

1 – Composition

Key vocabulary

composition: the placement of the elements of art on the page

rule of thirds: the process of dividing an image into thirds and placing the focus of your image where the lines cross

leading lines: lines shaped to draw the viewer's eye to the main subject of the art work



rule of thirds



leading lines

2 – Art techniques

Key vocabulary

collage: artwork in which pieces of paper, photographs, fabric and other items stuck onto a supporting surface

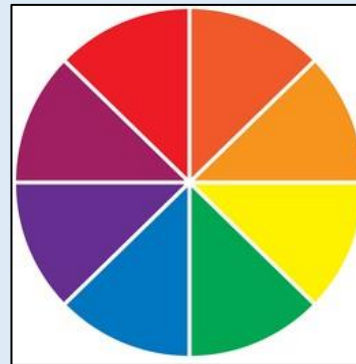
media: refers to the materials that are used to create a work of art.

mixed media: a term used to describe artworks composed from a combination of different media or materials

stencil: a piece of card, plastic or metal into which shapes have been cut, used to draw or paint patterns onto a surface

3 – Colour theory

- **Primary colours** are red, yellow and blue. They cannot be mixed from other colours.
- **Secondary colours** are orange, green and purple. They are made by mixing 2 primary colours.
- **Complementary colours** are opposite each other on the colour wheel.
- **Harmonious colours** are next to each other on the colour wheel.



colour wheel

4 – Artist focus – Dain

Dain is an American Street Artist based in New York City. He works in mixed media. He collages old adverts, logos, and various images and layers spray paint on top. He finishes his works with his signature “circle and drip” around the eye.

Collage: artwork in which pieces of paper, photographs, fabric and other items stuck onto a supporting surface.



Lamour Brooklyn #2 (2019)

1 – Types of Computer

Key Vocabulary

PC: a small, single-user computer based on a microprocessor

laptop: a battery or AC-powered personal computer. It is usually smaller than a briefcase and can easily be transported and conveniently used. It is sometimes called a notebook computer.

tablet: a portable PC, with a touch-screen interface. A tablet PC usually has software to run a virtual keyboard.

super computer: extremely powerful computers

server: computer or computer program which manages access to a centralised resource or service in a network

laptop



2 – What Makes a Computer?

Key Vocabulary

processor: carries out program instructions, also known as the CPU

RAM: Random Access Memory

hard drive: where your computer stores data

storage device: a piece of computer equipment where data can be stored

hardware: the machines, wiring, and other parts of a computer or electronic system

input: an input device is any piece of computer hardware used to provide data to a computer system

output: any piece of computer hardware that is used to communicate the results of data that has been processed by a computer system



hard drive

3 – Logic Gates

Key Vocabulary

NOT: has just one input. NOT tells us that Input A has to be 0 (or OFF) in order for the output to be 1. Otherwise the output is 0. A NOT gate is sometimes called an inverter.

AND: tells us that both Input A AND Input B have to be 1 (or ON) in order for the output to be 1. Otherwise the output is 0

OR: has two inputs. OR tells us that EITHER Input A OR Input B has to be 1 (or ON) in order for the output to be 1. Otherwise the output is 0

logic gate: a type of programming language. They are represented as truth tables

4 – Artificial Intelligence

Key Vocabulary

artificial: created by humans, usually as a copy of or instead of something natural

intelligence: the ability to gain and apply knowledge and skills

Alan Turing

- One of the world's most famous mathematicians, working during the 1940s.
- Alan Turing invented the idea of a 'Universal Machine' that could decode and perform any set of instructions.
- Ten years later he would turn this idea into a plan for an electronic computer, capable of running any program.

1 - Soundscape Skills

Key Vocabulary

soundscape: a collection of individual sounds that are layered up to create a strong sense of place

unison: simultaneous performance or utterance of action or speech

choral speech: ensemble speaking as a group often using various voice combinations and contrasts

canon: when an action or sound is created, by a group of people, one after the other

2 - Vocal Skills

Key Vocabulary

pitch: the degree of highness or lowness of the voice

pace: the speed at which someone speaks

tone: a quality in the voice that expresses the speaker's feelings or thoughts

volume: the degree of loudness or the intensity of a sound

clarity: ensure that you speaking clearly

volume



3 - Tragedy

Key Vocabulary

tragedy: a drama in which a series of actions leads to the downfall of the main character, called the tragic hero

- The plot builds to a catastrophe, or a disastrous final outcome, that usually involves the death of the hero and many others.
- A Shakespearean tragedy often includes elements of the supernatural.
- There is often a battle between good and evil.



tragedy

4 - NVC skills

Key Vocabulary

non verbal communication (NVC): the way movements, posture and gestures can show how someone feels without speaking. It is also referred to as body language.

facial expression: the appearance, mood or feeling conveyed by a person's face

posture: the position a character holds themselves in when sitting or standing

gesture: a movement made by part of the body, for example, arms, head to show a character's emotions

gait: a person's manner of walking

1 – Terminology

Form:

- A speech is a **formal** talk given to an audience.
- Speeches are used to emphasise or persuade an a point of view about a subject.
They can be used to argue and persuade, to inform and advise, and to entertain.

Audience:

- It is important to understand who you are writing the speech for so that you can effectively engage your listeners. What **purpose** (point) are you writing for?

Writer's craft:

- Speeches should have a simple structure to help your audience follow your ideas.
- Speeches should have a powerful opening to immediately engage your audience.
Use rhetorical methods (in Box 2) to do this.

3 – Vocabulary

conspiracy (noun): a secret plan to cause harm

egotistical (adj.): being self-centred

equality (noun): the state of having equal and fair opportunity and rights

hierarchy (noun): a structure of authority and power



satirical (adj.): a sarcastic and mocking tone, to make fun of something

2 – Rhetorical Methods

rhetoric: the art of effective or persuasive speech or writing

hypophora: when a writer raises a question, and then immediately provides an answer to that question

anaphora: a repeated phrase at the beginning of clauses

anecdote: a short story narrating a personal experience

triadic structure: listing of three words or phrases for effect (triplet)

repetition (for effect): when a phrase or word is repeated throughout a text to emphasise a meaning

direct address: when the writer communicates with the reader or audience by using their name or pronoun 'you'

4 – Grammar: Imperative and Modal Verbs

imperative verbs:

An imperative verb is one that tells someone to do something, so that the sentence it is in becomes an order or command.

- (e.g. *stop, jump, go*)

modal verbs:

Modal verbs are used to make a statement and show a belief that something is certain, possible or impossible. Some modal verbs are:

- *can*
- *may*
- *must*
- *should*

1 – Jouer (to play)

jouer	to play
je joue	I play
tu joues	you play (singular/informal)
il joue	he plays
elle joue	she plays
on joue	we play
nous jouons	we play
vous jouez	you play (plural/formal)
ils jouent	they play (masculine)
elles jouent	they play (feminine)

au basket	basketball		
au foot	football	aux jeux vidéo	video games
au hand	handball	aux échecs	chess
au ping-pong	ping pong		
au rugby	rugby	à la pétanque	bowls
au tennis	tennis	aux boules	bowls
au volley	volleyball		

2 – Faire (to do/make)

faire	to do
je fais	I do
tu fais	you do (singular/informal)
il fait	he does
elle fait	she does
on fait	we do
nous faisons	we do
vous faites	you do (plural/formal)
ils font	they do (masculine)
elles font	they do (feminine)

du patinage	skating	de la danse	dancing
du roller	roller-skating	de l'équitation	horse-riding
du ski	skiing	de la lutte	wrestling
du sport	sport	de la natation	swimming
du vélo	cycling	de la pêche	fishing
		de la randonnée	hiking
des promenades	walking	de la voile	sailing

3 – Negatives

To say 'not', 'don't' or 'never' in French, you need to use a negative.

In French, negatives go around the **verb**:

- ne ... pas = don't/not
- ne ... jamais = never

e.g. je **ne joue pas** = I don't play
je **ne fais jamais** = I never do

When you use a negative with 'faire', it should be followed with '**de**', rather than 'du' or 'de la'.

e.g. je **ne fais pas de** natation = I don't do swimming
je **ne fais jamais de** vélo = I never do cycling

4 – Aller

The verb 'aller' (to go) is an **irregular** verb. This means that, like with 'avoir' and 'être', you just have to learn its pattern by heart.

aller	to go	
je vais	I am going	I go
tu vas	you are going	you go
il va	he is going	he goes
elle va	she is going	she goes
on va	we are going	we go
nous allons	we are going	we go
vous allez	you are going (pl)	you go (pl)
ils vont	they are going (m)	they go (m)
elles vont	they are going (f)	they go (f)

5 – The Near Future Tense

To form the near future tense, we use the verb **aller + infinitive verb**

aller	to go	
je vais	I am going	I go
tu vas	you are going	you go
il/elle va	he/she is going	he/she goes
nous allons	we are going	we go
vous allez	you (pl) are going	you (pl) go
ils/elles vont	they are going	they go

e.g.
Je vais **jouer** au foot. I am going **to play** football.
Je vais **faire** de la lutte. I am going **to do** wrestling
On va **jouer** au volley. We are going **to play** volleyball.

6 – Time Expressions

Days of the week:

lundi	Monday
mardi	Tuesday
mercredi	Wednesday
jeudi	Thursday
vendredi	Friday
samedi	Saturday
dimanche	Sunday
le lundi	on Mondays

Future tense:

le weekend prochain	next weekend
la semaine prochaine	next week
l'année prochaine	next year
jeudi prochain	next Thursday

Regularity:

souvent	often
parfois	sometimes
d'habitude	usually
une/deux fois...	once/twice...
...par semaine	...per month
...par mois	...per month

1. Location

- Russia is located in two continents, Asia and Europe.
- Russia is so large that it has 11 time zones.
- The capital city, Moscow, is 10 hours behind the Kamchatka Region of Eastern Russia.



2. Climate of Siberia

Key Vocabulary:

extreme: is beyond normal

- There is a Mediterranean climate in south western Russia and the extreme cold of the northern and central parts of the country.
- The world’s coldest permanently inhabited town is called Oymyakon. This place had a temperature of - 88°C. This is colder than Mars.
- The extreme cold of central Russia means that there are no major towns or cities in the region.

3. Population of Russia

Key Vocabulary:

sparse: an area where there isn’t much of something

- The area with the highest population density in Russia is the west of Russia.
- The area with the lowest population density is the north and east of Russia.
- The east of Russia is sparsely populated due to the climate being extremely cold. This means that people have to wear lots of clothes and spend a lot of time indoors.

4. Economic Opportunities

Key Vocabulary:

resource: any material that is part of Earth that people need and value

- Russia is the largest producer of oil in the world. Russia has large reserves of gas. This gas is transported to countries, such as Germany to heat their homes.
- Russia is a resource rich nation but these resources have to be transported over vast distances.

5. Threats to the tundra

Key Vocabulary:

tundra: a vast, flat, treeless Arctic region in which the soil below the surface (subsoil) is permanently frozen

- The tundra is threatened by a number of economic and social reasons. The first reason is climate change.
- The next reason is due to the immense wealth of resources that is underneath the ground.
- The tundra needs protecting as it is a fragile ecosystem that takes 1000s of years to repair.

6. Russia and the Middle East

Key Vocabulary:

comparing: estimate, measure, or note the similarity or dissimilarity between

- Both are primary resource rich regions that have been exploited for profit.
- Both have people that have had to adapt to the extreme environments of the regions.
- On the other hand, both Russia and the Middle East have different climates. One is extremely cold and one is extremely warm.

1 – British Empire

Key Vocabulary

empire: a group of countries

trade: swapping products with one another

- The British Empire stretched from New Zealand to Vancouver Island in Canada.
- The British Empire ruled over 400 million people and covered 20% of the world.
- Trade and religion spread across the empire.
- The British Empire could buy and sell new products.

2 – Ireland and America

Key Vocabulary

independent: to not need anyone

colony: a country under the control of another country

- The Irish had been ruled by the English since the 1100s.
- The British were brutal towards the Irish for 800 years until they became independent in 1922.
- The British set up a colony called Jamestown in North America in 1607 where many Irishmen went.
- The 13 colonies declared independence in 1776.

3 – The British in India

Key Vocabulary

company: a business

trade post: where goods and services are traded

- The Mughal Empire covered most of what we call India, Afghanistan, and Pakistan today.
- By 1700, this empire had the most powerful economy in the world. It produced 25% of the world's goods and services.
- In 1608 the first British trade post was opened by the East India Company.

4 – The Indian Resistance

Key Vocabulary

famine: not enough food

movement: people trying to achieve something

movement led by Gandhi



- The Bengal famine caused 10 million people to die.
- The famine was caused by East India Company.
- Mahatma Gandhi led a movement for Indian independence. They did not want to be run by Britain anymore.

5 – Partition of India

Key Vocabulary

British Raj: the British government in India

refugee: a person forced to leave their home

- In 1947, the British left India. This was because of the movement led by Gandhi and the cost of the World War 2.
- The British Raj split India into three sections: India, which would be Hindu, and West and East Pakistan, which would be Muslim.
- This decision created 10 – 20 million refugees.

6 – Legacy of Empire

Key Vocabulary

legacy: something left behind

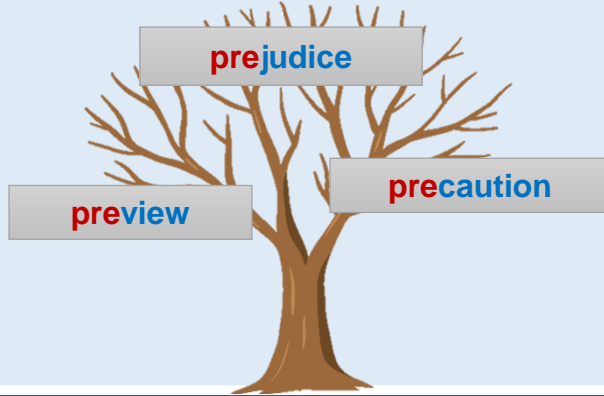
democracy: when people have the right to vote

- The legacy of the British Empire is viewed differently by the British and Indians. Britain are positive; India are negative.
- Today Britain recognises there is good and bad. Empire can bring wealth and democracy but it can also bring death and suffering.

pre-

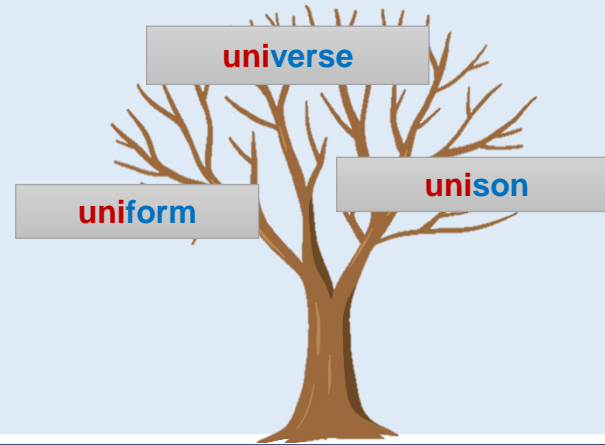
'pre-' means 'before, in front'

e.g. **view**: to watch > **preview**: to watch before



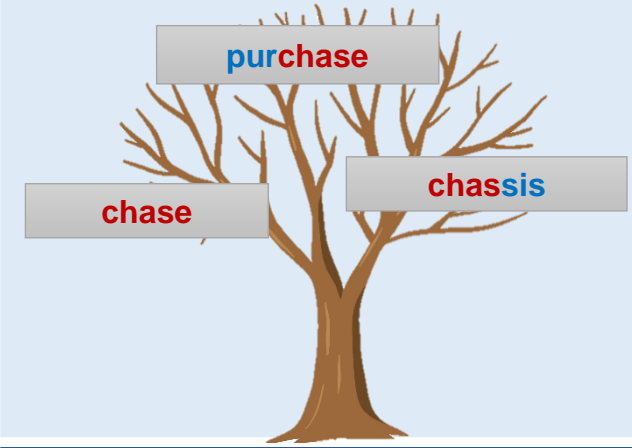
uni-

'uni' links with the idea of 'one'



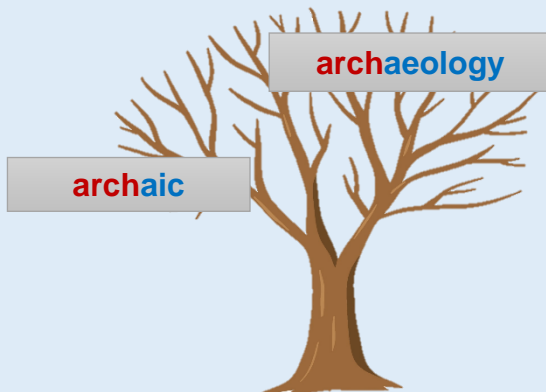
-chase

'chase' means to 'take' or 'seize'



arch-

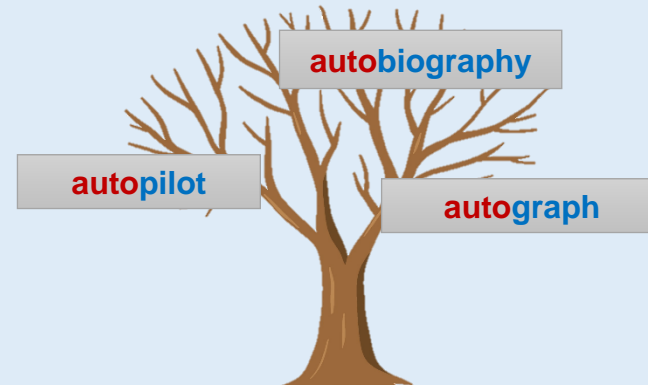
'arch' links with 'ancient'



auto-

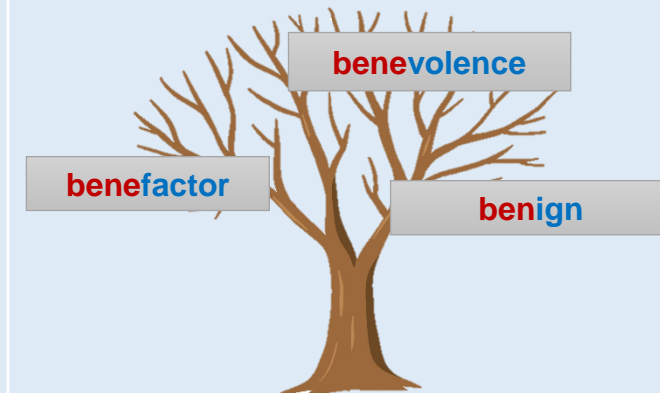
'auto-' means 'self' or 'own'

e.g. **pilot**: flies a plane > **autopilot**: plane flies itself



bene-

'bene' links with 'well' or 'good'



1 – Quadrants and Lines

Co-ordinates

x - : first number in a coordinate which is the horizontal value

y - : second number in a coordinate which is the vertical value

quadrant: one of four regions separated by the x and y axis.

origin: a fixed point at which measurements are taken from. This is usually (0,0).

gradient : a measure of the steepness of a line

2 – Linear Graphs

y-intercept: where a line crosses the y – axis

linear graph: produces a continuous straight line

$y = mx + c$: often the form of a linear graph where **m** is the gradient and **c** is the y intercept

non-linear graph: doesn't produce a continuous straight line

- the **steepness** of a line refers to its gradient
- An **ascending** linear sequence results in a positive gradient
- A **descending** linear sequence results in a negative gradient

parallel: two lines the same distance apart at all points

3 – Data

frequency: the number of times an event occurs

correlation: a measure of the strength of association between two variables

continuous data: data which can take any value

discrete data: data which takes certain values

qualitative: refers to a quality or attribute

quantitative: refers to a quantity or amount

range: difference between largest and smallest data

4 – Scatter Graphs

positive correlation: a link showing that as one variable increases, the other also increases

negative correlation: a link showing that as one variable increases the other decreases

outlier: result which lies beyond where most of the data is clustered

line of best fit: a line drawn on a scatter graph to represent the best estimate of the relationship between the variables

5 – Probability

trial: an experiment that is repeated

event: a set of possible outcomes from a trial

outcome(s): the result(s) of a statistical trial

probability: The likelihood (chance) of an event happening

sample space: set of possible outcomes from a trial

biased: something which is unfair

union: where one **or** two elements of a set are satisfied

intersection: where two elements of a set are satisfied

6 – 8 Times Table

$$1 \times 8 = 8 \quad 7 \times 8 = 56$$

$$2 \times 8 = 16 \quad 8 \times 8 = 64$$

$$3 \times 8 = 24 \quad 9 \times 8 = 72$$

$$4 \times 8 = 32 \quad 10 \times 8 = 80$$

$$5 \times 8 = 40 \quad 11 \times 8 = 88$$

$$6 \times 8 = 48 \quad 12 \times 8 = 96$$

1 – Origin

- Rap and Hip-Hop began in New York, USA.
- It started when the Jamaican sound system culture arrived in the late 1970s.
- Rappers combined lyrics and beats to entertain at rap battles where they would boast about being the best rapper.
- Rap came to the UK in the 1970s and 80s.
- The London Posse and Cookie Crew were two successful early rap groups.



Cookie Crew

2 – Hip-Hop Key Vocabulary

Key Vocabulary

MC: Master of Ceremony. Another name for a rapper.

sound system: large outdoor speaker system which originated in Jamaica often run by DJs and Rappers

beat: the pulse/heartbeat of the music

bass line: the low-pitched instrumental part or line of music played by the lowest sounding instrument

beatboxing: vocal percussion, mimicking the drum machines with the mouth



3 – DJing Key Vocabulary

mixing: when two different records are mixed together

beatmatching: changing the speed at which a record is played so that its tempo matches that of the song currently playing

scratching: moving a record back and forth on a record player to create a 'scratching' sounds

looping: when a sample of music is repeated over and over

sampler: a device that can take any sound that is put into it, process it and play it back

sampling: taking a section, or sample of a recording and reusing it within a different song

4 – Rap Lyric Writing

Key Vocabulary

couplet: a pair of rhyming words

internal rhyming/ assonance: matching the sound of words within the line

hook: a catchy line of lyrics which is remembered by the listener

Key Hip-Hop and Rap Artists

Post Malone, Khalid, Drake, Lil Nas X,
Travis Scott, Juice WRLD, DaBaby, Cardi B,
Lil Baby, Meek Mill, Chris Brown, Lil Wayne,
Kanye West, Jay-Z

Drake



1 – Ball familiarisation

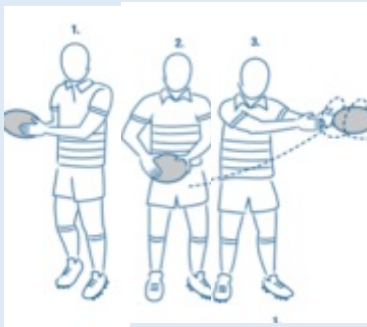
Key Vocabulary

pop pass: a short distant pass

spin pass: a pass played over a longer distant and to get the ball to its intended target quicker

Spin pass technique:

- Dominant hand at back of ball
- Other hand placed underneath front of ball
- Ball starts by side hip
- Move dominant hand across the top of the ball to apply spin



2 – Tackling

Key Vocabulary

parachute fall: a safe way to fall to the floor when tackled

tower of power: safe technique used to tackle the opponent

Tower of power:

- Target: opponents' thigh
- Cheek-to-cheek
- Ring of steel



3 – Invasive Running

Key Vocabulary

agility: the ability to change direction quickly without slowing down

speed: the ability to move all or some of the body quickly

Invasive techniques:

- Side step
- Change of speed
- Hand off
- Swerved run



4 – Positional Play

Key Vocabulary

attacking line: a diagonal line that stretches across the pitch

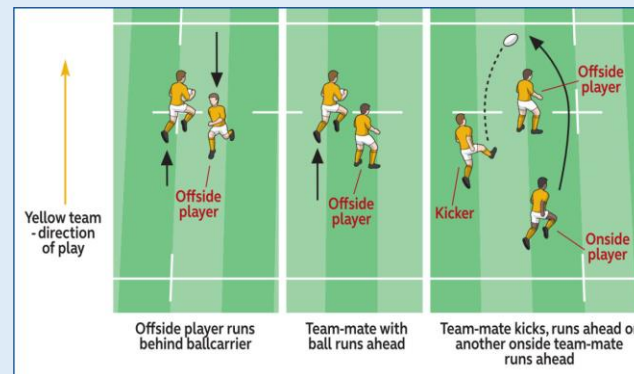
defensive line: a straight and compact line showing no gaps



5 – Offside

Key Vocabulary

offside: being in an illegal position e.g. in front of the ball or ball carrier.



6 – Scrummaging

Key Vocabulary

scrum-half: player that places rolls the ball into the scrum for “hookers” to compete for.

hooker: central player within the scrum that attempts to hook the ball backwards through their own scrum



1 – Dribbling

Key Vocabulary

3 steps: the maximum number of steps you can take when holding the ball

pivot: to turn to face a different direction without taking your foot off the floor

- Dribbling the ball- finger tips, head up, snap with wrist
- 3 steps with the ball before shooting or passing
- 3 seconds with the ball when standing still

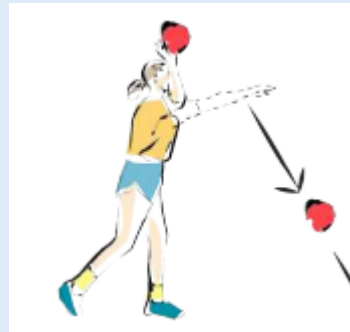


2 – Passing & Receiving

Key Vocabulary

'w' grip: how to grip the ball when catching it

bounce pass: a pass that bounces on the floor once before reaching a teammate



3 – Shooting

Key Vocabulary

jump shot: more effective shot to increase the likelihood of scoring

accuracy: the precise placement of something



4 – Defending

Key Vocabulary

intercept: to stop something in progress

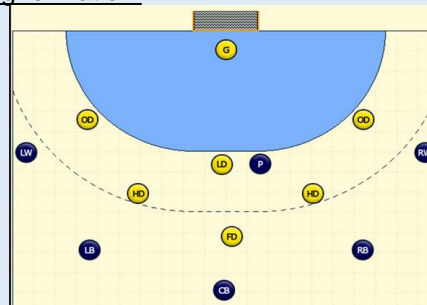
reaction time: the time taken to respond to something



5 – Attacking Phase of Play

Key Vocabulary

pivot: an attacking player who travels along the opponent's crease

Attacking formation:

6 – Defending Phase of Play

Key Vocabulary

formation: the positional placement of players

Defensive formation:

1 – Warm up, choreography and rhythm

Key Vocabulary

choreography: the sequence of steps and movements in dance.

rhythm: is a sense of timing. Dance music is counted in sets of 8 beats

3 stages of a dance warm-up include:

isolations: moving one part of the body at a time

aerobic: pulse raiser

flexibility: stretching

2 – Unison/Canon

Key Vocabulary

unison: when dancers use the same movement at the same time.

- This is a powerful choreographic device because it creates an engaging effect for the audience.
- It's aesthetically pleasing and makes the dance look neat.

canon: when dancers perform the same phrase one after the other.

- This is a powerful choreographic device because it makes the dance look more complex without the choreography appearing chaotic.

3 – Dance Style

genre: the style or category of dance

ballet: posture, toe pointing, and correct body positions, lines, and angles are all important.

hip hop: locking, popping, fast movements

street: dances are performed with soft knees, low, sharp and exaggerated moves

contemporary: strong controlled legwork of ballet, fall and recovery, improvisation characteristics of modern dance. Speed, rhythm and direction all change quickly.

tap: sounds of tap shoes striking the floor. The sound is made by shoes that have a metal "tap" on the heel and toe.

4 – Levels

levels: refer to whether the dancer is performing high, middle and low moves

- A powerful choreographic device because it creates an engaging effect for the audience.
- Adding leaps and jumps along with floor work makes it aesthetically pleasing



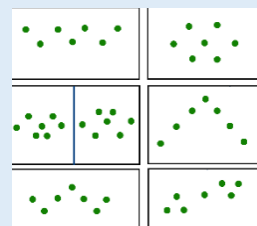
levels

5 – Formation

Key Vocabulary

formation: shape.

- Are you in a line, circle, square?
- Are there any changes to the formation throughout the dance?
- It's aesthetically pleasing.
- It maintains the interest as the dancers move around each other.



6 – Choreography & Performance

jump: feet leave the floor

gesture: movement to express emotions

turn: rotation

travel: move from one place to another

stillness: stationary

isolation: one body part

CHOREOGRAPHIC DEVICES	PERFORMANCE SKILL
unison canon formation levels	confidence focus audience

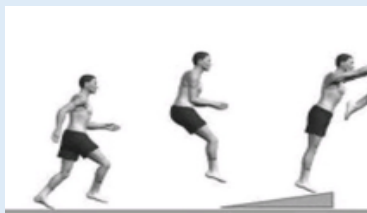
1 – Trampetting/Springboard

Trampette/springboard- run towards the trampette, take off one foot on the floor to two feet on the trampette. Push through the knees for power which will give you height on your jump. Swing arms upwards for height.

Perform a basic shape in the air. Land with bent knees and then extend.

Jumps-

- Make sure you always jump from two feet.
- Use your arms to gain more height on your jump,
- Bend from the knees to gain power.
- 4 Make a stretched shape in the air extending both the arms and the legs.
- Keep toes pointed to make the more aesthetically pleasing.
- Straight, star, tuck, pike, straddle, split jumps.

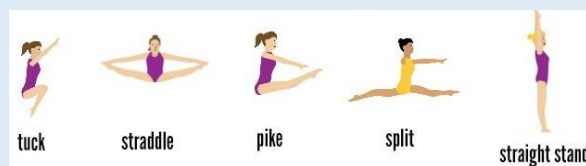


2 – Advanced Shapes

Advanced Shapes

Jumps-

- Make sure you always jump from two feet.
- Use your arms to gain more height on your jump,
- Bend from the knees to gain power.
- Make a stretched shape in the air extending both the arms and the legs.
- Keep toes pointed to make the more aesthetically pleasing.
- Tuck, pike, straddle, split jumps, half turn, full turn.



3 – Dive Forward Roll

Dive Forward Roll

- Run towards the trampette, take off with two feet. Push through your legs to gain height. You must travel upwards and forwards.
- Both hands should be placed on the crash mat, tuck in your head and lean forwards.
- Push **forward** with your legs until you begin to **roll**, then tuck your body and keep your back rounded.



1 – The Khalsa

Key Vocabulary

Khalsa: the community of Sikhs

turban: a man's head covering

turban



- The first Khalsa was formed during the time of Guru Gobind Singh.
- The Guru asked a group of Sikhs if any of them were willing to sacrifice their lives for their faith.
- Five men volunteered and entered a tent, expecting to be killed. They eventually emerged unharmed, all dressed in fine clothing and wearing turbans.
- The five men became known as the 'Panj Piare' (the Five Beloved Ones) and they became the first members of the Khalsa.
- Any Sikh can now join the Khalsa if they want to be fully committed to the faith.

2 – The 5 Ks

Key Vocabulary

symbol: something simple which stands for something more complex

The 5 Ks are symbolic items which all members

of the Khalsa wear to show their commitment to their faith:

1. Kesh – uncut hair. Sikhs do not cut their hair as this is a gift from God.
2. Kangha – a wooden comb. This is used to keep their hair neat.
3. Kachera – cotton underpants. This is to show modesty.
4. Kara – a steel bangle. This represents the one, eternal God.
5. Kirpan – a sword. This is used to defend the truth and the vulnerable. It is never used to attack others.



3 – The Guru Granth Sahib

Key Vocabulary

Gurdwara: the Sikh place of worship

scriptures: sacred writings

Guru Granth Sahib: the Sikh holy book

- In the Gurdwara building, scriptures from the Guru Granth Sahib are read aloud.
- Drums are often played whilst the Guru Granth Sahib is being read.
- The prayer hall is often decorated with bright colours on the walls and carpets.
- The Guru Granth Sahib will have its own bedroom within the Gurdwara, where it is kept when not being read.
- The communal kitchen, langar, is open to all people and serves vegetarian food to whomever wants it.

4 – Seva

Key Vocabulary

seva: service

langar: the communal kitchen in the Gurdwara

- Sikhs believe they must perform a selfless service to God's creation. This means that they have to help people.
- Sikhs believe when they are serving others, that they are serving God. They believe that God is in everything that He has created.

Seva can be performed in three ways:

1. Tan – physical service. For example: helping in the langar.
2. Man – mental service. For example: teaching others.
3. Dhan – giving to charity.

B1 – Aerobic Respiration

respiration: the chemical process that releases energy for life processes

aerobic: a process that involves oxygen

glucose: a simple sugar that can be made from larger carbohydrates

mitochondria: a subcellular structure where aerobic respiration takes place

carbon dioxide: a waste product that is produced from aerobic respiration as a gas

Aerobic Respiration Word Equation

glucose + oxygen → carbon dioxide + water

C1 – Neutralisation

Key Vocabulary

acid: a substance with a pH < 7

alkali: a substance with a pH > 7

neutral: a substance with a pH = 7

ph scale: a scale, from 1 to 14, which measures the acidity or alkalinity of a substance

neutralisation: a chemical reaction in which an acid reacts with an alkali to make a salt and water

indicator: a chemical substance that changes colour at a specific pH

P1 – Energy Sources

Key Vocabulary

energy source: a source from which useful energy can be extracted or converted

renewable: an energy source that will not run out

non-renewable: an energy source that is used faster than it is replenished and will run out

power: the amount of energy transferred in a set amount of time

watts: the units of power

standard form: a method of writing small or large numbers E.G. $192 = 1.92 \times 10^2$

B2 – Anaerobic Respiration

anaerobic: a process that does not involve oxygen

cytoplasm: the jelly like substance that fills the cell, where anaerobic respiration takes place

lactic acid: a waste product that is produced from anaerobic respiration

breathing rate: how many breaths are taken per minute

waste product: any substances that are produced in a reaction that are not the desired product

Anaerobic Respiration (animals) Word Equation

glucose → lactic acid

C2 – Reactions of Acids

irritant: a substance that causes discomfort to the body

corrosive: able to damage or destroy other substances by chemical reaction

REACTION	OBSERVATION	EXPLANATION
acid and alkali	no fizzing but possible colour change	no gas is produced some salts produced are coloured
acid and metal	fizzing	hydrogen gas is produced

acid + alkali → salt + water

acid + metal → salt + hydrogen

P2 – Energy Use

Key Vocabulary

fuel: a substance that is burned to release energy

joules: the units for all types of energy

kilowatt hour (kWh): the unit used to state the amount of energy used by a 1kW appliance for 1 hour

compare: to find similarities and differences between to objects

estimate: a rough calculation

conversion: the process of changing units by multiplying or dividing

risk: something that can cause harm

1 – Proteins

- We need protein for muscle growth and body repair.
- Any left is used as a secondary source of energy.

amino acids: the building blocks of proteins. There are 20 needed by our body.

essential amino acids: the amino acids that need to come from the food we eat

HBV: proteins that contain all of the Essential Amino Acids E.G. meat, fish, soya, eggs, milk, cheese

LBV: are generally proteins from plants and are missing at least one of the essential amino acids

protein complementation: when 2 or more LBVs are eaten together

vegans: can find it difficult to source the amount of amino acids needed for a balanced diet

2 – Fats

- We need this for energy, to protect our vital organs, to insulate our body and to provide the fat soluble
- Vitamins A D E & K

Key Vocabulary

saturated fats: come mainly from animals and are high in cholesterol.

- This is bad for our heart as it can clog our arteries and can cause long term health problems E.G. Type 2 diabetes and strokes.

unsaturated fats: come mainly from plant sources such as nuts and oils.

- They are lower in cholesterol, which makes it a healthier choice.
- We should aim to eat mainly unsaturated fats from sources such as nuts and oils

3- Carbohydrates

- We need these for energy.
- There are two types: simple and complex.
simple carbohydrates: mainly sugars which can lead to long-term problems such as tooth decay, obesity and type 2 diabetes.

complex carbohydrates: starchy foods such as bread, rice, pasta and potatoes

- These give us more fibre and our bodies find them harder to break down.
- The energy lasts longer keeping us feeling fuller for longer

dietary fibre: keeps our digestive system working healthily and prevents complications such as constipation or more seriously cancer of the bowel. E.G. wholemeal bread and fruit.

4 – Vitamins and Minerals

Vitamin A (fat soluble): for normal growth of children. Found in– oily fish, dairy foods, carrots, green vegetables.

Vitamin B: to allow the body to get energy from food. Found in- wholemeal cereals, meat, marmite.

Vitamin C: clear skin, healing of wounds. Healthy teeth and gums, prevents infections e.g. colds. Found in – fruit E.G. berries and citrus fruit, tomatoes, potatoes, green vegetables

Vitamin D (fat soluble): works with calcium to form strong bones and teeth. Found in – oily fish, margarine, eggs, sunshine.

calcium: works with vitamin D to make strong bones and teeth.

- It is needed for the clotting of the blood.
- Found in – milk, cheese, yoghurts, fish bones E.G. tinned salmon.
- Calcium is added to white bread by law

Iron: needed to form red blood cells, which carry oxygen to all parts of the body. Found in – red meat, green vegetables.

1 – Identity

Key Vocabulary

identity: understanding who you are, the way you think about yourself and your characteristics

- Everyone has a different identity and this is what makes us a diverse society.
- Everyone is unique and no one characteristic is more important than another.
- Identity encompasses a range of concepts: gender, race, heritage, religion, sexual orientation and ability.

2 – Self-Worth & Self-Confidence

Key Vocabulary

self-worth: the internal feeling of being good enough and understanding that you are a valuable human being

self-confidence: a feeling of trust in your own ability to do something

- Our self-worth and self-confidence are very important factors in supporting our own wellbeing.

3 – Gender Identity

Key Vocabulary

gender identity: an internal and personal understanding of your gender

- Gender identity is not always visible to others.
- For some people, gender identity aligns with the sex assigned at birth (male or female).
- For others, gender identity differs from the sex assigned at birth (transgender).
- For others, they do not feel their gender fits into either male or female categories (nonbinary).

4 – Recognising and Challenging Discrimination

Key Vocabulary

discrimination: treating someone unfairly because of a unique characteristic

homophobia: treating someone unfairly because they are homosexual

biphobia: treating someone unfairly because they are bisexual

transphobia: unfair treatment of someone who is transsexual or transgender

- All of the above must be reported to a member of staff and will be challenged.



Look

Look at the information carefully.
Read it three times.
It may help to say it as you read it.



Cover

Cover it with your hand or a piece of paper.



Write

Write it out, from memory.



Check

Check what you have written matches the information exactly.
Have you got it correct?
If so, tick your work to show it is correct.



Correct

If it doesn't match exactly, use your purple pen to correct it.
Repeat the steps above.
If you get 100% correct, move on to the next piece of information.

Flash Cards

If you choose to make flashcards to help you revise, don't forget our top tips.

1. On one side of the card, write the question clearly
2. On the other side of the card, write the answer you want to remember
3. Only put one question on each flashcard
4. Test yourself regularly, until you can't get the answers wrong

Scan the QR code to access a short video on how to use your flashcards more effectively.

