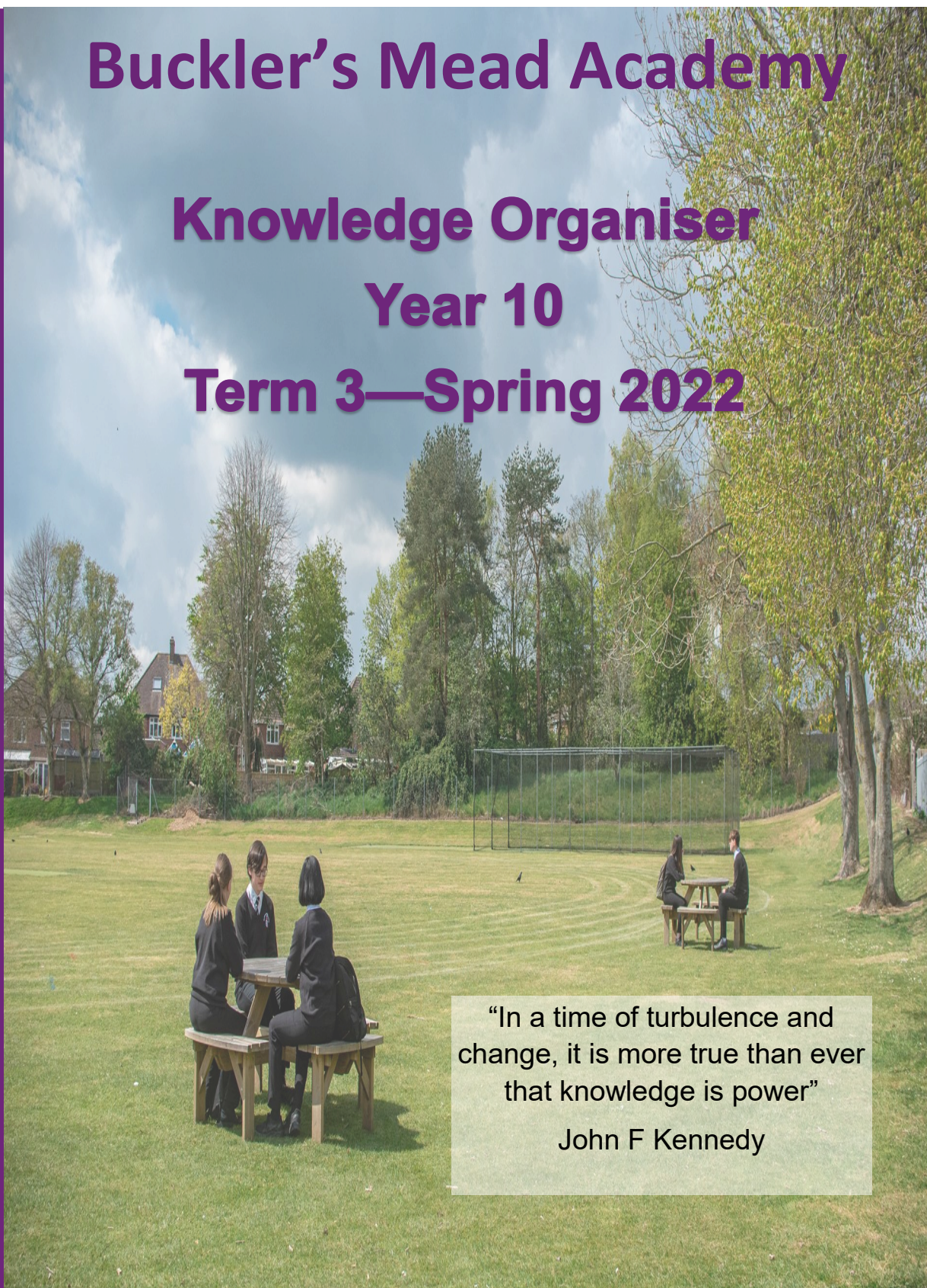


Buckler's Mead Academy

Knowledge Organiser

Year 10

Term 3—Spring 2022



“In a time of turbulence and change, it is more true than ever that knowledge is power”

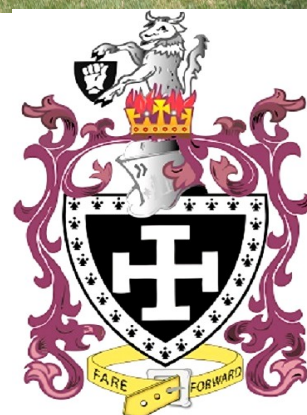
John F Kennedy

Inspiring Education for All

Name:

Tutor:

Ready, Responsible, Respect



Homework Timetable

	Week A	Week B
Monday		
Tuesday		
Wednesday		
Thursday		

Your Knowledge Organiser

Contents

How To Use your Knowledge Organiser For Homeworkp.4

Look, Cover, Write, Check, Correctp.5

Knowledge Quizp.6

Artp.7

Photographyp.8

Computing.....p.9

Food & Nutritionp.10

Design & Technologyp.11

Dramap.12

Englishp.13

Geographyp.14

Historyp.15

Mathsp.16

MFLp.17

MFLp.18

Musicp.19

P.E.p.20

Sciencep.21

Engineeringp.23

How to Use Your Knowledge Organiser

Self –Quizzing

Your Knowledge Organiser contains all of the key information you need to know for each subject area.

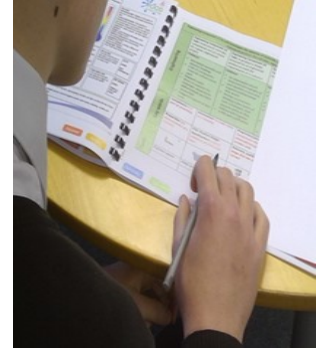
Your Knowledge Organiser will allow you to revise this key information and make sure it is stored in your long-term memory

The best way to use this resource is by self-quizzing.

“look, cover, write and check”

Look, Cover, Write, Check, Correct

First look through and read the information on a section of your knowledge organiser



Then Cover the section so you can no longer see the information

Next Try and **write out** the key definitions or facts that you need to know



Now uncover the section of your Knowledge Organiser and check how correct you were

Finally Correct anything that you wrote down that was incorrect

Knowledge Quiz

You teacher will quiz you on your Knowledge Organiser during the learning cycle .

Record your score from each quiz in the mark box.

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

Quiz 1					
Quiz 2					
Quiz 3					

Art – Natural Forms

Natural Forms	A natural form is an object found in nature that has not been changed or altered. It is still in its natural state. For example, flowers, leaves, seedpods, bones, skeletons, feathers, birds, fish, animals etc.
Assessment Objectives	GCSE assessment objectives are part of the assessment arrangements for these qualifications
Texture	Texture means how something feels. There are two types of texture: actual texture and visual texture.
Form	Form refers to objects that are 3-Dimensional, or have length, width, and height
Pattern	A pattern is a design in which lines, shapes, forms or colours are repeated. The part that is repeated is called a motif
Contrast	Contrast often means “opposite”: for example, black is the opposite of white, and so there’s a contrast between black ink and white paper
Monochrome	Monochrome means one colour, so in relation to art, a monochrome artwork is one that includes only one colour
Print making	Printmaking is an artistic process based on the principle of transferring images from a material onto another surface, most often paper or fabric. Traditional printmaking techniques include woodcut, etching, engraving, and lithography
Charcoal	Charcoal is made from twigs of willow or vine that have been heated at a high temperature in an enclosed vessel without oxygen. This process yields a solid drawing stick that produces a black line when stroked across a sheet of paper
Ink	Drawing inks are water-based media made from various plant and mineral colorants. Any given ink may vary in tone due to the purity and concentration of its ingredients and its degree of dilution. Historic drawing inks are commonly hues of brown, reddish brown, grey, and black
Pastels	The medium is available in a variety of forms, including loose powdered pastel and pastel pencils, but most often, pastel is applied directly with the colour stick. The broad side, when gently applied, produces areas of light tone revealing the texture of the paper, while more defined, saturated strokes may be achieved using the tip of the stick and applying it with greater pressure.

Photography Triangle

Photography Triangle	The triangle explains the relationship between shutter speed, ISO and aperture.
Aperture	Aperture is the opening through which light passes through the lens to enter the camera. Its size can be modified to control how much light reaches the sensor or negative film. The diameter of the aperture, also known as the F-stop, affects the exposure and depth of field.
Bokeh	Bokeh is an optical phenomenon that makes bright out-of-focus elements aesthetically pleasing. Using a fast lens at its wider aperture turns a busy background into blurred colours
Composition	Composition is where elements are positioned within a photo. It is considered one of the most important components of an image, as it allows the photographer to guide the viewer's eye across the image towards the main subject
AV Setting	Aperture priority, often abbreviated A or Av (for aperture value) on a camera mode dial, is a setting on some cameras that allows the user to set a specific aperture value (f-number)
Zoom	Zoom lens are those whose focal length can be modified, allowing photographers to make the subject appear closer than it really is
Depth of Field	Depth of field (DOF) is the distance between the nearest and the farthest objects that are in acceptably sharp focus in an image.
Shutterspeed	Shutter speed is the length of time a camera sensor is exposed to light when taking a photo. Slow shutter speeds capture the blur of subjects in motion, making it highly valuable for night and landscape photographers. On the other hand high speeds allow photographers to freeze a single millisecond in time, which is usually an absolute must in fields such as sport
TV Setting	In TV mode the user specifies a shutter speed, while the camera adjusts the aperture size to correctly expose the image. This mode is typically used to freeze high speed action with a fast shutter speed, or intentionally create some sense of movement and blur in an image, ie, by using a slow shutter speed.

Computing

Project Life Cycle	Initiation, Planning, Execution, Evaluation
SMART Targets	Specific, Measurable, Achievable, Relevant, Timed
Planning Tools	GANTT Charts, PERT (Project Evaluation and Review Technique), Critical Path, Flowcharts, Mind map.
Risk Mitigation	A strategy to prepare for and reduce the risk of threats.
Feasibility	How practical/realistic a project is.
Interaction/Iteration	Each phase of the Project Life cycle interacts with the phases before and after.

Data	raw facts and figures before they have been processed.
Data types	Text, alphanumeric, integer, real, currency, percentage, fraction, decimal, date/time, limited choice, object, logical/Boolean.
Information	The end result of data being processed.
Data collection methods	questionnaires/surveys, email, sensors, interviews, consumer panels,
IT methods of data collection	Barcode readers, QR codes, web based surveys, wearable technology, and mobile technology.
Storage methods	The cloud (virtual), hard disk drive, solid state drive, optical, flash memory device (all physical).
Big data	Large amounts of data collected and processed.

Types of threats	Malware (adware, bot, virus, worm, spyware); Social engineering (phishing, pretexting, baiting); Hacking, DDoS (distributed denial of service)
Vulnerability	A weakness that allows a person to launch a cyber-security attack (environmental, physical, system).
Impacts of cyber-security attack	Identity theft, data destruction, data manipulation, data modification, data theft.
IT legislation	Data Protection 1988; Copyright, design and patents act 1988; Computer Misuse Act 1990; Freedom of information act 2000.
Primary data	data collected directly through surveys/questionnaires
Secondary data	Collected from secondary sources such as journals/magazines.

Processing data	Two main tools for this: spreadsheets and database software.
Spreadsheets	Formulas, functions, worksheets.
Databases	Tables, records, queries, validation.
Presenting data	Word processing, desktop publishing, PowerPoint presentation.
Considerations of presenting data	Target audience, content limitations, availability of information.
Distribution Channel	Messaging services, websites, and Multimedia Cloud and Mobile apps.
Presentation Methods/Resources	report, presentation, charts, tables, hardware, software, connectivity

Year 10 Vitamins and Minerals

Vitamin Name	Major Functions	Deficiency Effects	Toxicity Effects	Food Sources
A Retinol, retinal, Retinoic acid, (Beta carotene)	Vision, immunity, reproduction and growth	Blindness, infections, stunted growth	Bone fractures, liver damage, birth defects	Fortified milk, eggs, liver (dark green leafy and yellow/orange vegetables)
D Cholecalciferol	Bone growth and maintenance, absorption of calcium	Rickets, osteomalacia	Calcium imbalance	Sunlight, fortified milk, fatty fish, eggs, liver
E Tocopherol	Antioxidant; protects cell membranes	Red blood cell breakage, nerve damage	Interferes with blood-clotting drugs	Vegetable and seed/ nut oils, seeds and nuts, wheat germ and whole grains
K Phylloquinone	Blood clotting, bone health	Hemorrhage	None reported	Dark leafy greens, cabbage family, liver
B1 Thiamin	Energy metabolism	Beriberi, neurological problems	None reported	Whole and enriched grain products, leafy greens, pork
B2 Riboflavin	Energy metabolism	Inflammation of the mouth, skin	None reported	Whole and enriched grain products, milk products
B3 Niacin	Energy metabolism	Pellagra	Niacin flush, liver damage, impaired glucose tolerance	Whole and enriched grain products, protein-rich foods
B5 Pantothenic acid	Protein, fat and carbohydrate metabolism	Extremely rare	Mild intestinal distress	Almost all foods, especially avocados, broccoli, meats
B6 Pyridoxine, pyridoxal, pyridoxamine	Protein and fat metabolism	Scaly dermatitis, anemia, convulsions	Nerve degeneration	Protein-rich foods
B7 Biotin	Protein, fat and carbohydrate metabolism; beneficial to hair, skin and nails	Extremely rare	Unlikely	Egg yolk, liver, peanuts; also produced by gut bacteria
B9 Folate, folic acid, folacin	Helps make DNA for new cells, activates B12	Anemia, birth defects	Masks a B12 deficiency	Fortified grain products, vegetables, legumes
B12 Cobalamin	Helps make DNA for new cells, activates folate, protects nerve cells	Anemia, irreversible nerve damage and paralysis	None reported	Meat, fish, poultry, eggs, milk products
C Ascorbic acid	Antioxidant, collagen synthesis, immune function	Scurvy	Diarrhea	Fruits and vegetables

Mineral Name	Major Functions	Deficiency Effects	Toxicity Effects	Food Sources
Calcium	Makes up bone and teeth; muscle contraction/relaxation; blood pressure; clotting; nerve function	Children - stunted growth Adults - bone loss (osteoporosis)	Diarrhea, interference with absorption of other minerals	Dairy, fish with bones, tofu, greens, legumes, fortified foods
Chromium	Helps insulin move glucose (sugar) from blood into cells	Abnormal glucose metabolism	Possible muscle degeneration	Meat, whole grains, vegetable oils
Fluoride	Helps make bones and teeth stronger; helps teeth resist decay	Susceptibility to tooth decay	Fluorosis, discolored teeth, nausea, chest pain	Fluoridated water, seafood, tea
Iodine	A component of thyroid hormone - helps regulate growth, development, metabolism	Goiter, cretinism	Low thyroid activity, enlarged thyroid	Iodized salt, seafood, plants grown in iodine-rich soil
Iron	Part of hemoglobin - carries oxygen in blood, myoglobin carries oxygen in muscle	Anemia, weakness, head-aches, reduced immunity, low cold tolerance	Fatigue, infection, liver damage, colon cancer, bloody stools, fatal to kids	Red meats, fish, poultry, eggs, legumes, dried fruit
Magnesium	Mineralization of bones and teeth, helps enzymes function, muscle contraction, nerve transmission	Weakness, muscle twitches, confusion, convulsions, bizarre muscle movements	Confusion, lack of muscle coordination, death (all due to overuse of laxatives, antacids)	Nuts, legumes, whole grains, dark leafy greens, seafood, chocolate/ cocoa
Phosphorus	Bones and teeth; DNA; Phospholipids (part of cell membranes)	Weakness, bone pain (Deficiency rare - usually a side effect of medication)	Low blood calcium, increased calcium excretion	All animal tissues (meat fish, poultry, eggs, milk)
Potassium	Maintains normal fluid and electrolyte balance, assists nerve impulse transmission and muscle contraction	Muscular weakness, paralysis, confusion (due to dehydration)	Muscular weakness, vomiting reflex	All whole foods, fruits, vegetables, grains, meat, milk
Selenium	Antioxidant; works with vitamin E	Keshan disease, muscle pain/degeneration, cataracts, low sperm, fragile red blood cells, heart damage	Nail and hair brittleness and loss, nerve, muscle, liver damage, nausea	Seafoods, organ meats, other meats, grains, veg depending on soil content
Sodium	Maintains normal fluid and electrolyte balance, assists nerve impulse transmission, muscle contraction	Muscle cramps, mental apathy, loss of appetite	Edema, acute hypertension, increased calcium excretion	Table salt, soy sauce, MSG, all processed foods.
Zinc	Part of insulin, helps many enzymes function, DNA repair, taste perception, immune function, wound healing, sperm	Failure to grow (kids), dermatitis, loss of taste, poor healing, sex retardation	Fever, nausea, vomiting, dizziness, uncoordinated, anemia, heart disease	Protein-containing foods, some grains and vegetables

DT - food & Nutrition

DT - Textiles

Keyword	Definition
Applique	The technique where one fabric is layered or applied on-top of another and secured in place by hand or machine stitching.
Batik	The application of hot wax onto cloth to create a pattern or design. When dye is applied the waxed area resists the colour. Once dry, successive applications of wax and dye can be applied in layers to create intricate patterns. The process can often be found on textiles from Indonesia and India.
Collograph	A method of direct printing in which materials such as string, cardboard, and other found materials are stuck to card or board to enable prints can be taken.
Couching	The process used to secure threads, fibres or yarns to a surface using hand stitching or embroidery.
Free-machining	Machine stitching where the foot has been removed and the fabric is moved in a variety of directions as stitching takes place. This technique is also known as scribble stitching.
Patchwork	A textile constructed by sewing together small pieces of fabric. The design is often in a geometric composition.
Resist techniques	The application of hot wax, gutta, salt or starch paste to a fabric to prevent the absorption of dye.
Screenprint	A technique of printing in which each coloured ink is squeezed through a stencil held on a mesh screen.
Stencil	A shape or image cut out of paper or card to create a space through which dye can be applied.

Drama

Key concepts, skills, questions or processes	
What will I learn?	You will develop your understanding of the performing arts by examining practitioners' work and the processes used to create performance.
What is a practitioner?	A practitioner is an individual or company who has a distinct style of performance, e.g. Brecht (Epic theatre), Stanislavski (Naturalism), Kneehigh, Frantic Assembly (Physical Theatre), 1927, Artaud (Theatre of Cruelty), Boal (Theatre of the Oppressed), Berkoff, Lecoq.
How will I do this?	You will watch a range of performances by professional rep in a range of styles. You will investigate how they created the pieces, and what influenced them, stylistically and contextually. You will also engage in workshops (lessons) where you will try out these styles for yourselves, and explore how different roles within the companies are linked together – e.g. director and actor/ puppeteer, set designer and choreographer, etc. You will keep a record of everything you are learning along the way.
What is expected of me?	It is vital that you keep an ongoing record, using your rehearsal logs, of everything we do in lessons, writing analytically (WWW/EBI) rather than just recounting the events of the lesson. You need to become critics as well as participants, showing an understanding of the processes behind the performance. You will have a number of assignments to submit, both practical and online/ written. You MUST keep on top of these assignments, as they all count towards your final grade.
What is an Assignment Brief?	This document explains exactly what you are expected to do, and how you will evidence it. The brief will also contain all your deadlines for submitting work. It details all the success criteria, so you should look at it often to ensure you are on track.

Key Vocabulary	Definitions & Explanations	Examples
Creative Intentions	What was the director/ writer/ creator thinking about? Themes / issues / response to stimulus / style/genre / contextual influences / collaboration with other practitioners / influences by other practitioners.	FUP – look at your creative intentions sheet – have you been able to complete all the boxes?
Purpose	Why was it made? to educate / to inform / to entertain to provoke/ to challenge viewpoints / to raise awareness / to celebrate...	This is not a complete list – what other purposes can you think of?
Practitioners' roles, responsibilities and skills	Performance roles e.g., actor / dancer / singer/ puppeteer, etc & Non-performance roles e.g: choreographer /set designer / director / writer etc. Responsibilities: rehearsing /performing /contributing to the creation and development of performance material, e.g., devising, designing, choreographing, directing, writing / refining performance material/ managing self and others. Skills: physical, vocal and music skills, managing and directing skills, communication skills used to liaise, direct and perform, creative skills, such as designing set, costume, lighting or sound, writing scripts and composing songs, organisational skills used to put on a performance by a director or choreographer.	You will be expected to research several roles within the Performing Arts business, and explore how they work with each other to create a piece, e.g. How does the musical director of Kneehigh work with the director/ writer/ actors when creating a piece like FUP? Music is integral to the piece – look at how their creative process unfolds – it's all on the website. How do roles differ, depending on the company and the performance piece itself?
Processes used in development, rehearsal and performance	Responding to stimulus to generate ideas for performance material / exploring and developing ideas to develop material / discussion with performers / setting tasks for performers / sharing ideas and intentions / teaching material to performers / developing performance material / organising and running rehearsals / refining and adjusting material to make improvements / providing notes and/or feedback on improvements.	What does a good rehearsal look like? Can you use your rehearsal time productively? How do you do this? Do you assign roles? Do you keep track of decisions made? Are you asking other people to feedback their opinions?

Key Terminology & Definitions

Abstract Noun	An abstract noun is a concept, idea, belief or emotion. It is not tangible. (You cannot experience it with your five senses.)
Concrete Noun	A noun is a person, place or thing. A concrete noun is something tangible that you can experience with one of your five senses.
Proper Noun	A name or place. All proper nouns must begin with a capital letter.
Adjective	A describing word
Verb	An action or doing word
Nomenclature	The deliberate allocation of a name to a person or thing.
Simile	When something is described by saying it is similar to something else.
Metaphor	When something is described as <u>being</u> something else to highlight the similarities
Personification	When a human quality is given to an inanimate object
Semantic Field	A set of words grouped together that relate to a specific subject
Pronoun	Words that refer to the participants in a discourse (ex, I, you, he, she, they)
Adverb	A word that describes how a verb is being performed
Narrative	An account of events, a story
Description	An account of a person, object or event
Method	A procedure used to achieve something. We refer to writers' methods and their achievements.
Genre	A style/category of art (including literature)
Reader Response	How the reader feels, what they understand or have learned after reading a text
Archetype	A stereotypical example of something
Dialogue	Written speech by characters
Mood/Tone/ Atmosphere	The feeling that a text carries or creates in a reader
Symbol	Something that stands for or represents an abstract concept
Flashback/ flashfor- ward	A jump back or forward in time
Cyclical structure	When a story ends where it began, usually to emphasise whether anything has changed or not
Shift	When the writer changes your attention and focusses it on something else
Linear	The story starts at a certain time and moves forwards logically.
Non linear	The story jumps through time regularly, or there is no concept of time

Geography

Distribution of the world's hot deserts

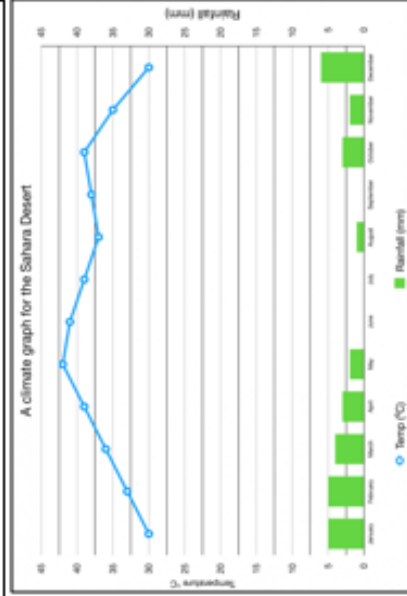
Most of the world's hot deserts are found in the subtropics between 20 degrees and 30 degrees north & south of the Equator. The Tropics of Cancer and Capricorn run through most of the world's major deserts.

Major characteristics of hot deserts

Aridity – hot deserts are extremely dry, with annual rainfall below 250 mm.
Heat – hot deserts rise over 40 degrees.
Landscapes – Some places have dunes, but most are rocky with thorny bushes.

Climate of Hot Deserts

Very little rainfall with less than 250 mm per year.
 It might only rain once every two to three years.
 Temperate are hot in the day (45 °C) but are cold at night due to little cloud cover (5 °C).
 In winter, deserts can sometimes receive occasional frost and snow.



Adaptations to the desert

Cactus

- Large roots to absorb water soon after rainfall.
- Needles instead of leaves to reduce surface area and therefore transpiration.

Camels

- Hump for storing fat (NOT water).
- Wide feet for walking on sand.
- Long eyelashes to protect from sand.

Year 10- Topic 3- Hot Deserts

Opportunities and Challenges in the Hot desert

Opportunities

- There are valuable minerals for industries and construction.
- Energy resources such as coal and oil can be found in the Thar Desert.
- Great opportunities for renewable energy such as solar power at Bhaleri.
- Thar desert has attracted tourists, especially during festivals.

Challenges

- The extreme heat makes it difficult to work outside for very long.
- High evaporation rates from irrigation canals and farmland.
- Water supplies are limited, creating problems for the increasing number of people moving into area.
- Access through the desert is tricky as roads are difficult to build and maintain.

Desertification means the turning of semi-arid areas into deserts.

Causes:

Fuel Wood

People rely on wood for fuel. This removal of trees causes the soil to be exposed. **Overgrazing**

Too many animals mean plants are eaten faster than they can grow back. Causing soil erosion.

Over-Cultivation

If crops are grown in the same areas too often, nutrients in the soil will be used up causing soil erosion.

Population Growth

Puts pressure on the land leading to more deforestation, overgrazing and over-cultivation.

Ways to reduce desertification

Water management - growing crops that do not need much water.

Tree Planting - trees can act as windbreakers to protect the soil from wind and soil erosion. Great Green Wall

Soil Management - leaving areas of land to rest and recover lost nutrients.

Technology – using less expensive, sustainable materials for people to maintain.

Vietnam War

Key Term	Definition
Democrat	One of the two leading political parties of the USA. Kennedy, Johnson and Truman were members of the Democratic Party. It is often seen as more liberal.
Republican	One of the two leading political parties of the USA. Nixon and Eisenhower were members of the Republican Party. It is often seen as more conservative.
Khmer Rouge	A communist organisation based in Cambodia. The Khmer Rouge became popular following the US bombing under Nixon
Pathet Lao	A communist organisation based in Laos. The Pathet Lao's popularity increased following the US bombing under Nixon
Mai Lai Massacre	A massacre involving the mass murder of innocent Vietnamese people by Charlie Company of the US army carried out on March 16 1968. This led to opposition to the war growing.
Tet Offensive	A coordinated attack by the Vietcong on strategic locations in South Vietnam. Though the Tet offensive was a failure for the Vietcong it did build opposition to the war in the USA.
Walter Cronkite	A leading news presenter for CBS news. He would report daily on events of the war and voice his opinion on the failings of the US army
'Five o'clock Follies'	A nickname for the daily briefings by the US army on the progress of the war. It was called a 'Folly' as it was suspected much was untrue.
Ho Chi Minh Trail	A supply route going from North Vietnam to South Vietnam journeying through Cambodia and Laos.
Vietnamisation	A policy started by Richard Nixon to withdraw US troops from Vietnam. The plan was for the South Vietnam army to take over the fighting of the war in place of the USA.
Vietcong	The communist guerrilla movement in Vietnam which fought the South Vietnamese forces and the US army between 1954 and 1975 with the support of the North Vietnamese army
Communist	Political ideology which promotes the common ownership of industry and production with no private owners

Maths

Mathematics – Year 10



In Maths you will receive a separate knowledge organiser.

Your knowledge organiser will help you to:

- Know** which **MET*** skills you should be learning
- Track** when you have learnt, revisited and revised a skill
- Identify** any gaps where you have missed lessons
- Guide** your revision when it comes to assessments

*The **MET (Mathematics Expertise Tower)** shows you all the skills you will master during your lessons and how each skill builds upon the last.

It is arranged into **4 topic areas:**



You can see the full **MET** in the Maths Corridor!

Maths Equipment you must have every lesson:

- Pen, pencil, rubber, ruler, protractor, compasses, scientific calculator

USEFUL WEBSITES:

My Login:

Password:



My Login:

Password:



My Login:

Password:



www.bbc.co.uk/bitesize

www.khanacademy.org

<https://corbettmaths.com>



Programme of study and assessment calendar

Community

Opportunity

“Inspiring Education for All”

Enjoyment

Success

MFL - French

Useful verbs

Aller à pied	to go on foot
Aller à vélo	to go by bike
Arrêter	to stop
Avoir envie de	to feel like
Boire	to drink
Dormir	to sleep
Encourager	to encourage
S'entraîner	to train
Éviter	to avoid
Être accro à	to be addicted to
Être allergique à	to be allergic to
Faire de l'exercice	to exercise
Faire de la musculation	to do weight training
Faire du sport	to do sport
Fumer	to smoke
Garder la forme	to keep in shape/fit
Manger	to eat
Mener	to lead
Penser	to think
Prendre	to take
Risquer	to risk
S'amuser	to have fun
Se coucher	to go to bed
Se détendre	to relax
Se droguer	to take drugs
S'enivrer	to get drunk
Se lever	to get up
Se promener	to go for a walk
Se relaxer	to relax
Se reposer	to rest
Trouver	to find

Time references

Chaque jour	every day
Déjà	already
De temps en temps	from time to time
Normalement	normally
Quelquefois/parfois	sometimes
Rarement	rarely
Régulièrement	regularly
Toujours	always
Le weekend dernier	last week
Le mois prochain	next month
Une fois par semaine	once a week
Souvent	often
Tous les jours	very day

Illnesses

J'ai mal au/à la/aux...	I've hurt my ...
Bras	arm
Dos	back
Genou	knee
Jambe	leg
Main	hand
Pied	foot
Tête	head
Ventre	stomach
J'ai la grippe	I have flu
J'ai de la fièvre	I have a temperature
J'ai mal au cœur	I feel sick
Je suis enrhumé	I have a cold
Je me suis cassé le bras	I have broken my arm

Vocabulary

Actif/ive	active
L'activité physique	physical activity
L'alcool	alcohol
Allergique	allergic
Au lieu de	instead of
Au moins	at least
Bio	organic
De bonne heure	early
La cigarette (électronique)	(e) cigarette
La drogue	drug
Dur	hard
Équilibré	balanced
Facile	easy
Le fastfood	fastfood
Fatigant	tiring
Frais/fraîche	fresh
Le fruit	fruit
La forme	fitness
Gras	fat
Le gymnase	gym
Ivre	drunk
Le légume	vegetable
La maladie	illness
La nourriture	food
L'obésité	obesity
Le paquet de	packet of
Passif/ive	passive
La routine	routine
Le régime	diet
Le repas	meal
Sain	healthy
La (bonne) santé	(good) health
Sportif/ive	sporty
Le stress	stress
Sucre	sugar
Le tabagisme	addiction to smoking
Tôt	early
Le yoga	yoga

Negatives

Using negatives is one way to show variety in your sentences. Remember how it fits around a verb.
 E.g. *Je ne suis pas sportif. Je ne joue plus de hockey*

Ne...jamais	never
Ne...rien	nothing
Ne...que	not only
Ne...pas	not
Ne...personne	nobody
Ne...plus	no longer

If you use a negative and a noun follows replace the article (e.g. *le/une*) with "de". Except when using "ne...que".

MFL - German

Hast du einen gesunden Lebensstil? Ich glaube, dass ich (nicht) sehr gesund bin, weil ...
 Was machst du, um fit zu bleiben? Ich treibe oft Sport, zum Beispiel ...
 Welche Aktivitäten machst du gern? Ich spiele gern ... / Ich spiele am liebsten ...
 Was machst du lieber - Sport treiben oder Sportsendungen sehen? Ich treibe lieber Sport, weil ...
 Wie findest du Rauchen? Meiner Meinung nach ist Rauchen ... , weil ...
 Was hast du letzte Woche gemacht, um fit zu bleiben? Letzte Woche habe ich ... gespielt / gegessen / getrunken
 Was wirst du morgen essen, um gesund zu sein? Morgen werde ich ... essen, um fit zu bleiben
 Wie könntest du deine Gesundheit verbessern? Obwohl ich ziemlich gesund bin, könnte ich mehr Wasser trinken

Useful verbs to talk about health

raten to advise
 ins Bett gehen to go to bed
 trinken to drink
 essen to eat
 schlafen to sleep
 Drogen nehmen to take drugs
 sich betrinken to get drunk
 fit bleiben to keep fit
 rauchen to smoke
 verletzen to injure
 schaden harm
 sich entspannen to relax

Health vocabulary

die Beratung advice
 eine ausgewogene Ernährung a balanced diet
 weiche/harte Drogen soft/hard drugs
 körperlich physical
 die Zigarette cigarette
 die Gesundheit health
 die Bewegung exercise
 der Alkoholmissbrauch alcohol abuse
 ungesunde Ernährung unhealthy diet
 der Stress stress
 der Bewegungsmangel lack of exercise
 die Fettleibigkeit obesity
 das Risiko the risk
 Bioprodukte organic products
 die Sucht addiction
 Kopfschmerzen/ Halsschmerzen headache/ sore throat
 Fieber haben to have a temperature
 die Krankheit illness

Saying how often you do something

oft often
 manchmal sometimes
 täglich daily
 nie never
 immer always
 regelmäßig regularly
 ab und zu now and then
 jeden Tag every day
 selten rarely
 zweimal pro Woche twice a week
 jede Woche every week

Useful verbs to talk about sport

wandern to walk
 tanzen to dance
 laufen to run
 klettern to climb
 spielen to play
 gewinnen to win
 machen to do
 ins Fitnesszentrum gehen to go to the gym
 ein Tor schießen to score a goal
 reiten to go horse riding
 Rad fahren to cycle
 schwimmen to swim
 teilnehmen to take part
 eislaufen to skate
 verlieren to lose

Talking about health and fitness in the past, present and future

Past	Present	Future
Gestern/letzte Woche/letztes Jahr	Heute/jetzt/jeden Tag/normalerweise	Morgen/nächste Woche/nächstes Jahr
Ich habe ... gespielt	Ich spiele ...	Ich werde ... spielen
Ich habe ... gegessen	Ich esse ...	Ich werde ... essen
Ich habe ... getrunken	Ich trinke ...	Ich werde ... trinken
Ich bin ... gegangen	Ich gehe ...	Ich werde ... gehen

Als ich jünger war, war ich nicht sehr aktiv - When I was younger, I wasn't very active.

Sport ist sehr wichtig für deine Gesundheit - Sport is very important for your health.

Eine ausgewogene Ernährung ist sehr wichtig - A balanced diet is very important.

Man sollte nicht zu viel Zucker oder Salz essen - You shouldn't eat too much sugar or salt.

Music

Management and Promotion roles	
1. Artistic manager/ Talent Manager	Organise and confirm show dates and tours, assist with studio planning and work with recording companies and negotiate fees. Seek out marketing opportunities and support artist on a personal level with life choices
2. Venue manager	Book artists for performances, help arrange events, organise security and manage publicity, ensure all services are available during schedules times, and ensure health and safety of artists, audience and staff.
3. Studio manager	Book recording sessions, hire engineers, session musicians and technical support, make sure the studio is in good working order. Publicise and promote their studio. Employ session musicians Promote and market studio
4. Promoter	Publicise concerts through advertising, work with venues and artists' agents to put on the show, and manage financial risk, insurance and safety.
5. Marketer	Get prices for advertisements and promotions, help to create the artist's image and brand. Organise promotional events, giveaways and sponsorship. Design and implement marketing plans for new releases Create radio/social media campaigns Create the artist's brand
6. A&R (Artists and Repertoire)	Scout for new talent to sign to a record label and manage the recording process. Help find songs appropriate for the artist. Development of artist as they grow and mature Help find appropriate songs for the artist
Creative Roles	
7. Musician	Instrumentalist, vocalist, accompanist, DJ. Practise regularly to keep skills to a high standard, perform, audition, attend rehearsals, market and promote their work, learn new repertoire
8. Composer/Songwriter/ Producer	Write, arrange, and orchestrate music. Respond to briefs, pitch ideas to clients, produce scores and parts, and market and promote their work, and sequence (use technology to create) music and give creative and artistic direction

Community

Opportunity

“Inspiring Education for All”

Enjoyment

Success

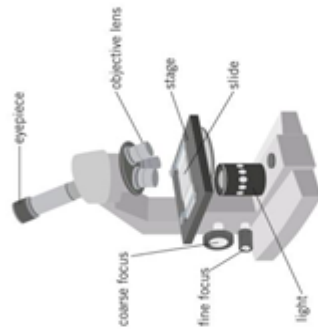
BTEC SPORT UNIT 2 (COURSEWORK) - KNOWLEDGE ORGANISER

PRACTICAL PERFORMANCE IN SPORT

RULES/LAWS	Rules and laws of a sport regulated by the national or international governing body for the sport. For e.g. Football Association (FA) or FIFA.
APPLICATION OF THE RULES/LAWS	When a goal is scored when a player is in an offside position in football or a forward pass in rugby, the official will apply a consequence according to the rules/laws of the sport.
REGULATIONS	Laws relating to players, equipment, playing surface, facilities, health and safety, time, officials (referee, umpire, judge, starter, timekeeper).
SCORING SYSTEMS	The method of scoring goals or points, method and/or requirements of victory.
ROLES OF THE OFFICIAL	The roles of umpires, referees, referees' assistants, judges, timekeeper, starters, table officials, third umpire, fourth official.
RESPONSIBILITIES OF THE OFFICIALS	The appearance, equipment, fitness, qualifications, interpretation and application of rules, control of players, accountability to spectators, health and safety (equipment, facilities, players), fair play, use of technology, effective communication (voice, whistle, signals).
TECHNICAL DEMANDS	These are the skills and techniques required to meet the demands of the sport.
TACTICAL DEMANDS	Decision making and strategies (attacking/defensive) to overcome an opponent, including using personal strengths.
SAFETY	Controlled environments that adhere to 'rules', health and safety guidelines, and consider appropriate risk management strategies in physical activity and sport.
ISOLATED PRACTICES	Skills and techniques demonstrated independently without any pressure or external forces, completed successfully and without fault.
CONDITIONED GAMES	Small-sided games with a condition set for e.g. a limited number of touches, a set number of defenders or attackers.
COMPETITIVE PRACTICES	Full-sided games. Appropriate opposition with match officials.
BODY COMPOSITION	Ratio of fat mass to fat free mass. Percentage of fat, bone and muscle in bod
SPEED	Distance divided by the time taken
AEROBIC ENDURANCE	Cardiorespiratory system working for long periods of time supplying oxygen and nutrients to working muscles.
MUSCULAR ENDURANCE	Muscle is able to contract over period time against a light to moderate resistance.

Biology Cells

OBSERVING CELLS USING A MICROSCOPE



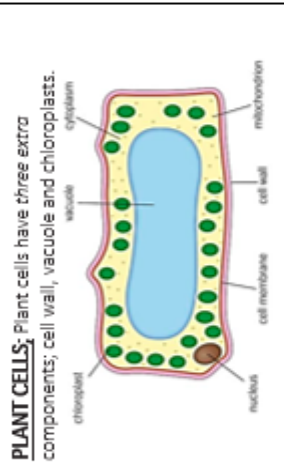
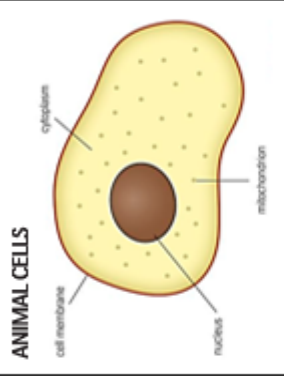
1. Move the stage to its lowest position.
2. Place the object on the stage.
3. Select the objective lens with the lowest magnification.
4. Look through the eye-piece and turn the coarse-focus knob slowly until you see the object.
5. Turn the fine-focus knob until the object comes into focus.
6. Repeat steps 1-5 with a higher magnification objective lens to see the object in greater detail.

TOTAL MAGNIFICATION

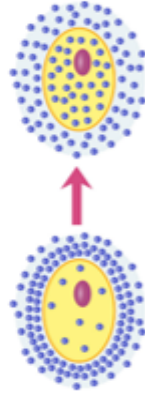
$$\text{Eye piece lens magnification} \times \text{objective lens magnification}$$

UNI-CELLULAR AMOEBIA

- Has no fixed shape
- Found in fresh water, salt water, wet soil, and even inside animals!
- They move by changing the shape of their body.
- They eat algae, bacteria and plant cells. They surround the tiny particles of food and form a food vacuole (engulf). The vacuole digests the food.
- They reproduce by binary fission (splits into two cells)

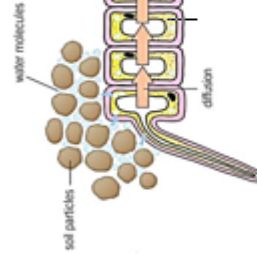


DIFFUSION: Movement of particles from an area of **high concentration** to an area of **low concentration** until they are evenly spread out.



DIFFUSION IN PLANTS

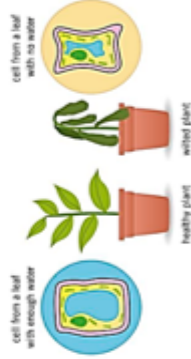
Water molecules diffuse from the soil (high concentration) into the root hair cells (low concentration). Water travels from root hair cells to other cells by diffusion.



UNI-CELLULAR EUGLIENA

- Found in fresh water.
- They contain chloroplasts (photosynthesis).
- They have an eye spot which detects light and a flagellum. The tail-like structure spins like a propeller, causing it to move towards the light (maximises amount of food it makes).
- When there isn't enough light, it eats micro-organisms (bacteria and algae) by surrounding and engulfing them).
- They reproduce by binary fission.

If a plant does not have enough water, the vacuole shrinks. The cells become floppy and the plant wilts.



SPECIALISED CELLS: These cells have specific structural adaptations.

Nerve cell (neurone) → long and thin with connections at the end (to join to other nerve cells)



Red blood cell → contain haemoglobin – a red pigment which joins to oxygen. Disk-shaped with no nucleus to increase its surface area.

Sperm → Have a long tail and lots of mitochondria (movement towards the egg).



Root hair cell → root hair creates a large surface area to absorb water and nutrients from the soil.

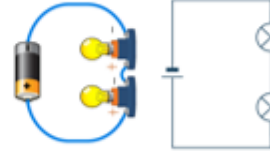
KEYWORD	DEFINITION
Amoeba	A uni-cellular organism.
Cell membrane	The cell component that surrounds the cell and controls movement of substances in and out.
Cell wall	The cell component that surrounds the cell and strengthens it. In plant cells it is made of cellulose.
Chloroplasts	The plant cell component that absorbs light so the plant can make food by photosynthesis.
Concentration	A measure of the number of particles in a given volume.
Cytoplasm	Jelly-like substance (in cells) where most chemical processes happen.
Diffusion	The process by which particles in liquids or gases spread out through random movement from a region where there are many particles to one where there are fewer.
Euglena	Uni-cellular organism that performs photosynthesis.
Flagellum	A tail-like structure that allows euglenas to move.
Leaf cells	The plant cells that contain chloroplasts, where photosynthesis takes place.
Microscope	An optical instrument used to magnify objects, so small details can be seen clearly.
Mitochondria	Part of the cell where glucose is broken down during the process of respiration, enabling energy transfer.
Nerve cells	An animal cell that transmits electrical impulses around the body.
Nucleus	The cell component that contains genetic material (DNA), which controls the cells activities.
Observation	Information gathered by your senses.
Red blood cells	An animal cell that transports oxygen around the body.
Respiration	A chemical reaction where food and oxygen are converted into water and carbon dioxide, enabling energy transfer.
Specialised cells	A cell whose shape and structure enable it to perform a particular function.
Sperm cells	Male sex cell containing male genetic information.
Structural adaptations	Special features to help a cell carry out its function.
Uni-cellular	Living things made up of one cell.
Vacuole	The cell component that contains liquid (cell sap), and can be used by plants to keep the cell rigid (firm) and store substances.

Electrical circuits

- The cell/battery provides the push to make charges move. This push is called potential difference.
- The current is the amount of charge flowing per second.
- A battery with a larger potential difference transfers more energy, making bulbs brighter.
- Components have a potential difference they are designed to work at (rating).
- A voltmeter is always connected in parallel and an ammeter is connected in series.

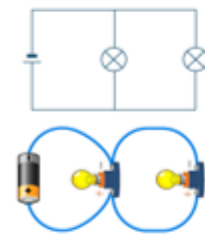
SERIES CIRCUIT

- The current is the same in all parts of a series circuit.
- If you add components, the current will get smaller because the resistance is bigger.
- In a series circuit, the potential difference (voltage) from the battery is shared by the components.
- If a bulb breaks, the rest will go out.

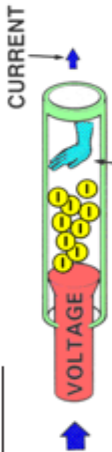


PARALLEL CIRCUIT

- The current is shared between the components (when it reaches the branches) and then adds again where the branches meet.
- The potential difference across each component is the same as the potential difference across the battery.
- If one bulb breaks, the other lights will stay on.



RESISTANCE



- Each component has a different resistance; this tells you how easy or difficult it is for charges (electrons) to pass through wires or components.
- Resistance is measured in ohms (Ω).
- Adding more components, increases the resistance, so the current is less.
- resistance (Ω) = $\frac{\text{potential difference (V)}}{\text{current (A)}}$

Resistance in wires is caused by electrons colliding with metal atoms and transferring energy to them.

The following affects resistance;

- Length \rightarrow longer wire = more resistance
- Thickness \rightarrow thicker wire = less resistance
- Material of wire \rightarrow good conductor = less resistance

There are two types of electrical charge: **positive charge (+)** and **negative charge (-)**. Charged particles (or charges) **attract or repel** each other. There is an electrostatic force between the charges.



Equations

Charge = current \times time

Potential difference = current \times resistance

Power = current \times potential difference

Power = current² \times resistance

Energy = Power \times time

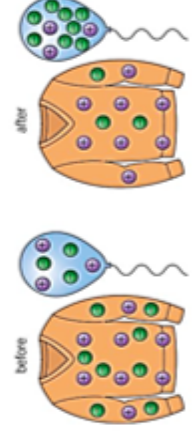
Energy = charge \times potential difference

Everything is made up of atoms. Atoms are neutral overall. They are made of three types of even smaller particles.

- Protons (positive charge)
- Electrons (negative charge)
- Neutrons (no charge)



Electrons are transferred from the jumper to the balloon. The balloon is charged up. It has more electrons than protons, so it is negatively charged. The jumper is positively charged. They will attract.



KEYWORD	DEFINITION
Ammeter	A device for measuring electric current in a circuit.
Amps	Units of measurement of electric current, symbol A.
Attract	Be pulled together.
Battery	Two or more electrical cells joined together.
Cell	A chemical store of energy, which provides the push that moves charges around a circuit.
Charged up	When materials are rubbed together, electrons move from one surface to another.
Current	Flow of electric charge, usually electrons, in amperes (A).
Electric field	A region where a charged material or particle experiences a force.
Electrical conductor	A material that allows current to flow through it easily, and has a low resistance.
Electrical insulator	A material that does not allow current to flow easily, and has a high resistance.
Electron	Tiny particles that are part of atoms and carry a negative charge.
Electrostatic force	Non-contact force between two charged objects.
Negatively charged	An object that has gained electrons.
Neutral	Describes an object or particle that has no charge, or in which positive and negative charges cancel out, giving no overall charge.
Ohms	The unit of resistance, symbol Ω .
Parallel	If some components are in separate loops in an electric circuit.
Positively charged	An object that has lost electrons.
Potential difference (voltage)	The amount of energy shifted from the battery to the moving charge, or from the charge to circuit components, in volts.
Rating	The value of potential difference at which a cell or bulb operates.
Repel	Be pushed away from each other.
Resistance	A property of a component, making it difficult for charge to pass through, in ohms (Ω).
Series	If components in an electric circuit are in the same loop.
Voltmeter	A device for measuring potential difference (voltage).
Volts	Unit of measurement of potential difference (voltage), symbol V.

CIRCUIT SYMBOLS

Science

Engineering

Keyword	Definition
Continuous improvement	The identification of improvements and subsequent evolution of products.
Ethics	Moral decisions when designing and manufacturing.
Functionality	How well a product carries out its purpose.
Iterative design	Design methodology based on a cyclical process of analysing, prototyping and testing to refine a product. Each iteration and result starts the process again.
Life cycle assessment	A technique used to assess the environmental impact of a product at all stages of its manufacture, use and disposal.
Market pull	Products developed to meet the needs of society or a specific section of the market.
Primary source	Research collected first-hand by a designer to develop a product or idea.
Prototype	An early model or sample of a product used to test a concept.
Social responsibility	The idea that a designer needs to evaluate the impact their product could have on society and take action to make this better.
User centered design	Design development with the user at the centre of the focus.