment?

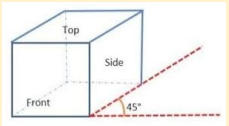
S Safety:- Could the product hurt anyone?

S Size:- How big is it? Is that suitable?

F Function:- What will the product do?

M Materials:- What is it made from?

Freehand drawing techniques



Oblique drawing

Using thick and thin lines to make an object stand out from a page. Rule if you can see two sides the line between is thin. If you can only see one side, the line is thick.

Hatching is the use of lines to give an image the look of shadows, shade and texture.

Key Words	Definitions
Render	To colour in an idea or design to make it look like a material or to make it stand out.
Enlarge	To make or draw an object bigger than the original drawing .
Reduce	To make or draw and object smaller than the original drawing.
Oblique	A 3D drawing technique which shows and image at 45° to a horizontal line.
Annotate	To add notes to your designs that explain what you are aiming to achieve. (eg. Size, Materials, joining techniques)
Freehand	To produce a drawing without the aid of drawing equipment like rulers and set squares.
Crating	The use of simple drawn shapes to draw more complex ideas.

Disability

Recycle

Place in bin

No Phones

Signs and symbols

Signs give information to people. They often avoid using words. This makes them easy to recognise, and helps people who don't speak your language or who can't read.

Extension task See how many signs and symbols you can find?

Drama

Greek Theatre

Did you know the Greeks invented theatre?

- Theatre has religious routes! Where the Greek people used to gather to watch religious ceremonies
- Stories that used to get told between family members were written down and turned into plays
- Theatre originated from Athens, in Greece, specifically the Festival of Dionysius!

Key features of Greek Theatre

Word	Definition
Chorus	One character being played by multiple actors
Amphitheatre	A theatre the Greeks would've performed in, made out of stone and outside
Tragedy and Comedy	Two genres Greek plays can be written as.
Mask	A prop worn on your face to show character.
Dionysus	The Greek God of wine, festivity and theatre.

Key terminology

Word	Definition
Theatre	A building or outdoor area where plays are performed.
Audience	A group of people watching a play be performed
Physical skill	How an actor uses their body to communicate
Vocal skill	How an actor uses their voice to communicate
Projection	How we can use volume to make sure the audience can hear us.

How to give constructive feedback

- I think your use of…[skill]...was good.
- It was good because…[how did they use the skill?]
- It gave the effect that…
- I thought you could add in more…[skill]
- You could add this in by…[how could they use that skill?]
- This would give the effect that…

Greek Myths

English

Subject Specific Content (QLA W1)

The Odyssey:

- The Odyssey was written by the Greek poet, Homer.
- An odyssey now has come to mean a very long journey.
- The story follows a character called **Odysseus, a famous Greek hero (protagonist),** as he attempts to make his way home to his family.

Characters:

1. **Telemachus** = Odysseus' son
2. **Penelope** = Odysseus' wife
3. **Athena** = Daughter of Zeus / Goddess of wisdom/battle
4. **Circe** = Witch-Goddess
5. **Calypso** = Nymph (falls in love with Odysseus)
6. **Laertes** = Odysseus' father

Vocabulary – Colour Thesaurus (QLA W3):

- **White** = ivory, salt, bone, pearl, porcelain
- **Red** = scarlet, blood, ruby, cherry, mahogany
- **Blue** = indigo, azure, sapphire, arctic, teal
- **Brown** = chocolate, mocha, cedar, caramel, tawny
- **Grey** = graphite, charcoal, slate, ash, pewter
- **Black** = raven, ink, midnight, coal, obsidian
- **Yellow** = citrus, sandy, golden, amber, butterscotch
- **Orange** = rust, bronze, honey, carrot, tiger

More information can be found at: https://greece.mrdonn.org/myths.html

Key Vocabulary, Spellings and Definitions (QLAs W1 and W3):

1. **Hellenic** – Relating to Ancient Greek culture – such as the people, and the language
2. **Hubris** – Excessive (more than normal) amounts of pride
3. **Labyrinth** – A maze
4. **Mortal** – A living human being (who can die)
5. **Narcissistic** – Being overly interested in yourself, or your own appearance
6. **Philosopher**- Someone who studies knowledge, reality and existence
7. **Polis** – A city-state in Ancient Greece
8. **Myth** – A traditional story that is often written to explain natural phenomena and quite often involves Gods or fantasy creatures.
9. **Legend** - A traditional story (historical but not authenticated – proven to be true)
10. **Folktale** - A story that is usually told through word of mouth.

Senses (QLAs W1 and W3):

- **See:** *What can you see? Zoom in to the smallest details.*
- **Touch:** *What textures could you feel?* E.g. Corrugated, jagged, velvety, serrated
- **Smell:** *What smells could you describe?* E.g. Comforting, putrid, delicate, intoxicating
- **Hear:** *What sounds could you describe?* E.g. Hushed, melodic, tumultuous, dulcet
- **Taste:** *What tastes could you describe?* E.g. Acidic, bitter, stale, sour

Food Preparation 1 yr. 7

Cooking Food / Skills

Key content

Cooking Food

1. A broad range of ingredients, equipment, food skills and techniques, and cooking methods are used to achieve successful results.
2. *Recipes and cooking methods can be modified to help meet current healthy eating messages and repeated at home.*

Why is food cooked?

Some foods can be eaten raw and form an important part of the diet. However, many foods need to be prepared and cooked before they are eaten to:

1. make the food safe to eat by destroying pathogenic micro-organisms and toxins;
2. destroy microorganisms and enzymes that cause food to deteriorate and therefore increase the keeping quality of the food;

Food skills

There are a number of food skills which enable a variety of increasingly complex dishes to be prepared and made.

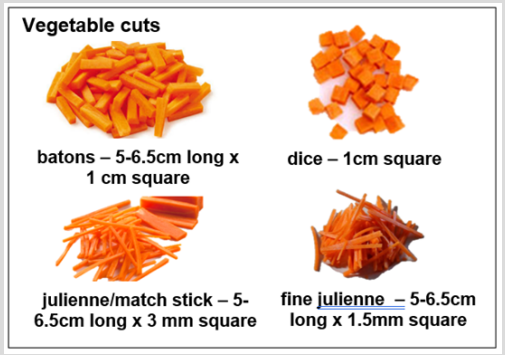
These can include:

1. beating, combining, creaming, mixing, stirring and whisking;
2. bridge, claw, julienne, jardinière, brunoise, macedoine .
3. kneading, folding, forming and shaping;
4. knife skills;
5. rubbing-in and rolling-out;
6. use of the cooker: boiling/simmering/poaching, frying, grilling, roasting and baking;

Diagrams:

The Bridge Hold

The Claw Grip



Key vocab

Word	Definition
Bridge	Form a bridge over the ingredient with your hand, making the sure the arch is nice and high so there's plenty of room for the knife to fit underneath. Hold the item securely with your fingers on one side and your thumb on the other.
Claw	keeping the fingers curled inward and gripping the food with the fingernails, the fingers stay out of harm's way. The side of the knife blade should rest against the first knuckle of the guiding hand.
Brunoise	A tiny cube cut from julienne sticks that chefs quarter and dice again, producing cubes that are ⅛ by ⅛ by ⅛ by ⅛ inches
Macedoine	Dicing ingredients into 1/4 inch cubes.
Jardinière	To cut a vegetable into thick batons
Julienne	Food cut into short, thin strips - matchstick
Pathogenic	Any organism or agent that can produce disease.
Deteriorate	Become progressively worse.

To find out more, go to:
https://bit.ly/2Z97B5f
https://www.foodafactoflife.org.uk/14-16-years/cooking/
https://www.johnofgauntschool.org/page/?title=Technology&pid=29
Optional Extra – if you are able to cook at home with an adult – why not try using the bridge and claw technique, along with practicing the vegetable cuts.

Year 7 Geography: Using maps effectively

What is Geography?

Human Geography: is about the human world, how and where people live, develop and earn a living

Physical Geography: is about the physical world around us. What is our planet like. The work of rivers, the sea and ice.

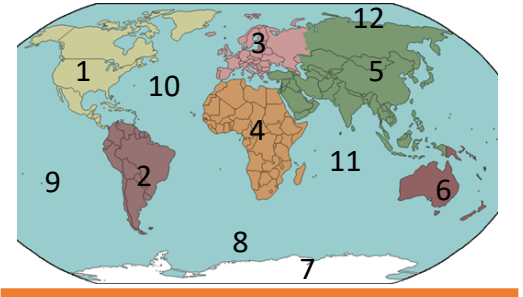
Environmental Geography: is about the natural habitats of our planet, such as mountains, forests and ocean. It is about how humans affect the planet

What makes a good Geographer?

Investigates and understands the world in which we live, we explore the human and physical world.

We ask questions about the world around us. (where is this place? What is it like? Why is it like this? How and why is it changing?

We develop knowledge of where places are in the world



The continents and oceans

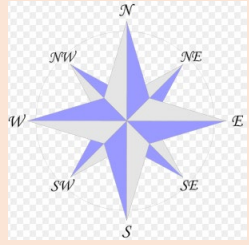
1. North America
2. South America
3. Europe
4. Africa
5. Asia
6. Oceania
7. Antarctica
8. Southern Ocean
9. Pacific Ocean
10. Atlantic Ocean
11. Indian Ocean
12. Arctic Ocean

Direction

You need to know the 8 point compass for giving directions, saying which way long shore drift is going or if it says look at the headland in the northwest corner of the map.

The compass

On most maps the direction 'north' will be straight up the map but check the compass carefully.



Map Symbols

Generally if you are given an OS map it will have a key telling you what the symbols mean. However, it's a good idea to learn some of the most common ones which are shown below.

- Motorway
- Main (A) road
- Secondary (B) road
- Bridge
- Railway
- County boundary
- National Park boundaries
- Building
- Bus station
- Footpaths
- Viewpoint
- Tourist information centre
- Parking
- Places of worship

Scale and Distance

Maps should always have a scale which can be shown with a ratio e.g 1:50,000 (which means 1 cm on the map equals 50,000cm (or 0.5km) in real life or a scale line which you can put your ruler alongside to see what distance is represented by 1cm on the map.

On the paper's edge

One method of measuring distance is to take a sheet of paper and place the corner of a straight edge on your starting point. Now pivot the paper until the edge follows the route that you want to take.

Step 1

Every time the route disappears or moves away from the straight edge of your paper, make a small mark on the edge and pivot the paper so the edge is back on course.

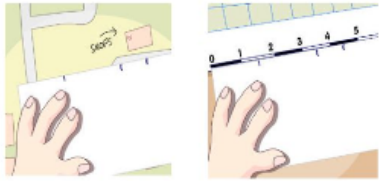
Step 2

Repeat this process until you reach your destination.

Step 3

You should be left with a series of marks along the edge of your paper. You can now place the sheet against the scale bar on your map.

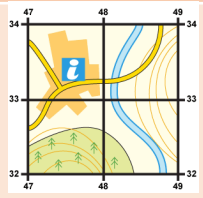
The last mark you made will tell you the real distance you need to travel.



4 Figure Grid References

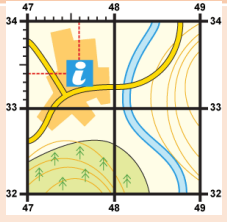
Ordnance Survey maps have numbered gridlines drawn on them. The lines running up and down the page are called eastings (because their numbers get higher as you move eastwards) and the ones running across the map are known as northings (because their numbers get higher as you move northwards).

Four-figure grid references



To give the 4 figure grid reference for the information centre give the number of the line that runs up the left hand side of the square (47).
The give the number of the line that runs across the bottom of the square (33).
This gives a four figure grid reference of 4733.

Six- figure grid references

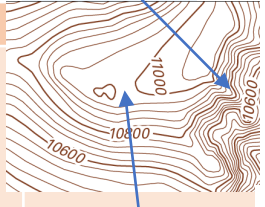


To give a 6 figure grid reference for the information centre start by finding the line that runs up the left hand side of the square (47) then imagine that the square is divided into tenths (this has been done for you on the diagram) and count across the tenths (6). Then give the line that runs across the bottom of the square (33) and count up the tenths (4).
Put it altogether to give a grid reference of 476 334

Relief: the height of the land. Steep or flat

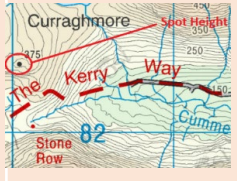
Contours

Contours are orange lines found on an OS map that join places of equal height above sea level. They show the height of the land in metres by the numbers marked on them. They also show the steepness of the land by how close they are together (the closer the lines the steeper the slope).



Spot Heights

Spot heights are black dots with a number next to them that give the height of that particular spot.



Inferring things from maps

As a geographer you should be able to describe and interpret a map.

Describing locations

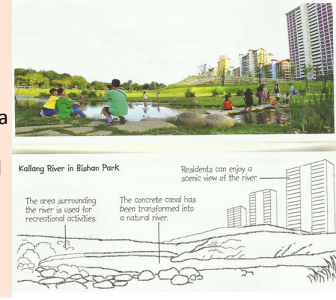
When you are asked to describe the location of something then write about what it is near. Use the scale calculate exactly how far away it is and also use compass points to describe he direction.

Inferring things from map evidence

You also need to be able to work something out using map evidence. For example you might be asked what evidence there is that tourism is important along a particular section of the coast, so you might look for a sandy beach, a cliff topic path and blue symbols which show tourist facilities e.g. a tourist information centre or a campsite.

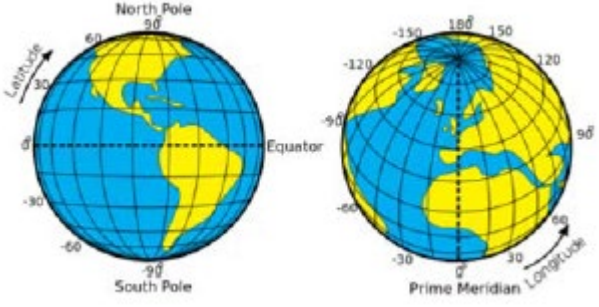
Drawing a field sketch

A field sketch is used to show the main geographical characteristics of a landscape. It should be an accurate outline sketch and include labels and annotations.



Latitude and Longitude

Latitude lines on an atlas map run horizontally around the earth and tell us how far north or south of the Equator (0 °). So for example London is 51°N.
Longitude lines run vertically around the earth and they measure how far east or west of the Prime Meridian (a line of longitude that runs through Greenwich in London). So for example London would be 0° W.



Neolithic Britain (4000 BC to 2500 BC)

1. Neolithic people began to farm (grow crops & keep animals like pigs and goats) – previously humans in Britain had been mobile hunter-gatherers.

2. Probably worshipped the sun and moon.

3. Initially used tools made from stone (like a Hammerstone or flint axes), wood or animal parts (bones, antlers)

4. Use menhirs and megaliths to build long barrows and stone circles. These were often used for burial and worship.

- **Local Examples of Neolithic Monuments:** Stonehenge, Avebury, Silbury Hill, West Kennet Long barrow, Stony Littleton Long barrow, Stanton Drew Stone Circle.

Stonehenge 2600 BC

5. Sarsen stones (big ones) from Malborough Downs near Devizes
6. Bluestones (smaller ones) transported from Preselli Hills in Wales
7. The Sarcen stones put up using wooden scaffolds
8. 25% of the menhir might be buried underground
9. Sunlight hits the Altar Stone at the Summer Solstice (21st June) and the Winter Solstice (21st December)
10. Hundreds of people involved in transportation, digging and building of Stonehenge.

Neolithic / Iron Age Diet

Cows, fish, pigs, mushrooms, hazlenuts, yoghurt, blackberries, raspberries, juniper berries, wheat, cheese

Challenge yourself to learn more about Pre-historic Britain here:
https://www.bbc.co.uk/bitesize/topics/z82hsbk/articles/zpny34j

Iron Age Britain (800 BC to 43AD)

Hillforts – defensive forts on flat-topped hills. Protected with ditches, banks and a single entrance.
Local Examples: Cley Hill, Barbury Castle, Scratchbury Camp

The Celts:
11. European tribe which arrived in Britain around 500BC.
12. fierce warriors (including the women).
13. Often fought naked with just iron swords, spears and wooden shields.
14. Used chariots and **woad** (from plant leaves) to paint frightening blue designs on their bodies.

Worship
15. Sacrifice – gave their gods valuable objects to keep them happy. They also sometimes sacrificed animals or humans.
16. Moon, stars and sun and the natural world were seen as sacred, and they worshipped in places like lakes, rivers, cliffs and forests.

Neolithic / Iron Age Housing

Long houses or smaller roundhouses. Walls of wattle and daub and a thatched roof.

What metals can be smelted?

Pre-historic people slowly worked out how to make hot enough fires to melt certain metals to make objects with.

The Copper Age 4000 BC – 2500 BC
The Bronze Age 2500 BC – 800 BC
The Iron Age 800 BC – AD 43

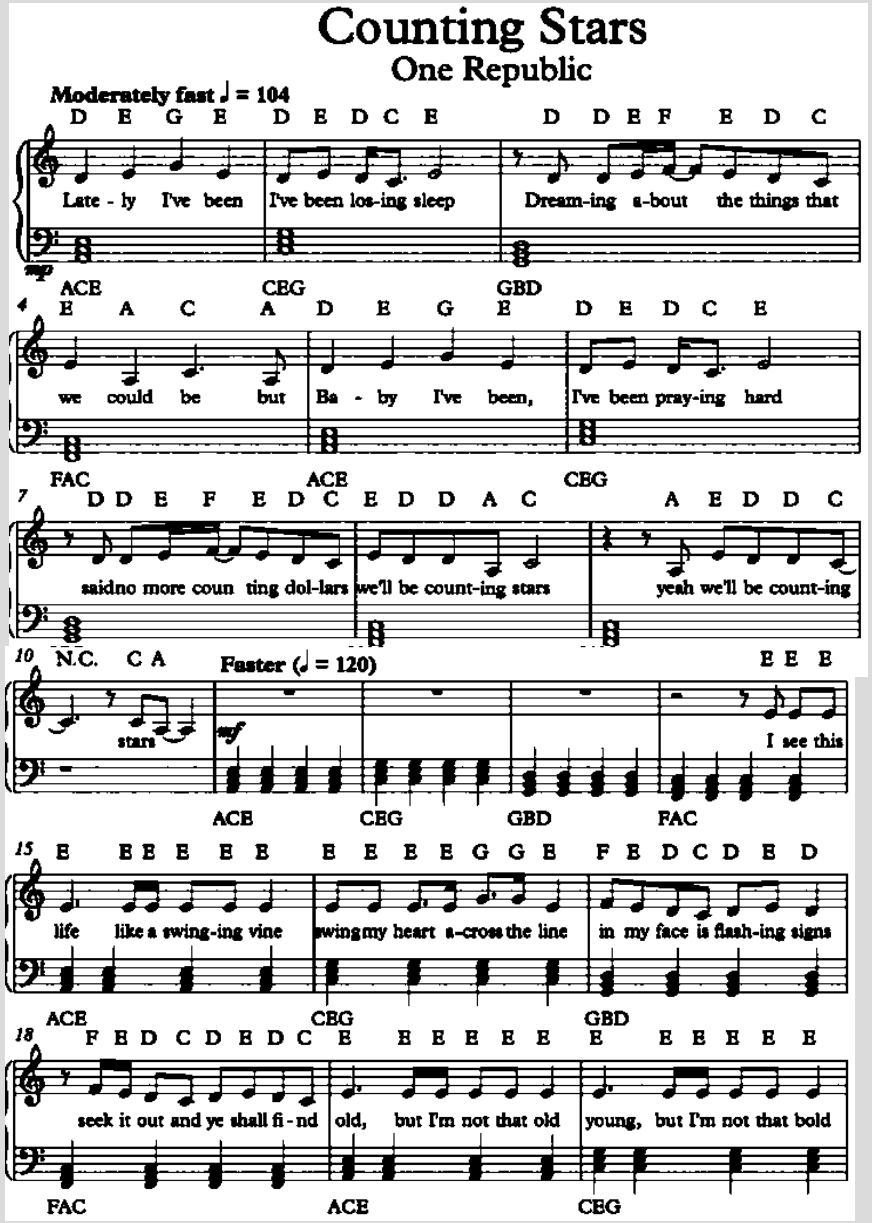
History – KPI 1: Prehistoric Britain

Key term	Definition
Century	Period of 100 years
Decade	Period of 10 years
Chronology	Study of dates, dating and ordering of events
Evidence	Available facts and information to prove if something is true
Henge	Circular chalk bank
Long barrow	Neolithic burial mound
Antler pick	Deer antler used for digging
Menhir	A large standing stone
Hillfort	Settlement protected with fences and banks (Iron Age)
Torc	Metal neck ring (Iron Age)
Druid	Iron Age priest and leader
Wattle and Daub	Sticks and mud (for walls)
Thatch	Grass / Straw used for roofing
Megalith	Large rock or boulder used to build a structure

Music

The Elements of Music Part I

Diagrams:



Key content

In this topic you will find out all about the fundamental elements that make up music (the elements of music). You will learn to analyse how these elements have been used in pieces of music that you listen to and play. You will learn to play the melody with your right hand and the chords with your left hand.

Key vocab

Word	Definition
Dynamics	How loud or quiet the music is
Rhythm	A collection of beats together
Tempo	The speed of the music
Tonality	The tone of the music – major (happy) or minor (sad)
Structure	How the music is organised
Melody	The main tune
Instrumentation	The instruments/voices used in a piece
Texture	How many layers there are in the music
Harmony	A combination of different notes/chords together
Chords	2 or more notes played together

More info can be found here: **Listening**

Counting Stars:

https://www.youtube.com/watch?v=tzMGDIU_-ow

Subject – Physical Education

Year 7

Topic – Physical Me

Key content

Run – running is very common in lots of sports. Particularly invasion games such as rugby/football/netball. But also in athletics, marathon running.

Throw – throwing is used across many sports, invasion games such as basketball/handball/rugby. Likewise, in cricket, rounders, javelin, shot putt players must throw to compete.

Catch – catching is needed for invasion games and striking/fielding games. To score points and to get people out.

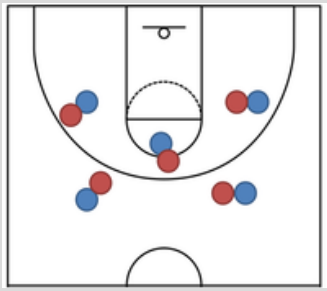
Jump – needed for lots of games and sports. Specifically long and high jump

Key vocab

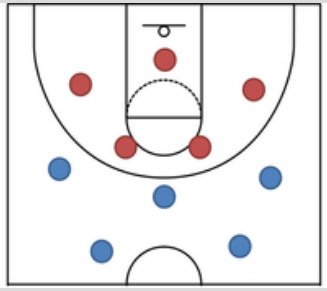
Word	Definition
Skill	the ability to do something well; expertise
Technique	a way of carrying out a particular task, especially the execution or performance
Tactics	Tactics are **the skills required in any game** that allows a player or team to effectively use their talent and skill to the best possible advantage.
Rules	rules are **in place for safety of the players, integrity of the game and to create as fair a competition as possible**
Regulation	A regulation is **a bit more formal than a rule** – it prescribes the required conduct or action exactly;
Strategy	Strategies are often **pre-arranged and rehearsed** plans to be effective in a competition.

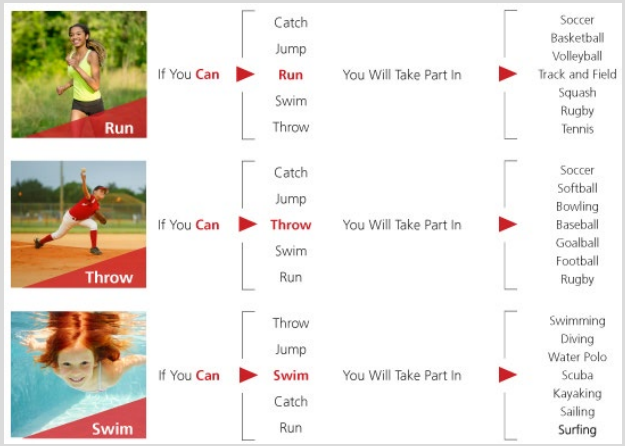
Diagrams:

Player marking



Zonal marking





6. PHYSICAL ME (Term 5&6)	
RULES AND REGULATIONS	
Know basic rules and regulations.	
SKILLS AND TECHNIQUES	
Perform basic skills and techniques	
TACTICS AND STRATEGIES	
Perform some tactics and strategies needed for the sport.	

RE Knowledge Organiser

Term One: Judaism

Key Word/Concept	Definition
God	Jews believe that there is one God, He does not have multiple parts
Abraham	The first Jew and founded of Judaism; a significant role models to all Jews
Moses	Most important messenger of God in Judaism; Moses led the Jews out of slavery in Egypt
Torah	Jewish holy scroll
Synagogue	Jewish holy building
Hebrew	Language of Judaism
Kosher	Food that meets the requirements of Jewish law
Bar/Bat Mitzvah	Son/Daughter of the commandment; rite of passage for Jews
Commandment	A divine/religious rule e.g. the 10 commandments
Omnipresent	God is present everywhere always
Omniscient	God is all knowing
Omnipotent	God is all powerful
Omnibenevolent	God is loving
Monotheistic	Belief in only one God

	Core Beliefs
Nature of God	According to Jewish belief, God has four main characteristics: • One – Jews believe in One God • Creator – Jews believe that God created the world • Law-giver – Jews believe God has given many religious laws • Judge – God will judge each person on hoe well they have kept his laws
Creation/Environment	**Genesis**, the first book of the Torah, explains the Jewish religious teaching about how the world was created. The story shows how God made the world and everything in it in 6 days, resting on the 7th.
Holy Book	There are two parts to Jewish rules: one part is called the **Written Law** because it is believed this was written down when it was given to the Jews. It includes the holy book called the Torah. The other part is called the **Oral Law** because it was not originally written down.
Symbolism	The word **kosher** describes all the things that Jews are allowed, and there are rules called **kashrut** which identify foods that are kosher.
Festivals/Rites of Passage	**Bar & Bat Mitzvah** ceremonies mark the transition into adulthood for young Jews. At age 13 a boy becomes Bar Mitzvah and at age 12 when a girl becomes a Bat Mitzvah. After these ceremonies Jewish boys or girls become responsible for living according **to Jewish Law**.

Further Reading & Watching:
https://www.bbc.co.uk/bitesize/topics/z9prkqt/articles/zfn792p
https://www.bbc.co.uk/bitesize/topics/zwykjxs/articles/z66dgwx

Science | Cell Biology

Key content

Specialised cells are cells that are adapted to perform a certain function. They include:

Sperm Cells → have a tail to swim to the egg.

Egg Cell → contains nutrients to feed a growing embryo.

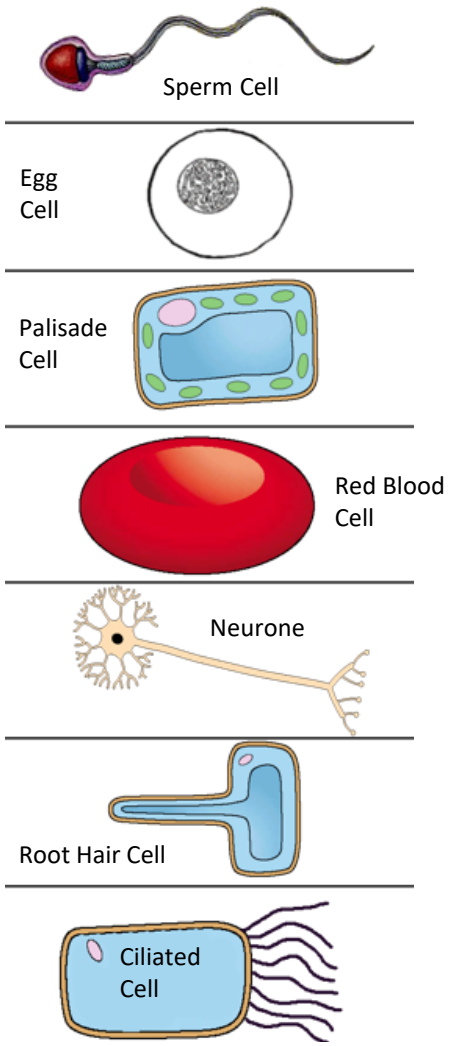
Palisade Cell → contains chloroplasts for photosynthesis.

Red Blood Cell → has no nucleus to transport as much oxygen as possible around the body.

Neurone → has a long axon to transport electrical impulses.

Root Hair Cell → has a large surface area to absorb water and minerals into a plant.

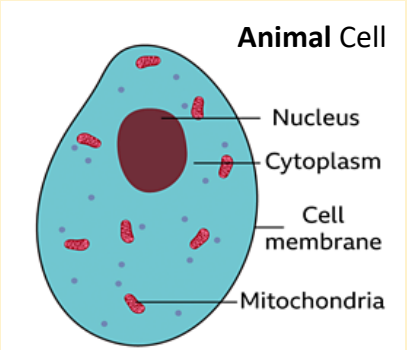
Ciliated Cell → has microscopic hairs that waft mucus out of the body.

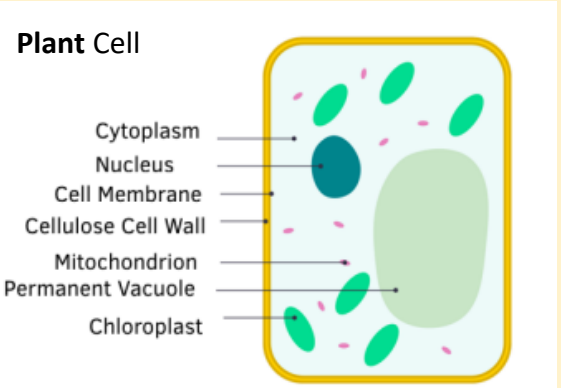


More information:

Key Vocab	Definition
Nucleus	A structure inside a cell that controls the cell and contains DNA.
Cytoplasm	Jelly inside a cell where chemical reactions happen.
Mitochondria	Structures inside cells that release energy.
Cell membrane	Structure around the cell that controls what enters and exits the cell.
Cellulose	A carbohydrate used to make the cell wall of plant cells.
Vacuole	A structure in a plant cell that contains cell sap.
Chloroplasts	A structure in plant cells that absorb light for photosynthesis.
Photosynthesis	A process in plants that uses light to make glucose (sugar) for the plant.

Diagrams with Key Content:





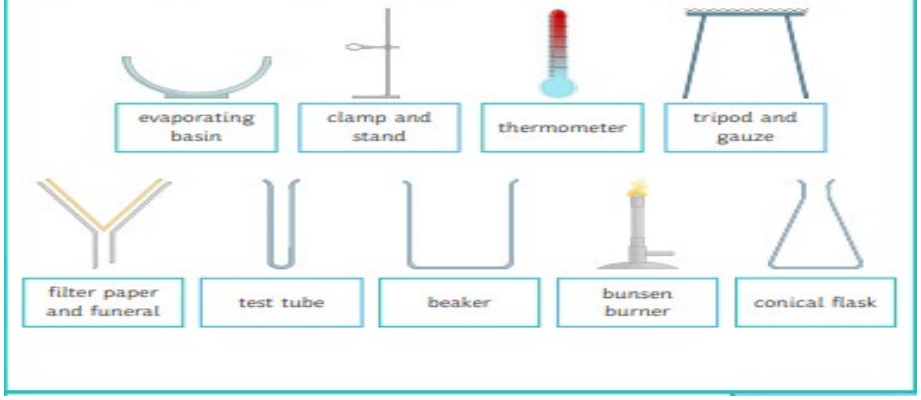
C1 Lab Skills Knowledge Organiser

1.1 Hazard symbols

1.2 Equipment

Scientific Equipment

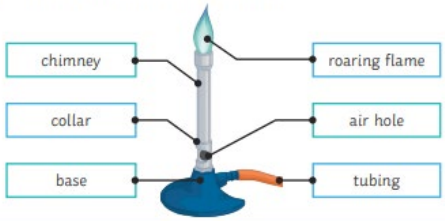
Diagrams are used when drawing practical equipment to make it easier and quicker to draw.



1.3 Bunsen Burners

Bunsen Burner

The Bunsen burner is an important piece of scientific equipment. It is used in many science experiments and uses methane gas.



1.4 Microscopes

How to Use a Microscope

1. Plug in the microscope and turn on the light.
2. Place the specimen (the object to be observed) on the stage.
3. Turn the magnification to the smallest.
4. Make sure that the specimen is in the centre; fasten it with the clips.
5. Look down the microscope.
6. Use the fine focussing wheel to observe the specimen.
7. Increase the magnification.
8. Draw/write down any observations.

Using a Microscope

Microscopes have been used for years to observe objects that are too small to see with the naked eye.

Over time, the magnification of microscopes has significantly improved due to developments in technology. We now have microscopes that can examine specimens at an atomic level.

We have made many important scientific discoveries thanks to microscopes.

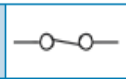
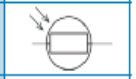
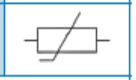
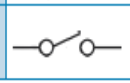
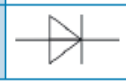
1.5 Circuits

Current and Circuit Symbols

Current: the flow of electrical charge.

Potential difference (voltage): the push of electrical charge.

Resistance: slows down the flow of electricity.

cell		closed switch		fuse	
resistor		ammeter		LDR	
battery		voltmeter		LED	
variable resistor		bulb		thermistor	
open switch		diode			

UNIT 3. ¿CÓMO ESTÁS?

I can greet and say how I am

¿Qué tal?/¿Cómo estás? *How are you?*

Hola *Hello* **Buenos días** *Good morning* **Buenas tardes** *Good afternoon* **Buenas noches** *Good evening / Good night*	**estoy** *I am*	**fenomenal** *great* **muy bien** *very well* **bien** *well* **regular** *so-so* **mal** *bad* **fatal** *awful*	**porque estoy** *because I am*	**MASC**  **cansado** *tired* **contento** *cheerful* **estresado** *stressed* **feliz** *happy* **nervioso** *nervous* **relajado** *relaxed* **tranquilo** *calm* **triste** *sad*	**FEM**  **cansada** *tired* **contenta** *cheerful* **estresada** *stressed* **feliz** *happy* **nerviosa** *nervous* **relajada** *relaxed* **tranquila** *calm* **triste** *sad*
Gracias *Thank you*					

Author's note: ***"Estoy"*** *means* ***"I am"****. It is often used to talk about how you are feeling or how you are.*