



Trinity Academy Grammar

Year 8 (R)
Knowledge Organiser
Term 3

Your subjects are in alphabetical order.

1 – Definitions

line: mark made by a brush, pen or stick

hatching: lines are drawn in one direction

cross hatching: lines are drawn in two or more directions

pattern: a design in which lines, shapes, forms or colours are repeated

wash: thin layer of diluted ink or watercolour paint

tone: how light or how dark something is

contrast: when opposite elements are arranged together (i.e. light and dark, big and small)

2 - Definitions

relief printing: when you cut or carve a printing surface so all that's left is the design to be printed

polyprinting: a form of relief printing that uses a thin sheet of polystyrene.

We use a pen to gently "carve" the design in the polystyrene

brayer: a small roller used to apply ink in printmaking



printing ink: coloured paste used to printing

3 – Printing Definitions

monoprint: form of printmaking in which an image is made from a surface coated in printing ink (plastic sheet). This technique make a single print

relief printing: when you cut or carve a printing surface so all that's left is the design to be printed

polyprinting: a form of relief printing that uses a thin sheet of polystyrene. We use a pen to gently "carve" the design in the polystyrene

brayer: a small roller used to apply ink in printmaking 

4 – German Expressionists

- Art movement in Germany (1900 - 1920)
- Characterised by distorted forms, strong contrasts, and bold lines
- Capture the strong feelings of the subjects
- Convey a sense of unease and dark mood
- Distorted features and exaggerated expressions
- Reflect artists' response to social problems of the time



Karl Schmidt Rottluff – Christus erschienen 1918

Computing

Python Programming

Year 8

Term 3

1 – What is Programming?

Key Vocabulary

programming: is the process of designing and building a computer program to accomplish a specific task

print: displays a statement or variable on the shell window

input: allows the user to input information into the program

shell: the place where code is run

syntax: the rules of the programming language that need to be followed in order for it to work

debug: tells us where the error is and what type of error. This allows the programming to fix the error and run the code

algorithm: a set of instructions or code used to solve a problem

2 – Data Types

Key Vocabulary

data types: different types of data are stored in variables as different data types

string: a variable data type that can store a combination of letters, characters and numbers

integer: a variable data type that can store whole numbers e.g. 65

floats/real: a variable data type that can store decimal numbers e.g. 2.5

boolean: a variable data type that stores either TRUE or FALSE

variable: a name given to an item of data so that the data can be stored in memory while your python program is running

operators: special symbols that carry out arithmetic or logical tasks e.g. > ==

3 – Selection

Key Vocabulary

selection: these allow your python program to follow one path in the code if a certain condition is true, or to follow another path of the code if the condition is false

IF: checks if the condition is TRUE, if so the program runs the indented code below it

Elif: if the first IF is not TRUE, then this elif condition is checked, there can be multiple of these

Else: if all the IF and Elif statements are not TRUE, then the code indented below else will run

4 – Iteration

Key Vocabulary

iteration: is used to repeat a set of instructions or commands in a program. It saves having to write them all out over and over again

for loop: runs for a specific amount of times and stops when it reaches the desired number

Example:

```
for l in range (5):  
    movie = input ("what is one of your top 5 movies?")
```

This would ask the question 5 times then end the loop

1 – Purpose of Poetry

A poem is a collection of spoken or written words that expresses ideas, emotions and viewpoints in an imaginative way

the form of a poem: this refers to line lengths, rhythms and patterns of rhyme

• A poem can take various forms

stanza: one of the parts into which a poem is divided

• They separate ideas and give shape

• They guide the reader through the poem

narrative: refers to the story or message that the poet is trying to show

2 – Context

Maya Angelou:

- An African-American writer and civil rights activist
- Angelou was born in 1928 in the American South

Vanessa Kisuuile:

- A black-British poet from Bristol, in the south of England
- Kisuuile wrote 'Hollow' in response to the destruction of the Edward Colston in June 2020.
- Edward Colston was a slave trader who profited from the enslavement of African-Americans in the 19th century

Suhaiymah Manzoor-Khan:

- Suhaiymah is a Bradford-born British Muslim poet, who is very successful on the 'slam' (live) poetry circuit.
- Her poem is about resisting prejudice and stereotyping

3 – Terminology

enjambment: the running of a sentence from one line of verse into the next

caesura: a break or a pause in a line of verse

stanza: one of the parts into which a poem is divided

sibilance: a literary device that relies on the repetition of soft consonant sounds, like 's' or 'sh', in words to create a whooshing or hissing sound

metaphor: a figure of speech comparing two things which are not literal or physically possible

4 – Vocabulary

multicultural (adj.): relating to people of many different nationalities and cultures

dignity (noun): being worthy of honour or respect

prejudice (verb): to judge and/or treat others differently because of their race/gender/religion

adversity (noun): a very difficult situation

to empower (verb): to give or delegate power or authority

5 – Grammar: Clauses

a clause: one or more phrases linked to a verb that express an idea to make up a sentence.

A **main clause** is able to stand alone, however a **subordinate clause** cannot

Due to the adversity Maya Angelou experienced in her past, her writing often includes themes such as **oppression and discrimination**

The subordinate clause is in bold and underlined. It cannot make sense alone

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1 – Countries and Destinations

en Algérie	to Algeria
en Angleterre	to England
en Belgique	to Belgium
en Espagne	to Spain
en France	to France
en Grèce	to Greece
en Italie	to Italy
en Suisse	to Switzerland
au Portugal	to Portugal
aux États-Unis	to the USA

2 – Means of Transport

	cher/cherre	cher/cherre	expensive
je vais	I go	I take	comfortable
je prends	comfortable	fatigant/ e	tiring
je voyage	fatigant/ e	pratique	practical
on va	we go	lent/ e	slow
en avion	by plane	rapide	fast
en bateau	by boat	sûr/ e	safe
en bus	by bus	plus	more
en car	by coach	moins	less
en métro	by subway	très	very
en train	by train	trois	too
en voiture	by car	à mon avis	in my opinion
		selon moi	in my opinion
à pied	on foot	je pense que	I think that
à vélo	by bike	je préfère	I prefer

To say **to, at, or in** in French we use the following:
For towns we use 'à' J'habite **à** Wakefield.
For feminine countries use 'en' Je vais **en** Belgique.
For masculine countries use 'au' Je vais **au** Brésil.
For plural countries use 'aux' Je vais **aux** États Unis.

4 – Holiday Vocabulary

faire...	to do...	
du camping	camping	
du ski	skiing	
du ski nautique	water skiing	
du vélo	cycling	
de la natation	swimming	
des randonnées	hiking	
du patinage	ice skating	I watched
du roller	roller-skating	visited
de la parapente	hang-gliding	I did
de la pêche	fishing	took
de l'équitation	horse riding	saw
de la voile	sailing	went
de la planche à voile	windsurfing	arrived

5 – Weather

Time phrases:	
tous les jours	every day
tous les soirs	every evening
le matin	in the morning
l'après-midi	in the afternoon
le soir	in the evening

6 – The Perfect Tense

To form a verb in the perfect tense, you need:	
A pronoun	Part of avoir
'I'	'ai'
elle	a
A pronoun	Part of être
je	suis
nous	sommes
Past participle	Past participle
Apronoun	Part of avoir
'I'	'ai'
elle	a
Past participle	Past participle
Apronoun	Part of être
'I'	'étais'
elle	était
Past participle	Past participle
Apronoun	Part of avoir
'I'	'ai mangé'
elle	mangé
Past participle	Past participle
Apronoun	Part of être
'I'	'étais allé(e)'
elle	allé(e)
Past participle	Past participle
Apronoun	Part of avoir
'I'	'ai resté(e)'
elle	resté(e)

7 – Holiday Activities

you can...	
you can not...	
tan on the beach	
swim in the sea	
see the monuments	
send a postcard	
do a boat tour	
take some photos	
meet people	
relax at the hotel	
visit tourist sites	

8 – Holiday Activities

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14 – Holiday Activities

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15 – Holiday Activities

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16 – Holiday Activities

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17 – Holiday Activities

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18 – Holiday Activities

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19 – Holiday Activities

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20 – Holiday Activities

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21 – Holiday Activities

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23 – Holiday Activities

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24 – Holiday Activities

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25 – Holiday Activities

1 – Water Cycle

Key Vocabulary:

evaporation: heated water turning into water vapour

1. The sun heats up water on land, in rivers, lakes and seas and turns it into water vapour. The water vapour rises into the air

2... Water vapour in the air cools down and condenses back into tiny drops of liquid water, forming clouds

3. Water falls as precipitation. The clouds get heavy and water falls to the ground in the form of rain or snow.

4. Rain water runs over the land and collects in lakes or rivers, which take it back to the sea. The the Process repeats

2 – Drainage Basin

Key Vocabulary:

drainage basins: the area of land drained by a major river and its tributaries

watershed: the edge of the drainage basin

source: the start of a river (usually high relief)

mouth: the end of a river (low relief)

confluence: the point where 2 rivers meet

tributary: a smaller river joining the main one



3 – Long Profile

Key Vocabulary:

long profile: shows the gradient of a river as it journeys from source to mouth

upper course: found steep areas. There may be waterfalls as the river flows through steep V-

shaped valleys

middle course: further downstream and the relief is hilly. Usually find meanders (large bends in a river)

lower course: is closest to the mouth of the river where the land is low-lying. The gradient is almost flat due to the lack of vertical erosion (wearing away of river bed)

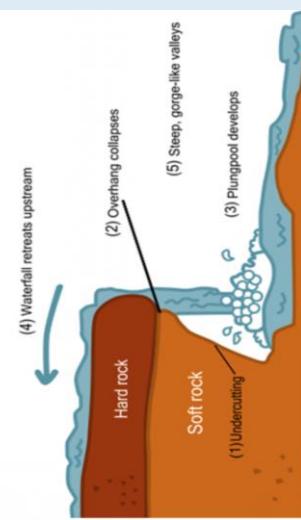
4 – Waterfalls

Key Vocabulary:

meander: a bend in the river

deposition: the dropping of sediment

transportation: the moving of sediment



5 – Meanders

Key Vocabulary:

importance: the value something has

economic: relating to money or jobs

development: grow and become more mature

6- Importance of Rivers to People

Key Vocabulary:

- Humans use rivers for irrigation in agriculture, for drinking water, and to produce electricity through hydroelectric dams. Negatively humans dump their waste in rivers
- When a river floods it can damage buildings, roads, parks, wildlife, and cost a lot of money to repair

Early-Modern History

The Transatlantic Slave Trade

Year 8

Term 3

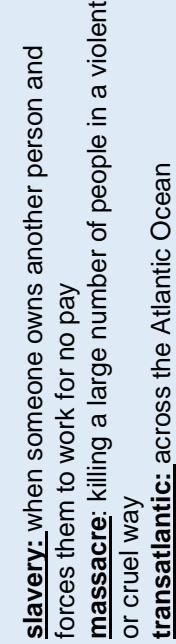
1 – Mali and Mansa Musa



AFRICAN EMPIRES: THE MALI EMPIRE

- empire:** a group of countries controlled by another country or ruler
- trade:** swapping products with one another
- Mansa Musa was one of the richest and most powerful rulers of the Mali Empire in West Africa.
- He was a devout Muslim and in 1324 went on pilgrimage to Mecca. He travelled there on horseback with 60, 000 men, 80 camels and lots of gold
- He established a university with the largest collection of books in Africa.
- Under his rule, Timbuktu became an important city for trade with connections to places across Northern Africa

2 – The Middle Passage



- slavery:** when someone owns another person and forces them to work for no pay
- massacre:** killing a large number of people in a violent or cruel way
- transatlantic:** across the Atlantic Ocean

- Enslaved people were auctioned, where they were sold to buyers. They were branded with a hot iron, so it was known they were now enslaved
- They worked on plantations growing things like cotton, sugar, coffee and tobacco
- Work on a plantation would start at sunrise and finish at sunset. At harvest an 18 hour day was common
- Harsh punishments were used to control and de-humanise enslaved people



3 – Experiences in the USA

- The Middle Passage refers to the journey where enslaved Africans were taken from Africa to the Americas as part of the slave trade triangle in awful conditions
- 15% of enslaved Africans died during the Middle Passage- approx. 2 million people.
- The Zong Massacre was the killing of more than 130 Africans by the British crew of the Zong ship. A trial over insurance was held.

4 – Resistance

- escape:** to get away from someone/somewhere
- resist:** refusing to accept something or do what you are told
- Harriet Tubman escaped slavery and went on to rescue more than 70 other people. She used a network of safe houses and the support of anti-slavery campaigners. This was known as the 'Underground Railroad'.
- Enslaved people also resisted by keeping their identity e.g., languages or beliefs.
- There were many rebellions on plantations e.g. in Jamaica.

5 – The Haitian Revolution

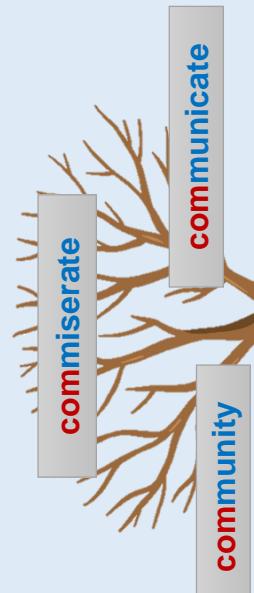
- revolution:** a big change such as a change in how a country is governed
- France controlled Haiti, an island in the Caribbean.
- Haiti produced half the world's sugar and 60% of the world's coffee and made France wealthy.
- The rebels tried to set the fields on fire so that the system of slavery could not work.
- Toussaint Louverture was the leader of the rebellion. He was a brilliant general and politician.
- Haiti gained their independence from France but were made to pay a large fine.

6 – Abolition of Slavery

- abolish:** to get rid of something
- civil war:** a war between two groups within the same country
- Britain abolished the slave trade in 1807 but it took until 1833 for Britain to end slavery itself across the empire.
- William Wilberforce and Olaudah Equiano were key people in the abolition movement.
- Slave owners were paid compensation but enslaved people did not receive anything making it hard to escape poverty.
- Slavery was abolished in the USA after the American Civil War in 1865.

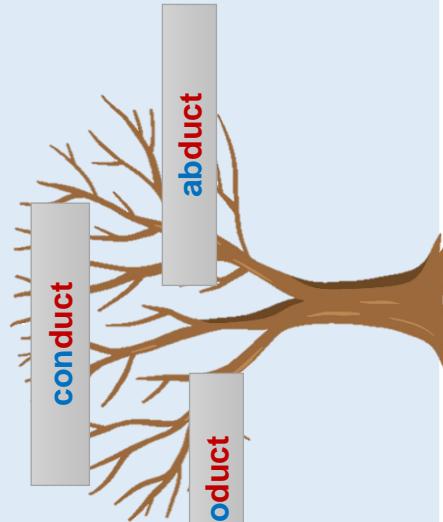
com-

‘com-’ means ‘with, together’



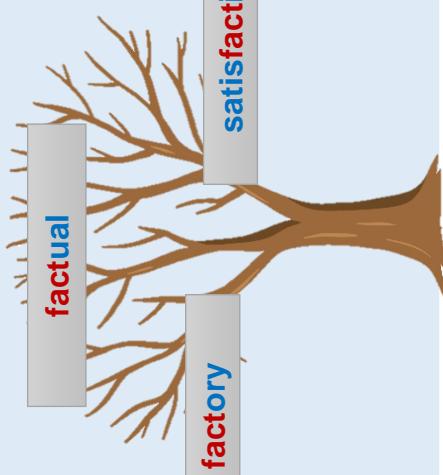
duct-

‘duct’ links with the idea of ‘leadership, to lead’



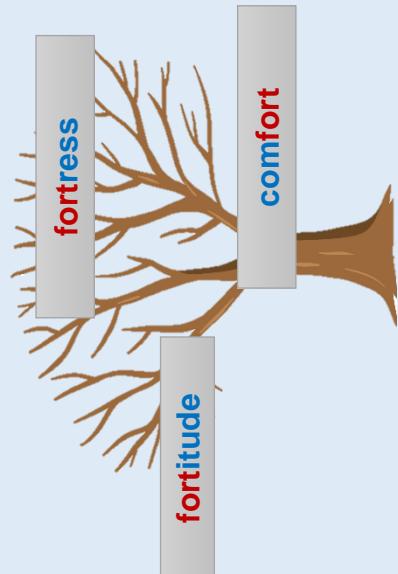
fact

‘fact’ means to ‘made’ or ‘done’



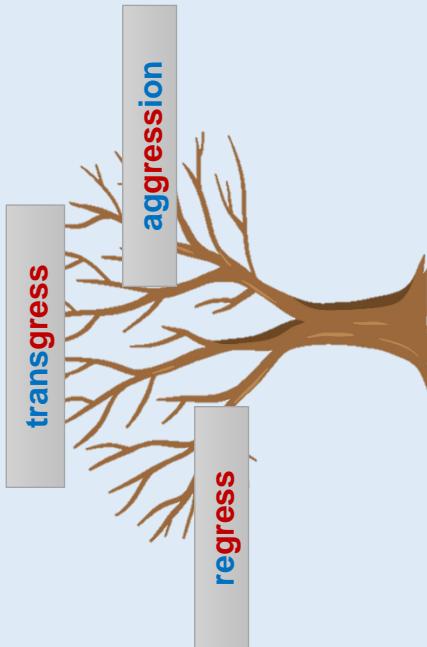
fort

‘fort’ links with ‘strength’



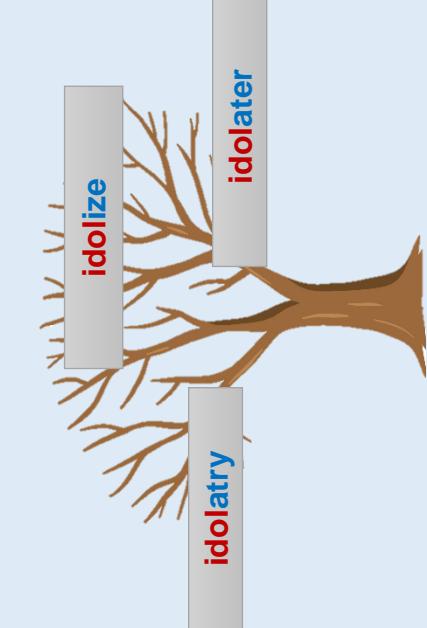
gress

‘gress’ means ‘step’ or ‘move’



idol-

‘idol’ links with ‘shape/form’ or ‘similarity’
** Originally, idols were statues of what people thought God looked like



Mathematics

Algebraic Techniques

Term 3

Those topics highlighted in yellow also appear in Science, Geography or Technology

1 – Probability

Key Vocabulary

trial: an experiment that is continually repeated

Example - Flipping a coin

event: a set of possible outcomes from a trial

Example - Heads or tails on a coin

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

Example - heads when the coin is flipped

probability: the likelihood (chance) of an event happening

Example - 1/2 chance of getting a heads on a coin

2 – Expanding Brackets

expression: contains symbols such as numbers, letters and operators

terms: either single numbers, letters or a variable or the product of numbers and variables

simplify: write it in its most compact form

substitute: where you replace numbers into an algebraic expression

expand: to multiply each term in the bracket by the expression outside the bracket

3 – Factorise and Solve

highest common factor: the largest factor of two or more terms. Also known as HCF

factorise: Writing an expression with brackets

binomial: the sum or difference of two terms

equation: a statement that two things are equal, it contains expressions on both sides of the equal sign.

solution: the answer when you solve an equation

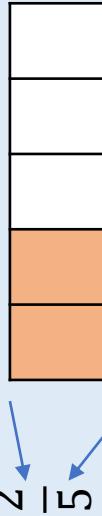
4 – Inequalities

inequality: a range of values

- # not equal
- ≤ less than or equal to
- < less than
- ≥ greater than or equal to
- > more than

5 – Fractions (Recap)

numerator: number of pieces



denominator: total number of pieces

unit fraction: have the numerator of 1

example: $\frac{1}{5}$

non unit fraction: have a numerator greater than 1

example: $\frac{3}{5}$

improper fraction: has a numerator is greater than the denominator example: $\frac{7}{5}$

6 – 9 Times Table

$$1 \times 9 = 9$$

$$2 \times 9 = 18$$

$$3 \times 9 = 27$$

$$4 \times 9 = 36$$

$$5 \times 9 = 45$$

$$6 \times 9 = 54$$

$$7 \times 9 = 63$$

4

5

6

7

8

9

10

11

12

1 – Reggae Music

Reggae music: originated in Jamaica in the 1960s, and quickly became the country's leading music genre

genre: a style of music

calypso: a style of Afro-Caribbean music that originated in Trinidad and Tobago at the start of the 20th Century

chord: two or more notes played at the same time

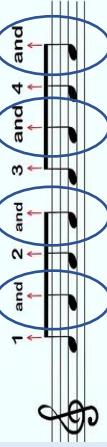
2 – Structure of Reggae Music

lyrics: the words of a song

hook: the 'catchy' section of a song which the listener will remember. Can be melodic, rhythmic or lyrical

riff: a repeated musical pattern usually used in the intro or instrumental sections.

off-beat: playing notes or chords on 'and' beats of the bar, rather than on the numbered beats



syncopation: a disturbance or interruption of the regular flow of rhythm

3 – The Musical Elements

dynamics: the term used for the volume

rhythm: a group of different note lengths

pitch: how high or low the notes sound

texture: the different layers of sound

structure: how music is put together

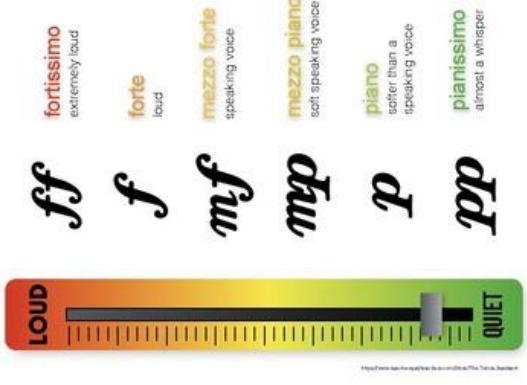
melody: the main tune

instrumentation: the instruments used

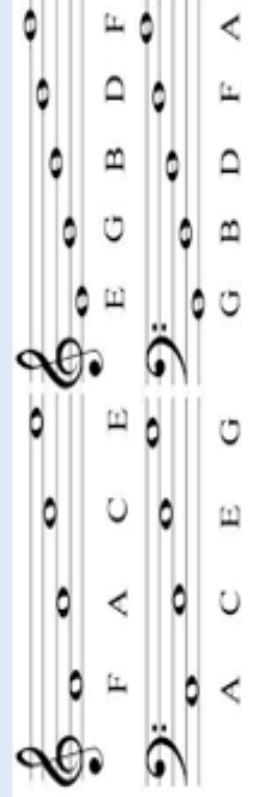
tempo: the speed

harmony: several notes played together

4 – The Stave and Pitch



stave: the five lines we write music notes on
treble clef: used for high notes, tells us where the notes are on the stave



bass clef: used for low pitched notes

1 – Trampetting/Springboard

Trampette/springboard- run towards the trampette, take one foot off the floor to place 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
- Make a stretched shape in the air extending both the arms and the legs
- Keep toes pointed to make it more aesthetically pleasing
- Tuck, pike, straddle, split jumps, half turn, full turn

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- 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 it more aesthetically pleasing
- Types of jumps - 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 it more aesthetically pleasing
- Tuck, pike, straddle, split jumps, half turn, full turn

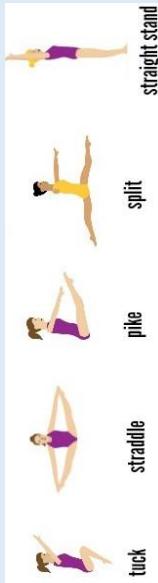


3 – Dive Forward Roll

Dive Forward Roll

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 it more aesthetically pleasing
- Push **forward** with your legs until you begin to **roll**, then tuck your body and keep your back rounded



PE

Dance

Year 8

Term 3

1 – Warm up & 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
canon: when dancers perform the same phrase one after the other



3 – Formation

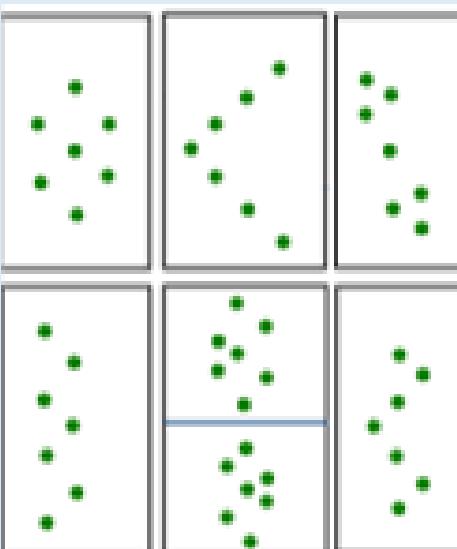
Key Vocabulary

formation: shape
 • Are you in a line, circle, square?

- Are there any changes to the formation throughout the dance?

4 – Choreography & Performance

CHOREOGRAPHIC DEVICES



PERFORMANCE SKILL

- | | |
|------------|-----------|
| confidence | unison |
| focus | canon |
| audience | formation |
| levels | levels |

1 – Set up, Grip, Stance and Rally

Key Vocabulary

pistol grip: the correct positioning of the hands on the bat



stance: the position you stand in ready to rally.

- Feet shoulder-width apart
- Low, knees bent
- Balls of feet
- Ready, anticipation



2 – Backhand

Key Vocabulary

pathway: the direction and distance the ball moves



forehand serve:

- Stand with knees slightly bent
- Slightly side on to the table (to allow for backswing)
- As the ball drops strike the ball with the bat angled towards the table

forehand serve:

- Face sideways with shoulder pointing towards target
- As the ball drops strike the ball with the bat angled towards the table.
- Finish with bat pointed towards opponent

3 – Serve

Key Vocabulary

backhand serve:

- Stand with knees slightly bent
- Slightly side on to the table (to allow for backswing)
- As the ball drops strike the ball with the bat angled towards the table

4 – Forehand

Key Vocabulary

forehand drive: an attacking shot used to attack the opponent. This shot has more depth and passes lower over the net



5 – Tactics to overcome an Opponent

Key Vocabulary

tactics: an action or strategy carefully planned to achieve an specific outcome

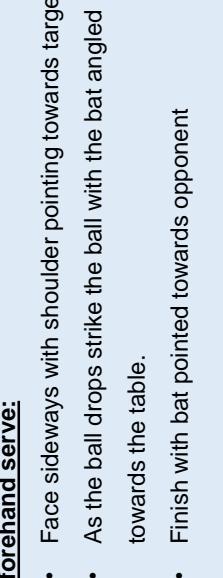
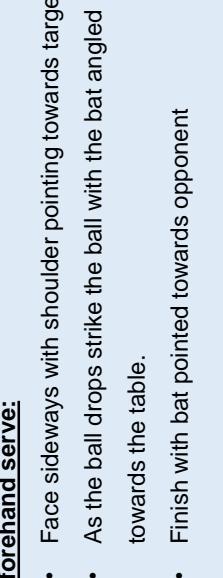
Recognising your opponents weakness:
Identify your opponents weakest shot (e.g. backhand)
Aim to hit the ball so that your opponent is forced to return using a weak shot

6 – Rules and Regulations

Key Vocabulary

let: when serving, if the ball hits the net and goes over, hitting the opponents side, the serve must be repeated

doubles: Every two serves, the previous receiver becomes the new server and the partner of the previous server becomes the receiver



1 – Origins of the Religion

Key Vocabulary

origins: the start of something

- Hinduism is the religion of the majority of people in India and Nepal
- The religion started around 3,500 years ago around the River Indus
- There were two groups of people living there: the Dravidians and the Aryans.
- It is a combination of the traditions of these two groups of people from which Hinduism grew

2 – Belief in God

Key Vocabulary

polytheism: belief in more than one god

monotheism: belief in only one god

deity: a god or goddess

- Hindus believe in one God, who is called Brahman
- They believe Brahman has lots of different ways of showing himself to the world
- Hindus believe that Brahman shows himself to the world in many forms so that Hindus can understand him better
- These different forms all have different names and different roles. They are known as deities

3 – The Trimurti

Key Vocabulary

Trimurti: three faces

- The 3 main forms of Brahman are known as the Trimurti
 - Brahma is the creator. Images of Brahma have four heads, so that he can see in all directions at once. He also has four arms, which is as symbol of power
 - Vishnu is the preserver. Images of Vishnu show him with four arms carrying a discus, a lotus flower, a conch shell and a mace. This is to represent power
 - Shiva is the destroyer. Images of Shiva often change. He is sometimes shown dancing and with four arms
- The story of Rama and Sita is remembered through the festival of Diwali
 - Rama was a prince and he married Sita
 - Sita was kidnapped by the evil demon, Ravana
 - Rama rescued her, with the help of the monkey god Hanuman
 - Rama and Sita made their way back to the kingdom with the help of small lamps which had been placed on the ground by the people of the kingdom. The lights guided them home
 - The festival of Diwali uses light to remember the small lamps used to guide Rama and Sita home, but also to show that good can overcome evil

4 – The Story of Rama and Sita

Key Vocabulary

festival: a religious celebration

- The story of Rama and Sita is remembered through the festival of Diwali
 - Rama was a prince and he married Sita
 - Sita was kidnapped by the evil demon, Ravana
 - Rama rescued her, with the help of the monkey god Hanuman
 - Rama and Sita made their way back to the kingdom with the help of small lamps which had been placed on the ground by the people of the kingdom. The lights guided them home
 - The festival of Diwali uses light to remember the small lamps used to guide Rama and Sita home, but also to show that good can overcome evil

Science	Photosynthesis, Separating Mixtures, Physical Changes and Chemical Changes	C1 – Mixtures	P1 – States of Matter	Year 8	Term 3
B1 – Photosynthesis 1					
Key Vocabulary					
<p>root: part of the plant that absorbs water and minerals</p> <p>leaf: part of the plant specialised for photosynthesis</p> <p>stomata: small openings on the surface of a leaf where gas exchange occurs</p> <p>chloroplasts: the site of photosynthesis</p> <p>guard cells: control the opening and closing of the stomata</p>	<p>pure: contains one type of particle</p> <p>impure: contains more than one type of particle</p> <p>element: a pure substance made from one type of atom</p> <p>compound: a pure substance made from two or more types of atoms chemically bonded together</p> <p>mixture: a substance made from two or more types of particles not chemically bonded together</p> <p>solute: a solid or gas that will dissolve</p> <p>solvent: the liquid that dissolves the solute</p> <p>solution: a mixture of a solvent and a solute</p>	<p>particle: the smallest piece of matter</p> <p>chemical change: a change in which a new substance is formed and is usually irreversible</p> <p>physical change: a change where no new substance is formed and is usually reversible</p> <p>change of state: a physical process where matter changes state e.g., melting, freezing, condensation</p> <p>property: a characteristic or a trait</p>	<p>Key Vocabulary</p>		
B2 – Photosynthesis 2		C2 – Separation Techniques	P2 – Conservation of Mass and Density		
Key Vocabulary		Key Vocabulary	Key Vocabulary		
<p>photosynthesis: a series of chemical reactions in a plant to produce glucose</p> <p>word equation for photosynthesis:</p> <p>carbon dioxide + water -> glucose + oxygen</p> <p>biomass: the total mass of all living things in an area e.g., glucose and starch</p> <p>carbohydrate: a nutrient used by plants for energy</p> <p>peer review: the evaluation of scientific, academic or professional work by others working in the same field</p>	<p>dissolve: when a soluble solid and a solvent form a solution</p> <p>soluble: can dissolve</p> <p>chromatography: a method for separating mixtures of inks, dyes or pigments</p> <p>filtration: a method to separate an insoluble solid from a solution</p> <p>crystallisation: a method to separate a soluble solid from a solution</p> <p>distillation: a method to separate solutions of different boiling points</p>	<p>conservation of mass: matter cannot be created or destroyed, just transferred from one form to another</p> <p>mass: the amount of matter in a given volume</p> <p>compare: looking at the similarities and differences between things</p> <p>anomaly: a result that doesn't fit a pattern</p>			

Technology

Product Design

Year 8

Term 3

1- Designing	2 – ACCESS FM	3 – SCAMPER														
<p><u>design problem:</u> an issue/opportunity that has been found, where a product or service could be designed to improve it</p> <p><u>design brief:</u> a short statement outlining key points such as function, target market and the intended user which is given to the designer to work towards during the design process</p> <p><u>design criteria (design specification):</u> the precise goals (or <u>criteria</u>) that a project must achieve in order to be successful</p> <p><u>client:</u> the person you are working for- this is sometimes used in the same way as customer</p> <p><u>iterative design:</u> iterative design is a cycle of product improvement. it is the continuous process of designing, testing, evaluating, and refining products</p> <p><u>modifications:</u> changes you make to a product or service to improve them</p>	<p><u>ACCESS FM</u> is a tool used to analyse, evaluate and design products. It helps you to consider the main features of the product using the key headings below.</p> <p><u>aesthetics:</u> what something looks like, the appearance of it</p> <p><u>construction:</u> how something has been made; the processes that have been used to manufacture it</p> <p><u>customer:</u> who is going to buy and use the product</p> <p><u>environment:</u> the impact of a product on the environment, and how environmentally friendly it is</p> <p><u>safety:</u> how safe a product is to use, and are there any dangers associated with it</p> <p><u>size:</u> how big or small a product is, including dimensions (measurements)</p> <p><u>function:</u> how a product works, what it does, or what it is used for</p> <p><u>materials:</u> what a product is made from, the materials that have been used in the construction of it</p>	<p>SCAMPER is a useful creativity tool that helps you generate ideas for new products and services, or to improve existing ones</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>S</td> <td>C</td> <td>A</td> <td>M</td> <td>P</td> <td>E</td> <td>R</td> </tr> <tr> <td>Substitute</td> <td>Combine</td> <td>Adapt</td> <td>Modify</td> <td>Put to Another Use</td> <td>Eliminate</td> <td>Reverse</td> </tr> </table> <p><u>substitute:</u> replace a part of a product or idea with something else</p> <p><u>combine:</u> merge 2 or more ideas or products together</p> <p><u>adapt:</u> adjust or tweak, to make small changes to a product</p> <p><u>modify:</u> change the overall process to bring new ideas or products</p> <p><u>put to another use:</u> do something else with a product, find another purpose, or another function for it</p> <p><u>eliminate:</u> take out parts of a process or product</p> <p><u>reverse/ rearrange:</u> change the layout of parts of a product or service</p>	S	C	A	M	P	E	R	Substitute	Combine	Adapt	Modify	Put to Another Use	Eliminate	Reverse
S	C	A	M	P	E	R										
Substitute	Combine	Adapt	Modify	Put to Another Use	Eliminate	Reverse										

1 – Good Dental health

Key Vocabulary

teeth: enamel coated structures in the jaw, used for biting and chewing

dental health: the practice of keeping your mouth clean and free of disease

In order to keep your mouth and teeth clean and healthy, follow the following pieces of advice:

- Brush your teeth with a good toothbrush and toothpaste.
- You should brush your teeth last thing before you go to bed, and at least one other time in the day
- You should brush your teeth for at least two minutes each time
- Spit out your toothpaste after brushing but do not rinse your mouth with water –this leaves a protective layer of toothpaste on your teeth

2 – Tooth Decay and Gum Disease

Key Vocabulary

decay: rotting because of bacteria

disease: a disorder of some part of the human body

gums: the tissue of the upper and lower jaws that surround the base of the teeth

- Tooth decay can be painful and lead to fillings, crowns or inlays. If tooth decay is not treated, the nerve of the tooth can become infected and die, causing an abscess
- This may then need root canal treatment or even for the tooth to be removed
- Gum disease is common and, if left untreated, may lead to bone loss around the teeth. In some cases, it may lead to loose teeth and teeth being lost. Gum disease is preventable.
- It can be treated and kept under control with regular cleaning sessions and check-ups

3 – Dental health and your diet

Key Vocabulary

diet: the foods that a person regularly eats

sugar: a sweet substance found in nature, which can have a negative impact on physical and dental health

4 – Accessing good dental care

Key Vocabulary

responsible: having a duty to do something

It is important that you take care of your dental health

The NHS in the UK can provide dental care. To find an NHS dentist, go to this website: <https://www.nhs.uk/nhs-services/dentists/how-to-find-an-nhs-dentist/>

There is lots of good dental health advice on this website: <https://www.dentalhealth.org>

- It is the way you eat / drink sugar which has a big impact on your teeth
- It takes up to an hour for your mouth to cancel out the acid caused by eating or drinking sugar. During this time, your teeth are under attack from the acid.
- Drinking water after a meal can help cancel out the acid more quickly
- Sugary fizzy drinks, fruit juices, and sport juices can also lead to dental erosion.
- This is when the enamel (coating) on your teeth gradually wears away



Look at the information carefully.

Read it three times.

It may help to say it as you read it.

Look



Cover it with your hand or a piece of paper.

Cover



Write it out, from memory.

Write



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

Check

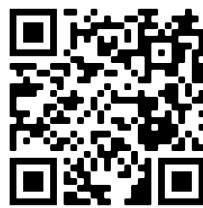


If it doesn't match exactly, use your purple pen to correct it.
Repeat the steps above.
If you get 100% correct, move on to the next piece of information.

Correct

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.