Trinity Academy Grammar

Year 8

Knowledge Organiser

Terms 1 and 2

Your subjects are in alphabetical order.

Name: _____

Tutor group: _____

MASTERS OF RECALL

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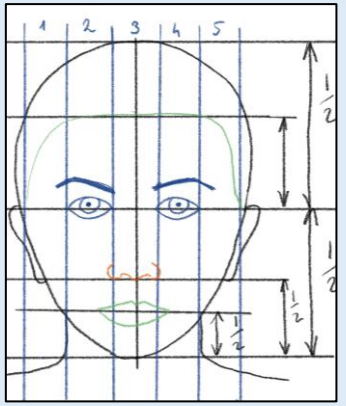
Art	Drawing - Portraits	Year 8	Term 1

1 – Basic proportions of the face

Most faces fit in the following basic rules:

- The overall head is shaped like an upside down egg
- The eyes are positioned ½ way up the head shape
- The space between the eyes is one eye length
- The bottom of the nose is ½ way between the eyes and the chin
- The lips sit halfway between the bottom of the nose and the chin
- The ears sit between the eye line and the nose line



2 – Definitions

tone: tone describes how light or how dark something is

The parts of the object on which the light is strongest are called **highlights** and the darker areas are called **shadows**.

proportions: the size relationships between different parts. For instance the height compared to the width.

texture: the way something feels to the touch. In art we use mark making to give and impression of texture.

composition: the way the elements of art are arranged on the page

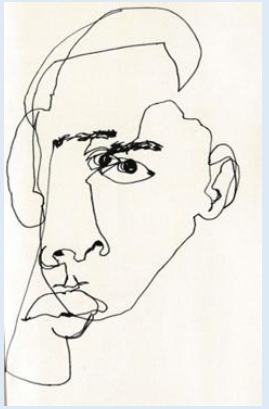
3 – Definitions

observational drawing: drawing what you see in front of you as realistically as possible

continuous line drawing: drawing made in one single line, keeping your pen on the paper at all times

blind drawing: a drawing where you look carefully at the object you are drawing, without looking at the paper

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

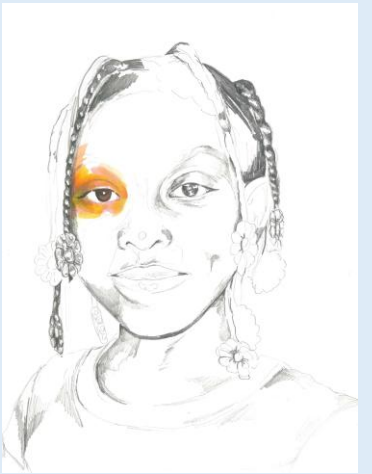


Continuous line drawing

4 – Artist focus – Adrian Brandon

New York based artist

- Famous for *Stolen*, a collection of partially filled-in paintings of Black people killed by American police.
- Each portrait remains unfinished as Brandon only colours one minute for each year of the person's life before they were killed.
- The white space represent the lives people could have had. He says "I want the viewer to see how much empty space is left in these lives, stories that will never be told, space that can never be filled."



Aiyana Stanley Jones, Adrian Brandon – painted for 7 minutes

Computing	Digital Citizenship	Year 8	Term 1

1 – Computing basics

Key Vocabulary

E-Safety: being safe on the internet

password: a secret word or phrase which allows access to a computer system or service

computer lab: is a space which provides computer services to a community

screen time: time spent using a device such as a computer, television or games console

online Etiquette: The way you behave online

privacy setting: controls available on many websites and apps to limit who can access your profile

2 – E-Safety

Key Vocabulary

radicalization: having increasingly radical views in opposition to a political, social or religious status

sexting: sending someone a sexually explicit photograph or message via a mobile phone

digital footprint: the trail of information you leave behind when you use the internet. It includes the websites you visit; email you send and information you submit to online services such as websites

fake profile: a deceptive online identity created with the intent to mislead or deceive others

3 – Using Email

Key Vocabulary

email: messages delivered by electronic means through a network

email recipient: the person who receives an email from someone else

email subject: the first line of text the email recipients see, after the sender's name, when they receive an email

CC/ Carbon Copy:

BCC/ Blind Carbon Copy:

attachment: a file or data what is sent with an email such as a photo

4 - Technology

Key Vocabulary

presentation software: an application that is specifically designed to allow users to create a presentation of ideas such as Microsoft PowerPoint

App/ application: a type of software that can be installed and run on a computer, tablet, smartphone or other electronic devices

internet: a global computer network consisting of many interconnected networks

audience: a specific group of people your presentation is aimed at

Drama	Physical Theatre – Frantic Assembly	Year 8	Term 1

1 – Frantic Assembly

physical: using the body

choreographer: the person responsible for creating sequences of movement for a dance or piece of physical theatre

practitioner: an expert in an area who creates a new way of doing something

devising: creating a performance from scratch, often using a stimulus

company: a group of performers

2 – Physical theatre skills and techniques

duet: a performance for two people

sequence: a series of movements arranged in an order

contact: physical touch between two body parts

transition: the way you move from one thing to the next

unison: when two or more actors perform the same movement at the same time

canon: when two or more actors perform the same movement one after the other

formations: the shape or pattern created by the actors when stood in the space

levels: high, medium or low, creating different heights in the performance

3 – NVC Skills

body language: the way movements, posture and gestures can show how someone feels without speaking.

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

gesture: a movement made by part of the body (e.g. arms, head) to convey a character's emotions

gait: a person's manner of walking

pace: the speed at which something happens or is done

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

4 – Evaluation

Evaluate your performance:

- Describe how you have used a range of performance skills and techniques in your performance.

In my performance I have used the skills of…
I chose to use these skills because…

- Identify one strength of your performance and give a reason why.

One strength of my performance was… because…

- Identify one area for improvement in your performance and give a reason why.

I would like to improve my use of… because…
I will do this in my next performance by…

English	‘Animal Farm’ – George Orwell	Year 8	Term 1

1 – Historical Context

- ‘Animal Farm’ is an **allegory** (see box 2 for a definition) for the **Russian Revolution** of 1917.
- The **working-class** people of Russia revolted (went against) the government and the Emperor **Tsar Nicholas II.**
- This rebellion was led by a group called the **Bolsheviks** led by **Vladimir Lenin.**
- After the rebellion, a **new communist government** was created, and Russia became known as the **Soviet Union.**
- Communism is the idea of **common ownership** where all industry (e.g. factories) is controlled by the government to **try and make everyone equal.**
- **Joseph Stalin** later became the leader of the Soviet Union. He was a **dictator** who used **propaganda** to control his people.

2 – Terminology

allegory: a story with a deeper hidden meaning, where characters/ideas can often represent something from the real world e.g. historical events

cyclical structure: when the conditions at the end of a story are in some way the same as they are at the beginning

symbolism/ to symbolise: the use of symbols such as objects to represent a deeper meaning e.g. the farm itself on ‘Animal Farm’ symbolises the society of the Soviet Union

anthropomorphism: when human characteristics or behaviour are given to a god, animal, or object in a narrative e.g. the animals in ‘Animal Farm’ all display human characteristics, such as speaking, using tools, and thinking deeply

3 – Vocabulary

revolution (noun): the overthrow (changing) of a government or system for a new system

dictator (noun): a ruler with total power over a country; usually won through violence/force

tyrant (noun): a cruel and brutal leader

tyrannical (adj.): to act like a tyrant

oppression (ab-noun): continued unfair control by one leader/group over others

hierarchy (ab-noun): the structure of power in society – those with more power are higher up in the hierarchy, such as a king / tyrant

propaganda (noun): a government persuading its people by lying and/or missing out facts e.g. persuading them to fight in a war

4 – Grammar: Exclamatory Sentences

- An exclamative sentence is sentence which shows that a person’s feelings have been heightened.
- For example, the speaker or narrator has been shocked, impressed, surprised, horrified or delighted.
- A special punctuation mark is used to highlight this heightened emotion: **the exclamation mark** (**!**)

For any type of sentence can be said with a strong tone of a voice, you would use an exclamation mark:

statement: Old Major spoke wonderfully!

imperative (command): “Sit down now!” Napoleon commanded.

exclamation: “Oh dear!” Boxer cried.

exclamation: “That is my message to you, comrades: rebellion!”

French | Freetime Activities | Year 8 | Term 1

Trinity Academy Grammar

1 – Freetime Activities

Verbs ending in **er, ir or re** are **infinitive verbs:**

aller au cinéma	to go to the cinema
écouter de la musique	to listen to music
faire du shopping	to do/go shopping
jouer au foot/au tennis	to play football/tennis
regarder la télé	to watch TV
télécharger de la musique	to download music

écouter la radio	to listen to the radio
jouer aux jeux video	to play video games
lire un livre	to read a book
sortir avec des amis	to go out with friends
télécharger des podcasts	to download podcasts

Key phonics: er = 'ay' a = 'ah' an = 'on'

2 – Opinions and Reasons

j'adore	I love
j'aime	I like
je déteste	I hate
je n'aime pas	I don't like
j'aime bien	I quite like
je préfère	I prefer
parce que c'est	because it is
car c'est	because it is
mon film préféré, c'est…	
my favourite film is…	

amusant/e	funny
barbant/e	boring
divertissant/e	entertaining
effrayant/e	scary
émouvant/e	moving
fascinant/e	fascinating
génial/e	great
idiot/e	stupid
nul/le	rubbish
passionnant/e	exciting
très	very
un peu	a bit

When using an opinion phrase, it must be followed by the **infinitive** form of the verb. e.g. J'aime **regarder** les films d'action. = I like to watch action films.

3 – ER Verbs

The 'er' verbs in French are a group of verbs which all have the same endings in the present tense.
To conjugate these verbs, you remove the 'er' from the infinitive and add a different ending (to match the person who is doing the verb).

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)

4 – Faire (to do)

The verb 'faire' (to do/to make) is irregular. It does not follow any usual pattern, so we need to learn it by heart.

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)

e.g. je fais des achats = I do online shopping
je fais des activités = I do activities

5 – Time Phrases and 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

je **ne** regarde **pas** = I don't watch
je **ne** regarde **jamais** = I never watch
je **n'**écoute **pas** = I don't listen

d'habitude	usually	**une fois...**	**once...**
parfois	sometimes	**deux fois…**	**twice…**
quelquefois	sometimes	…par mois	per month
souvent	often	…par semaine	per week
tous les jours	every day		

de temps en temps	from time to time
en ce moment	at the moment

6 – Additional Vocabulary

des chansons	songs
des séries	series
en ligne	online
sur…	**on…**
Internet	the internet
mon ordinateur	my computer
mon portable	my mobile
ma tablette	my tablet

les livres….	**books…**
…d'amour	… about love
les romans…	**novels…**
… fantastiques	…about fantasy
… policiers	…about crime

les comédies	comedies
les informations	the news
les dessins-animés	cartoons
les émissions…	TV shows…

les films…	
films…	
… d'action	… about action
… d'horreur	… about horror

Geography	The Middle East	Year 8	Term 1

1 – Location of the Middle East

Key Vocabulary:

latitude: is a horizontal line that measures distance north and south of the Equator

- The Middle East is located between Europe, Asia and Africa.
- The Middle East is located in the continent of Asia.
- The Middle East is comprised of 18 countries including; Saudi Arabia, Iran, Iraq and Turkey.
- 371 million people live in the Middle East.
- 60 different language are spoken.

2 – Climates of the Middle East

Key Vocabulary:

vegetation: grassland and shrubs

- The south of the Middle East is a Hot Desert which is a dry, sandy region with little rainfall, high temperatures, and little vegetation.
- The North of the Middle East has hot dry summers when the weather is similar to a desert. Winters are warm and wetter.
- Middle East reaches 52 degrees Celsius.

3 – Adaptations to the Middle East

Key Vocabulary:

adaptation: is a change to a behaviour

nomadic: moving around and not settling in one location.

- During the summer in the Middle East it can be **dangerous** to spend more than 4 hours outside.
- Heat stroke and dehydration can be deadly!
- The **Bedouin people of the Middle East** are nomadic and live in the desert.

4 – Resources in the Middle East

Key Vocabulary:

economic: related to jobs and money.

Primary Resources: The Middle East currently holds **48%** of the world's oil reserves and **43%** of the world's natural gas.

- The economy of the UAE has grown by **231 times** since 1971 because of oil and gas.
- Cities need to **diversify t**o include the service industry and tourism like in in Dubai.

5 – Economic Opportunities

Key Vocabulary:

opportunity: is where you change something for the better.

tertiary jobs: providing a service e.g. **tourism**

- Employment is changing in the Middle East from **primary** based jobs to **tertiary industries**.
- Before oil was found in the 1970s the **HDI** of the UAE was 0.60 but after economic development it is now 0.86.

6 – Conflict in the Middle East

Key Vocabulary

conflict: is a disagreement between countries

- There has been conflict including wars in Iraq and Yemen.
- Over 100,000 people have died in the conflict.
- 17 million people are at risk of famine in the Yemen due to the fighting.
- The war is between two different ethnic groups. The Shia Muslim Houthi movement and the Sunni Muslim groups who back President Hadi.

History

How Did the Industrial Revolution Affect People?

Year 8 | Term 1

Trinity Academy Grammar

1 – What was the Industrial Revolution?

industry: making raw materials into products in factories
revolution: A rapid change in the way a country is governed or the way people live

- The Industrial Revolution began in England in 1760. It was a massive period of change in society.
- There were huge changes in transport; roads, canals and railways were all developed.
- The Industrial Revolution caused lots of people to migrate (move) very quickly from the countryside to the towns. The growth of towns and cities was called **urbanisation.**

2 – What was life like for most people?

census: an official count/survey of the population
sanitation: the process of keeping things clean and healthy

- As more factories opened throughout the 1800s, extra workers were needed who had to find somewhere to live. Developers bought large areas of land and put up cheap housing which they rented out to workers. Most of these were 'back-to-back' (two rows of terraced houses built next to each other).
- Sometimes whole families rented one room, with the very poorest living in the cellars. The houses had no plumbing. Disease spread easily.

3 – How did it effect people's health?

epidemic: an infectious disease occurring over a wide area at a particular time
cholera: an infectious disease of the small intestine

- The most common diseases which killed people were cholera, tuberculosis (TB) and smallpox.
- Diseases spread so quickly, as nobody had discovered what caused diseases and how they spread.
- During the Industrial Revolution there were some huge medical breakthroughs.
- A vaccine was developed for Smallpox . It was discovered in 1796 by Edward Jenner.

4 – What were working conditions like?

mill: a factory with machinery for making a specific product
spinning: the process of making fibres into yarn

- As the Industrial Revolution developed, huge mills were built where people would work on machines weaving the cloth.
- Wages were very low, women and children were paid less than half the wages of men. Most people worked between 12 - 16 hours a day, six days a week.
- Safety hazards were everywhere. Machines did not have safety covers and children as young as 5 were working.

5 – What was life like for the unemployed?

poor law: ensured that the poor were housed in workhouses, clothed and fed
workhouse: a building where very poor people in Britain had to work in exchange for food and shelter

- In 1834, a law called the New Poor Law was introduced. This said that people who were very poor, sick or unemployed should be looked after in a workhouse. It would provide food drink and work for its inmates.
- Almost everyone who lived during the Victorian period believed that, if someone was poor, it was their own fault. This meant the conditions in the workhouse were often very unpleasant.

6– What were the significant inventions?

invention: creating something that did not exist before
resonant: influences future generations

- The Industrial Revolution was a time a massive technological progress.
- Charles Babbage was nicknamed the father of the computer.
- George Stephenson was nicknamed the father of the railways.
- Alexander Graham Bell invented the telephone.
- Michael Faraday discovered how to generate electricity.

Literacy B	Spelling Rules - Plurals	Year 8	Term 1

Week 1 – need to know vocabulary!

vowel: a, e, i, o,u

consonant: any letter that isn't a vowel

plural: more than one

singular: just one

prefix: letters at the start of a word

suffix: letters at the end of a word

Week 2 – Just add 's'!

attempts castles carriages

If a word ends in a consonant or 'e', just add s to make the plural!

stripes hedges birds

Week 3 – Y and I

city - y +ies cities

When a word ends in 'y', change 'y' to 'I', then add –es!

family - y +ies families

Week 4 – a different word!

Some plurals need completely different words!

person people

tooth teeth

Some words stay the same!

sheep sheep

Week 5 – adding 'es'

watch +es watches

If a word ends in –ch, -sh, -x or -s you need to add – es to the end

dish +es dishes

Week 6 – f > v

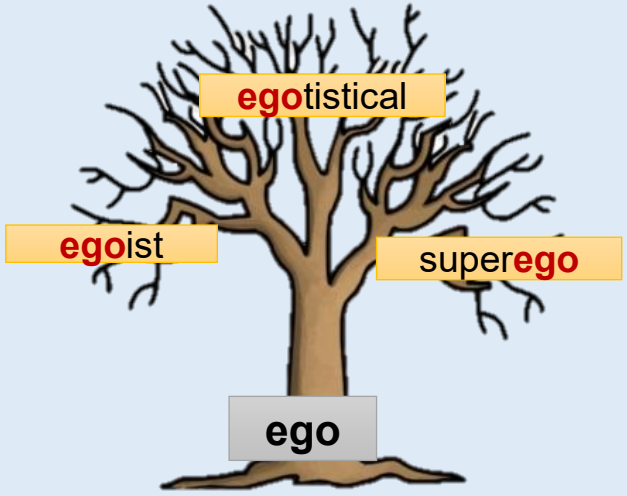
thief -f +ves thieves

Some words ending in –f have the f changed to v then add –es, but some just add –s.

roof +s roofs

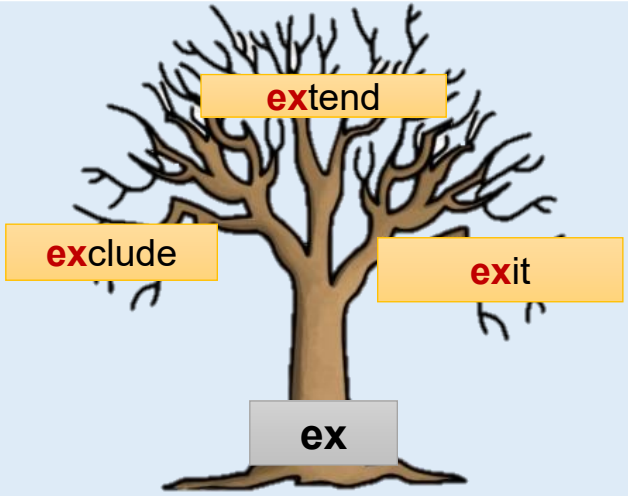
Literacy R	Prefixes and Suffixes	Year 8	Term 1

Week 1 – ego



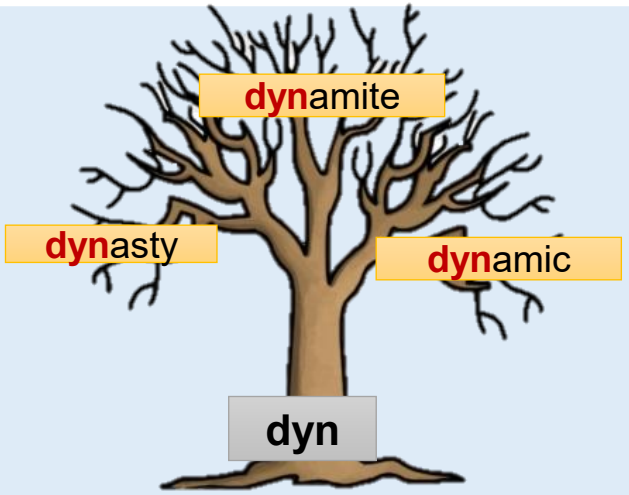
ego means ‘I’ or ‘myself’

Week 2 – ex



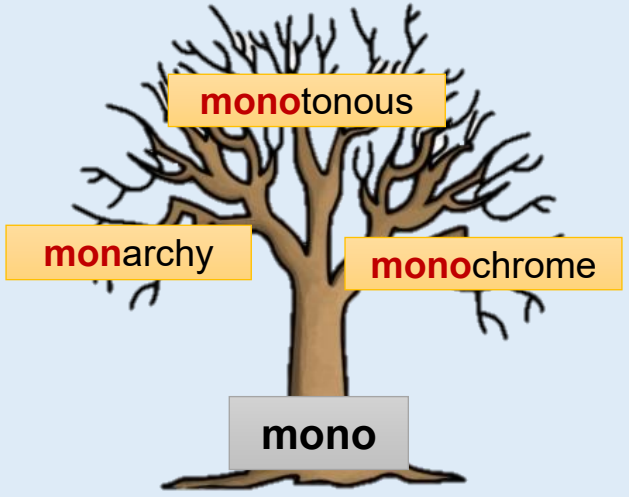
ex means ‘out of’ or ‘from’

Week 3 - dyn



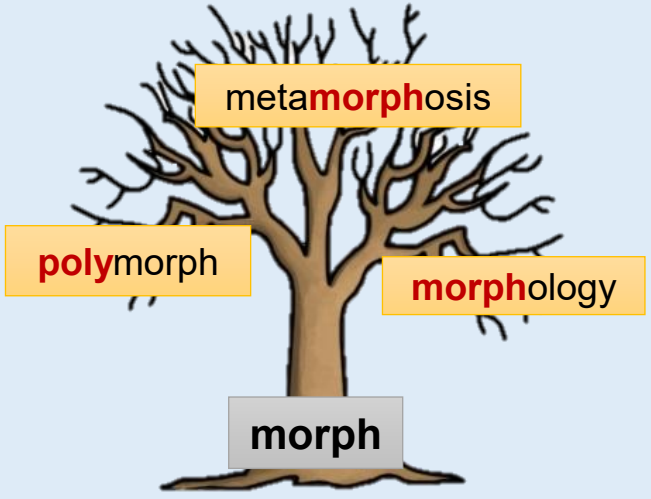
dyn means ‘power’

Week 4 – mono



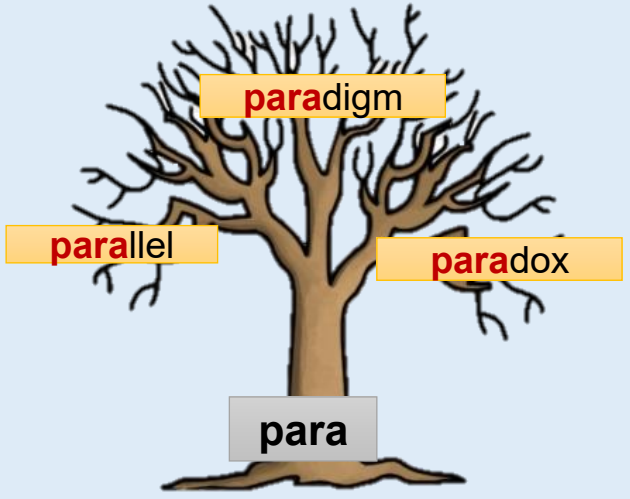
mono means ‘one’, ‘single’

Week 5 – morph



morph means ‘shape’ or ‘form’

Week 6 - para



para means ‘beside’ or ‘alongside’

Mathematics	Proportional Reasoning	Year 8	Term 1

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

1 – Indices

index: small number to the right and above the base number or variable that shows how many times the base is multiplied by itself

$4^3 = 4 \times 4 \times 4$

base: the number that is being multiplied when using an index

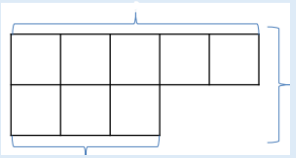
power: a way to express repeated multiplication of a number or variable using a base and an index

2 – Ratio

ratio: a comparison of two or more values. The ratio of a to b is written as **a : b** or a ratio of "five to three" is written as **5 : 3**

This means for every 5 parts of one thing, there are 3 parts of another

In ratios, all parts are of equal size, and we use bar models to represent them

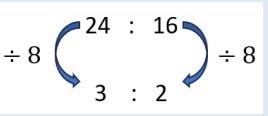


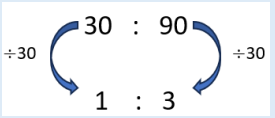
3 – Ratio

unit ratio: a ratio in the form 1 : n or n: 1. For example: 1:5

proportion: when two or more ratios are equal

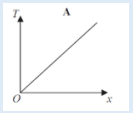
simplify: to reduce to a simpler equivalent integer form, all parts by the same number





4 – Proportion

direct proportion: relationship between two quantities where they increase or decrease at the same rate



unit price : cost of a single unit (just 1) of a product, found by dividing the total price by the number of units

currency: the money used by a country

Sterling is the British currency (£)

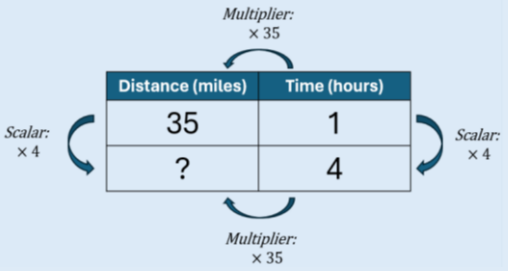
conversion: process of changing a quantity from one unit or form to another

e.g. £1 = $1.20

5 –Proportion

per: for each one of something

proportion table: a method of calculating values that are in direct proportion to each other



6 – Key Command Words

integer: a whole number e.g. 1, 2, 3, 7, 8 are whole numbers.

ascending: increasing or going up

descending: decreasing or going down

convert: to change a value or expression from one form to another e.g. I can convert a fraction to a decimal equivalent.

equivalent: having the same value e.g. one half is equivalent to two quarters

percentage: fraction out of 100. e.g. 25% is 25 out of 100

Numeracy | Year 8 | Term 1

1 – Sharing Amounts In A Ratio

Ratios compare one quantity to another and are used a lot in cooking, DIY and medicine.

e.g. To make bread you need flour and water in the ratio 5 : 3. A 400 g loaf will need how much of each?:

Flour

Water

} 400 grams

There are 5 parts flour and 3 parts water so a total of 8 parts. 400 grams ÷ 8 = 50 grams per part.
50 × 5 = 250 g of flour and 50 × 3 = 150 g of water.

2 – Metric Conversions - Distance

1 kilometre (km) = 1000 metres

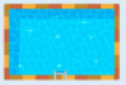
1 metre (m) = 100 centimetres
= 1000 millimeters (mm)

1 centimetre (cm) = 10 millimetres

Things you might measure

mm

cm



m

km

3 – Map Scales

A map tells you how far apart two places are.

To do this they tell you the scale such as 1: 50000. This means that 1 centimeter on the map is 50000 centimeters in real life.

e.g. the distance on the map between two marks is 4 cm and the scale is 1 : 10000. How many centimeters is this in real life?

Map		Real Life
1	:	10000
× 10000 →		
4	:	**40000**

4 – Currency Conversion

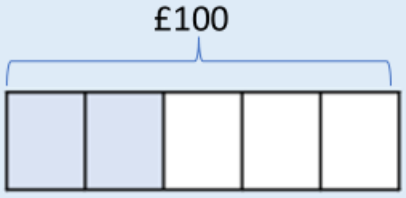
A currency is the money used in a country. e.g. the currency used in the UK is Pounds Sterling.

Currency conversion is when you buy or sell one currency with another. e.g. If you are going on holiday to Spain you need to buy Euro's with Pounds. If the exchange rate is £1 : €1.40 and you want to convert £300 you would get €420.

£		€
1	:	1.40
× 1.4 →		
300	:	**420**

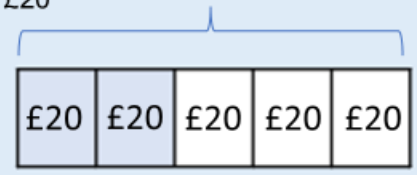
5 – Fractions Of An Amount

$\frac{2}{5}$ of £100



The £100 is split into 5 equal parts.

So £100 ÷ 5 = £20



The numerator tells you how many parts you want.

So, 2 parts = 2 × £20 = £40

6 – Ordering Fractions

To put fractions in order you need to make the denominators the same.

e.g. is $\frac{3}{5}$ of a mixture greater or less than $\frac{2}{3}$ of the mixture?

Make the denominators the same by finding the lowest common multiple of 5 and 3 which is 15.

$\frac{3}{5} = \frac{9}{15}$ $\quad\quad$ $\frac{2}{3} = \frac{10}{15}$

$\frac{10}{15}$ is greater than $\frac{9}{15}$ so $\frac{2}{3}$ is greater than $\frac{3}{5}$

Music	The Blues	Year 8	Term 1

1 – Origins of Blues Music

Key Vocabulary

Slaves: People who were taken from Africa to America to work on the farms in the southern states of America

Spirituals: Religious songs sung by slaves to keep their spirits up and to bring them closer to God

Emancipation: When the slaves were set free after the 13th Amendment was passed

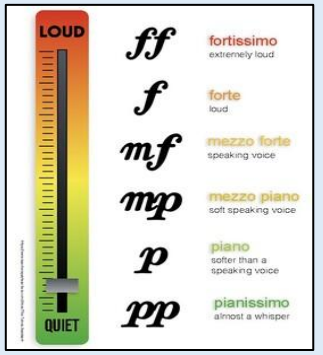
Segregation: Inequality black people suffered, even after they were freed as slaves

Great Migration: When many black people moved north looking for work

Home of the Blues: The name given to Chicago, after many blues musicians went there

2 – The Musical Elements

Key Vocabulary



dynamics: the term used for the volume

rhythm: a group of different note lengths

pitch: how high or low the notes sound

structure: how music is put together

melody: the main tune

instrumentation: the instruments used

tempo: the speed / **texture:** the different layers of sound

harmony: two or more voices singing at different pitches

3 – Features of Blues Music

Key Vocabulary

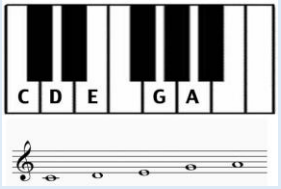
Blue Notes: Flattened notes to create a minor interval which creates a 'bluesy' sound

Improvisation: Making it up on the spot

12 Bar Blues: 12 bar chord sequence made up of just three chords

Bass line: The lowest line of music in a piece of music

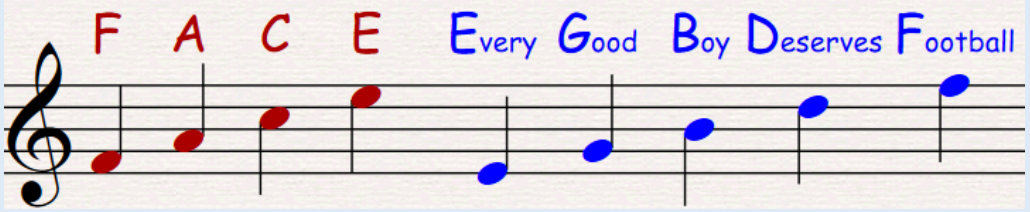
Pentatonic Scale: Group of 5 notes



4 – Pitch Recognition

Key Vocabulary

stave: The five lines we write music notes on



treble Clef: Used for high notes, tells us where the notes are on the stave

PE	Physical Education at TAG	Year 8	Term 1

1 Kit Expectations

PE kit must be brought to all PE Lesson.

- ✓ T-Shirt or Jumper (with academy logo)
- ✓ Shorts (with academy logo)
- ✓ Academy socks

We also accept

- ✓ Plain blue academy pants
- ✓ Plain blue academy leggings

- ✓ *Sick or Fit we bring our kit.*

2 Changing room expectations

1. Line up outside the changing rooms in silence.
2. Enter calmly and quietly.
3. Go straight to your peg.
4. Begin changing as soon as you reach your allocated peg.
5. Once the teacher begins the register remain in silence .
6. Answer your name, to the register by saying here Sir/Miss.
7. Remain in silence whilst preparing your answer to the PCD questions.

3 What will you study this year?

Baseline Assessment	OAA
Dance	Hockey
Fitness	Gymnastics
Handball	Cricket
Football	Netball
OAA	Athletics

4 What is a pulse raiser?

A **pulse raiser** is a type of **warm-up activity** designed to gradually increase your heart rate and blood flow to prepare your body for more intense physical activity.

5 The importance of a pulse raiser

It's a short activity that:

- Gets your heart pumping 💗
- Warms up your muscles so they're ready to move
- Prepares your body for running, jumping, or playing games

6 Examples of a pulse raiser

- **Jogging on the spot** for 1 minute
- **Star jumps** (jumping jacks)
- **Skipping** with or without a rope
- **Dancing** to your favourite song
- **High knees** (lifting your knees up while running on the spot)

RS	Hinduism	Year 8	Term 1

1 – Origins of Hinduism

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

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

polytheism: belief in more than one god
monotheism: belief in only one god
deity: a god or goddess
Trimurti: 3 forms

The Trimurti means "three forms". It is the idea that one God can be understood in three different ways. Hindus believe these three forms help explain how the universe works.

Brahma – The Creator- his job is to create the universe
Vishnu – The Preserver: his job is to look after the world
Shiva- the Destroyer: his job is to destroy the universe when the time is right

4 – Creationism

creation: to bring something into being
Aum: the sound that created the universe

Hinduism has many different creation stories but despite this they all try to explain how the universe began. The creation stories link back to the Trimurti.

One example of a Hindu creation story:

A lotus flower grew from Lord Vishnu's navel with Brahma sitting on it. Brahma separated the flower into three parts - the heavens, the Earth and the sky.

5 – The Atman

Atman: a person's soul/essence
eternal: never ending, goes on forever
Brahman: God
reincarnation: being born again

Hindus believe the atman is eternal, this means it has always existed.

Your body can change, grow or die but your atman stays the same forever and lives on through reincarnation. This means when the body dies the atman is reborn into a new life.

6 – Karma

Karma: the idea that actions have consequences
Atman: a person's soul/essence

Hindus believe:

Good actions → good results
Bad actions → bad results
These results might happen in this life or in a future life.

Hindus believe karma is not just what you do, but why you do it. For example:
Helping someone kindly = good karma
Hurting someone or acting selfishly = bad karma

Karma influences what kind of life your atman is reborn into.

Science	Reproduction, Elements, Energy	Year 8	Term 1

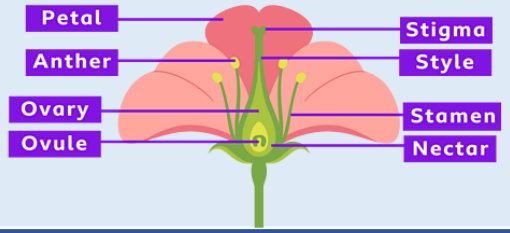
1 – Plant Reproduction

Key Vocabulary

Stigma – a part of the female reproductive system of a flower where pollen is deposited

Stamen – the male reproductive organ consisting of the anther that produces pollen and a filament that supports the anther.

Gametes- Reproductive cells

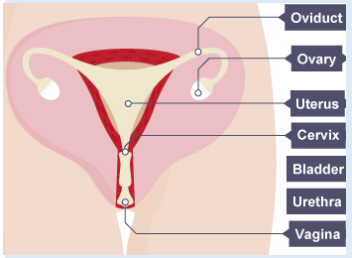


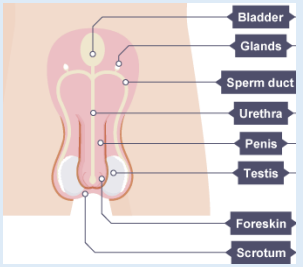
2 – Animal Reproduction

Fertilisation – the process where the nucleus of a sperm cell fuses with the nucleus of an egg cell to create a zygote

Gestation – the period during which a baby develops inside the mother's uterus

Foetus – the developing baby in the uterus from 9 weeks to birth





3 – Properties of elements

element – a substance that cannot be broken down into any other substance

compound- a substance formed when two or more different elements are chemically combined

mixtures - a substance that contains two or more different substances that are not chemically joined

pure – a substance made up of only one type of atom, element or compound

impure – contains two or more substances

4- Separation Techniques

filtration – Separates an insoluble solid from a liquid

crystallisation - the process where a soluble solid forms crystals a solvent evaporates

distillation - a separation technique used to separate liquid from a mixture

insoluble – a substance that cannot be dissolved

soluble - a substance that can dissolve

5- Energy Resources

renewable - a natural resource that can be replenished at the same rate or faster than it is used

non-renewable – energy resources that we use up faster than they can be replenished

power - the rate at which energy is transferred

examples of renewable
Solar, wind, hydroelectricity, geothermal, biomass

examples of non-renewable
Coal, oil, gas and nuclear

6- Insulation in households.

insulation - Materials which do not transfer energy easily

conduction - how heat is transferred through a substance by vibration of particles

convection - transfer of heat through the movement of fluids (liquid and gases)

Household Insulations
Cavity wall insulation
Loft insulation
Double glazing
Draught excluders

Technology	Food and nutrition	Year 8	Term 1

Hygiene and the 4C's

When preparing and cooking food we need to make sure we follow **the 4cs** in order to ***prevent*** bacteria from multiplying.

cross contamination : is when bacteria spreads from one surface to another.

chilling : food between 0°C and 5°C can help to slow down the process of bacteria multiplying.

cooking : food thoroughly to 75°C or higher can destroy harmful bacteria in foods.

cleaning : can prevent harmful bacteria from multiplying.

Hazards

contaminant : a poisonous substance that can make something unsafe

chemical hazard : his hazard involves toxic substances contaminating the food. Eg. Cleaning products.

physical hazard :this hazard involves non living items contaminating the food. (Think objects)

Allergenic hazard - this hazard involves food substances that can be harmful to people with special diets.

Microbiological hazard - this hazard involves the growth of bacteria on food.

HACCP

HACCP stands for …

Hazard - **w**hat could cause harm to a person and when?

Eg. Screws, plasters. Hair in food.

Analysis - **i**s this hazard going to seriously harm a person?

Eg. Food poisoning, chocking.

Critical - **h**ow could you prevent this from happening?

Eg. Checking machinery daily, using hair nets, blue plasters.

Control Point - **w**hat could you do if this still doesn't stop the hazard?

Eg. Wearing hats as well as hair nets.

Carbohydrates

Carbohydrates are part of the Eatwell Guide. They are a food source that give us energy.

Carbohydrates are the body's main source of **energy**, they help us to perform all our **daily functions**.

Without carbohydrates we would be very **tired**.

Starch carbohydrates give us energy for a longer period of time. Eg. Bread, pasta and potatoes.

Sugar carbohydrates give us energy for a short period of time. Eg. Biscuits, milk and fruit juice.

Proteins

Protein—represent one of three main food groups within the diet (Macronutrient).

Protein is essential for the growth, maintenance and repair of body tissue.

Repair - to restore (something damaged, faulty, or worn) to a good condition

Amino Acids – are 'building blocks' of the body.

Proteins are made up of **amino acids** – these can be thought of as the building blocks of the body.

Fats

Fats and oils—represent one of three main food groups within the diet (Macronutrient).

Function of fat—is to protect our internal organs.

Saturated fats tend to be solid at room temperature and from animal sources, while unsaturated **fats** are usually liquid and from plant sources.

Saturated fat examples: meat, butter, cream and eggs.

Unsaturated fat examples: Plants, oils, fish, seeds and nuts.

Weekly Wellbeing	Healthy Minds	Year 8	Term 1

1– Wellbeing

wellbeing: the state of being comfortable, healthy, or happy

- Wellbeing is the general term used to describe physical and mental health and happiness.
- How you view your wellbeing can change, depending on the various things that are going on in your life. It is important to look after your own wellbeing, and talk to someone if you feel that you are unwell either physically or mentally.
- It is normal to not feel well at some times in your life, and there are people who can help with this.

2– Mental Health

mental health: our emotional, psychological, and social well-being. It affects how we think, feel, and act We need to look after our mental health, as much as our physical health. Some tips for looking after your mental health include:

  - Talk about your feelings, follow a routine, talk to someone if you feel stressed - this is normal and we can help, exercise regularly, be kind to yourself and others, eat well (lots of fruit and vegetables), sleep well and don't stay up too late!

- Trinity Academy Grammar has a **ZERO TOLERANCE** approach to bullying. .
- We conduct our bullying surveys once a term, which gives all students an opportunity to say if they are experiencing bullying. BUT you should not wait for this – speak to your year leader or any trusted adult if you experience any form of bullying.
- We also have an online Call It Out system, and concerns can be dropped off in paper form at the admin window by the canteen.

3– Staying Positive on Social Media

social media: websites and applications that enable users to create and share content or to participate in social networking

- Social media is a big part of young people's lives, but it is important to remember that not everything that you see on there is a true reflection of reality.
- People only put things on social media which they want other people to see. Some people don't show the negative or tough parts of their lives.
- Remember to not overshare parts of your own life on social media – once it is online it is impossible to permanently remove it.
- If social media is making you feel sad, it is a good idea to take a break.
- Make sure you know who your followers are so that strangers cannot see what you are posting.

4 – British Values

The British values are principals that help people in the UK live respectfully and fairly.

Democracy: Everyone has a voice and a chance to share their opinion. People vote to make decisions and choose leaders.

Rule of law: Rules and law help keep people same and make sure everyone is treated fairly.

Individual Liberty: People have the freedom to make their own choices and express their beliefs as long as they don't harm others

Mutual respect: Treating other people kindly and valuing their feelings, opinions, and differences

Tolerance: Understanding and respecting that people may have different religions, celebrations and respecting others traditions.

Childline is confidential service for children and young people under 19, offering support for issues such as bullying, mental health, family problems, abuse, and more: You can contact Childline in the UK for free, 24/7 support at 0800 1111.

Trinity Academy Grammar

Year 8

Knowledge Organiser

Term 2

Your subjects are in alphabetical order.

MASTERS OF RECALL

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Art	Drawing Portraits	Year 8	Term 2

1– Vocabulary

observational drawing: drawing what you see in front of you as realistically as possible

continuous line drawing: a drawing made in one single line, keeping your pen on the paper at all times

gradient: a smooth transition from one tone to another or one colour to another

2 - Vocabulary

tone: how dark or light something is. Tone is also called shade. The parts of the object on which the light is strongest are called **highlights** and the darker areas are called **shadows.**

texture: the way something feels to the touch

mark making: the different lines, dots, marks and patterns we create in an artwork to show texture

3– Vocabulary

composition: the placement of the elements on your page

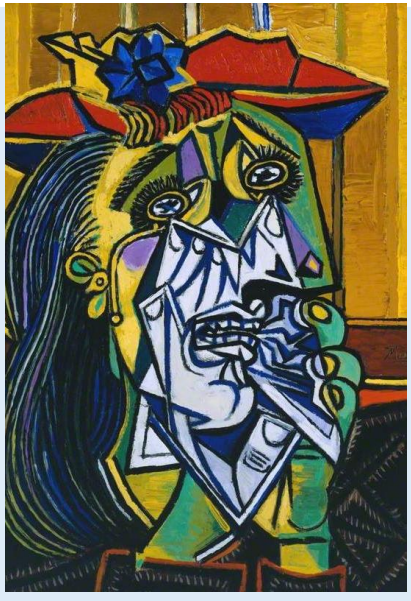
contrast: when opposite elements are arranged together (e.g. light and dark, big and small…)

abstract: art that does not attempt to represent external reality, but rather seeks to achieve its effect using shapes, colours, and textures

4- Artist: Pablo Picasso

Pablo Picasso (1881 -1973) was a Spanish Artist who lived in France. He was a founder of the Cubist movement. He changed the way artists painted portraits by breaking the portraits into geometric shapes, using shapes and colours to show emotions

The weeping woman, shows the pain and loss of a woman during the Spanish civil war



The Weeping Woman (1937)

5 – Artist: Adrian Brandon

Adrian Brandon is a New York based artist

- Famous for *Stolen*, a collection of partially filled-in paintings of Black people killed by American police
- Each portrait remains unfinished as Brandon only colours one minute for each year of the person's life before they were killed
- The white space represent the lives people could have had. He says, "I want the viewer to see how much empty space is left in these lives, stories that will never be told, space that can never be filled."

Aiyana Stanley Jones, Adrian Brandon – painted for 7 minutes

Computing	Media Animation	Year 8	Term 2

1 – Animation

Key Vocabulary

animation: a technique used to make objects and drawings appear as if they are moving

stop frame animation: a technique in which many photographs are taken of objects with small movements in-between

key frame animation: a technique which uses key frames to create the animation

2D animation: when an animation is created using a series of drawings in two dimensions e.g. flat

3D animation: when an animation is created in a computer software that allows objects to be animated in a 3D environment

2 – Software

Key Vocabulary

Scratch: a block-based visual programming language used to create games, short movies and animations by programming sprites to move

Wick editor: is a free open-source tool for creating games and animations

Blender: is a computer graphics software used for creating 3D models, animated films, visual effects and video games

3 – Tools

Key Vocabulary

sprite: a 2D graphic, for example to represent a character in a game

objects: items within your animations

rotate: moving an image around a fixed point to change the angle

scale: changing the proportions of objects e.g., making the size bigger or smaller

layers: the different levels on which you place objects

squash & stetch: the idea of applying a contrasting change to a shape to give a sense of flexibility and life in animation

4 – Creating

Key Vocabulary

frame rate: the speed at which frames progress in an animation. Measured usually as frames per second (fps)

key frame: a frame in a timeline at which a change will occur

onion skinning: makes previous frames visible to help plan for the next frame

thumbnail: a thumbnail is a very small image to show the animation scene

tweening: the process of creating the in-betweens, which are the images that go between keyframes

Drama	Macbeth	Year 8	Term 2

1 - Theatrical Skills

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

stage combat: create the illusion of physical combat without causing harm

2 – NVC and Vocal Skills

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

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

gesture: a movement made by part of the body (e.g. arms, head) to convey a character's emotions

gait: a person's manner of walking

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 – Evaluation

Evaluate your performance:

- Describe how you have used a range of performance skills and techniques in your performance.

In my performance I have used the skills of…
I chose to use these skills because…

- Identify one strength of your performance and give a reason why.

One strength of my performance was… because…

- Identify one area for improvement in your performance and give a reason why.

I would like to improve my use of… because…
I will do this in my next performance by…

English | ‘Animal Farm’: Writing | Year 8 | Term 2

1 – Form

speech: a formal talk given to an audience

formal: following accepted rules and conventions; serious in tone

audience: the people listening to or reading a text

perspective: the writer or speaker's opinion about a subject

purpose: the reason why a text is written or spoken

persuade: to convince someone to think, feel, or do something

argue: to present reasons and evidence to support a viewpoint

inform: to give facts or information about a topic

advise: to give guidance or recommendations

entertain: to amuse, interest, or engage an audience

2 – Rhetorical Methods

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

anaphora: a repeated phrase at the beginning of clauses

anecdote: a short, personal story used to show something

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

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

direct address: when a writer uses the words ‘you’ or ‘we’ to speak to the audience directly

3 – Vocabulary

manipulation (ab-noun): controlling or influencing people in a clever or dishonest way

corruption (ab-noun): dishonest or immoral behaviour by those in power

equality (ab-noun): the state of everyone having the same rights and opportunities

inequality (ab-noun): a lack of fairness where some people have more power or privilege than others

loyalty (ab-noun): strong support or faithfulness to a person or cause

betrayal (ab-noun): breaking someone's trust or being disloyal

4 – Vocabulary

conspiracy (noun): a secret plan to cause harm

egotistical (adj.): being self-centred

satirical (adj.): a sarcastic and mocking tone or presentation of events, used to make fun of something political

authority (ab-noun): the power to make decisions and enforce rules

leadership (ab-noun): the ability to guide or direct others

5 – Vocabulary

exploitation (ab-noun): taking unfair advantage of people for personal gain

privilege (ab-noun): a special advantage given to certain people or groups

censorship (ab-noun): controlling or limiting information that people can access

rhetoric (noun): the art of effective or persuasive speech or writing

6 – 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 with another verb to show possibility, ability, permission, obligation, or certainty.

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

French | Sport | Year 8 | Term 2

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 us 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

Regularity:

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

Future tense:

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

Geography	Siberian Russia – Extreme Environments	Year 8	Term 2

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.

History	What was the legacy of the British Empire?	Year 8	Term 2

1 – Key vocabulary and introduction

colony	The name for a country being ruled by another country.
empire	Groups of countries that are governed by one country.
trade	The buying and selling of goods.

The first Empire ever established was the Akkadian Empire, in Mesopotamia in 550 BCE.
The longest surviving Empire was the Roman Empire which lasted for approximately 1500 years.
Another example of an Empire is the Ottoman Empire, which was founded in 1299 CE. It was ruled by Turkish tribes from Anatolia and lasted for 600 years.

2 – North America

Native Americans: people who lived in America before the arrival of Europeans

The British wanted America as part of its empire for wealth, power and for new living space. In 1607, the first colony was founded in America, and the British went on to control 13 Colonies in America.

However, the colonisation of this land had a devastating impact on Native Americans; the British destroyed land and crops, claimed settlements, and spread diseases such as smallpox and measles which were fatal to Native Americans.

3 –Africa

Scramble for Africa: in the 1880s, European nations rushed to seize land in Africa for themselves.

Africa was rich in 'cash crops' , such as gold, rubber, timber, cocoa, spices, and coffee. Britain colonised around 30% of the African population and destroyed many traditional civilisations.

The British also used violence to gain land across Africa; for example, Britain gained control of Benin by looting its treasures and burning the city to the ground.

4 – India

East India Company: a British trading company that became very powerful in controlling India

In 1857 Indian soldiers rebelled against the British. They were motivated by religious reasons, including rumours that gun casings were greased with animal fats. There was a lot of violence, and it took Britain a year to regain control.

India gained independence in 1947. Indian soldiers had fought in huge numbers for Britain in both world wars.
Gandhi was a famous leader of the independence movement who fought for India to be able to rule themselves.

5 – Twentieth century

nationalism: when you support your own country but to such as extent that you exclude people or work against other people's interests

People in Britain's colonies had long been opposed to the British Empire and had continued to oppose British rule, often violently.

In the twentieth century many more people, began to question empires and felt that countries should be able to rule themselves.

After WW2, Britain lost power and money and could no longer afford the empire as there was so much opposition to British rule and increased nationalism across the Empire.

6– Legacy

legacy: a situation that has developed as a result of past actions and decisions

The British Empire has left a legacy that is different in the many different countries that were colonised.
The resources and materials obtained through the British colonies brought massive amounts of **wealth** to Britain. This had a negative impact on countries whose wealth and resources were stolen, affecting their ability to develop.

Britain's **museums** are still filled with things looted from places the British Empire colonised or invaded. For example, the British Museum still have items such as the Benin Bronzes (from the Kingdom of Benin, now modern-day Nigeria).

Literacy B	Spelling Rules – Homophones	Year 8	Term 2

Trinity Academy Grammar

Week 1 – buy/by/bye

buy: giving someone money for something
e.g. I am going to buy a car.

by: going past
e.g. The car drove by.

bye: what you say when you leave.
e.g. I said bye to my friends.

Week 2 – accept/except

accept: when you take something given to you
e.g. I accept this gift.

except: when something is left out
e.g. I like all cars except green ones.

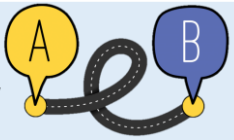
Week 3 – whether/weather

weather: what it's like outside
e.g. The weather is very cold today.

whether: making a decision between two options
e.g. I don't know whether to buy the top or the skirt

Week 4 – to/too/two

to: going somewhere
e.g. I am going to the shop.



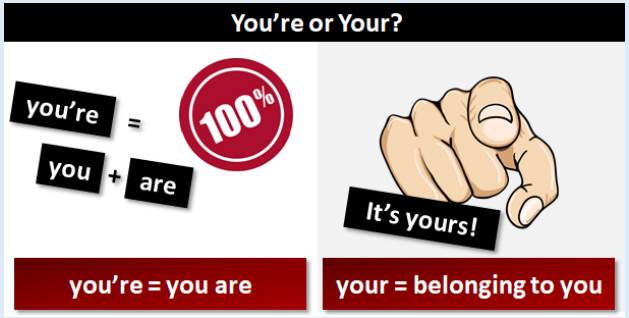
too: as well as
e.g. I have brown hair too!

two: 2
e.g. There are two apples left.

Week 5 – you're/your

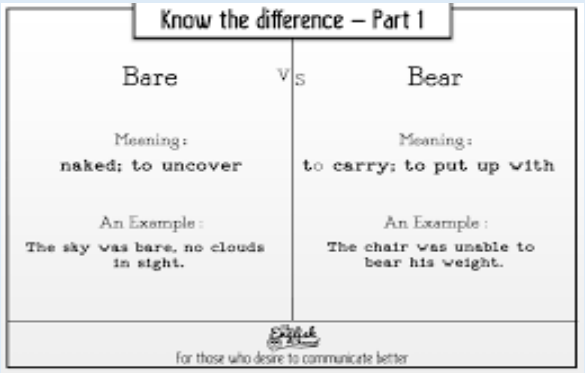
you're: contraction of you and are

your: it belongs to you



Week 6 – bare/bear

The verb *bare* has only one meaning: "to uncover."
All other uses of the verb are for *bear*: "bearing children,"

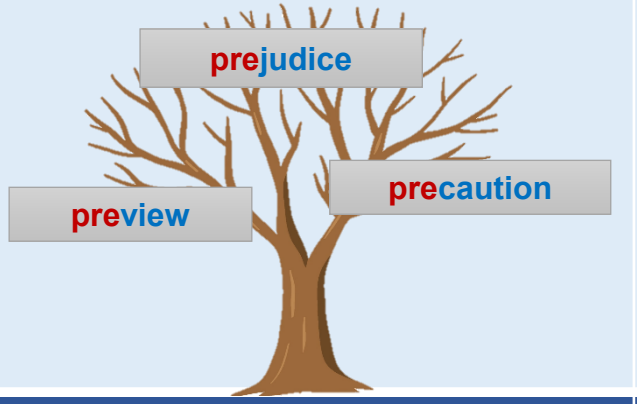


Literacy – R Band	Prefixes and Suffixes	Year 8	Term 2

pre-

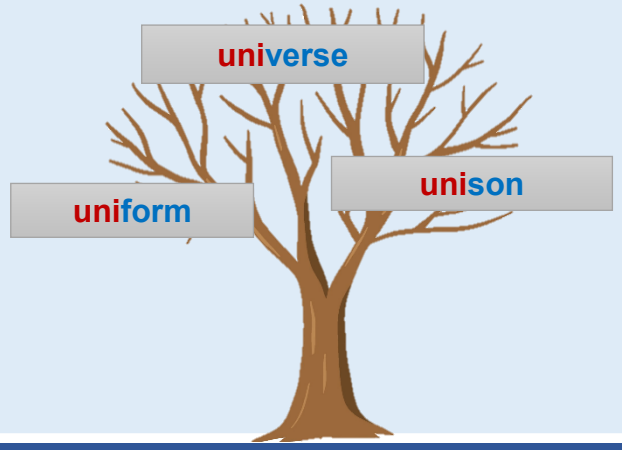
‘pre-’ means ‘before, in front’

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



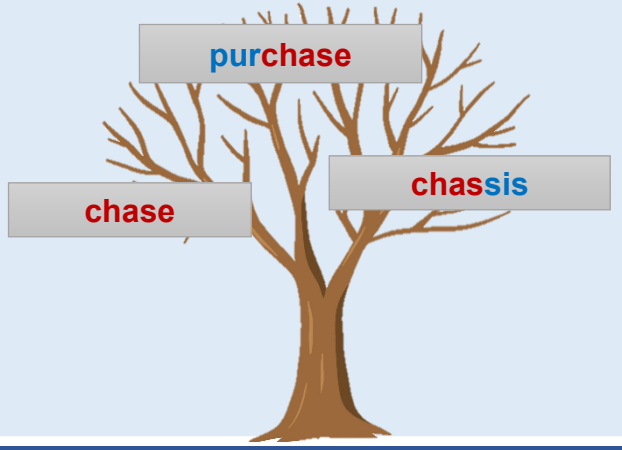
uni-

‘uni’ links with the idea of ‘one’



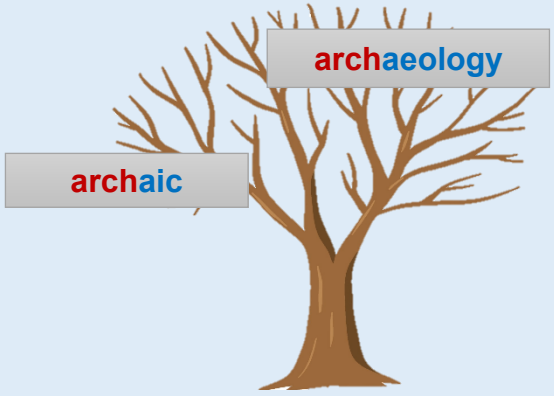
-chase

‘chase’ means to ‘take’ or ‘seize’



arch-

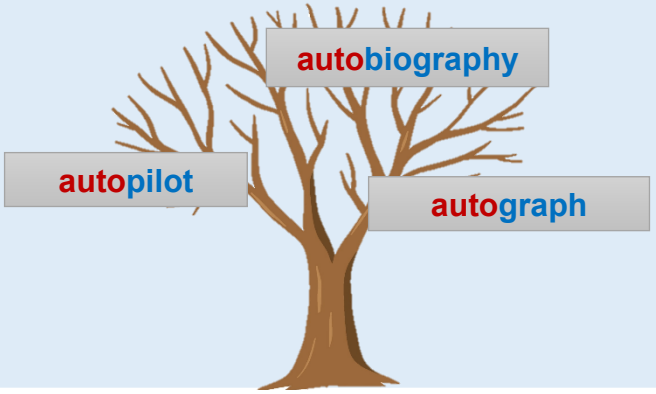
‘arch’ links with ‘ancient’



auto-

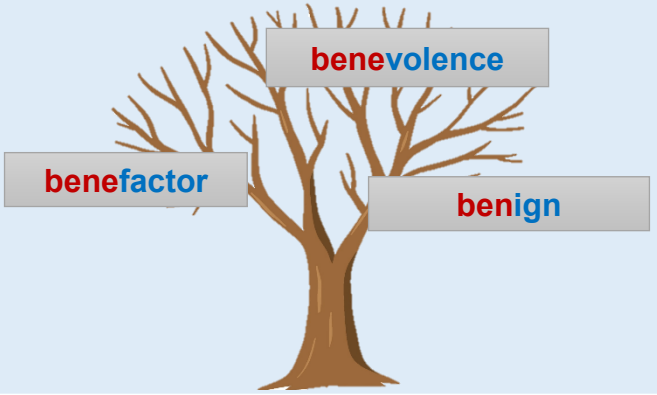
‘auto-’ means ‘self’ or ‘own’

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



bene-

‘bene’ links with ‘well’ or ‘good’



Mathematics | Representations | Year 8 | Term 2

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

1 – Expanding Brackets

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

expression: collection of terms involving variables and numbers. Example: 4a + 3b or 3y -10

simplify: write in a simpler equivalent form

substitute: where you replace a variable (letter) with a number

expand: to multiply each term in the bracket by the expression outside the bracket. For example: 4(a + 3) = 4a + 12

2 – Factorise and Solve

highest common factor: common factor of two or more integers or terms that has the greatest value or power. Also known as HCF.

factorise: writing an expression with **brackets** 4a + 12 = 4(a+3)

equation: a statement that two things are equal, it contains expressions on both sides of the equal sign. 5a + 12 = 20.

like terms: terms with the same variable(s) and power(s). For example: $5a^2$ *and* $-3a^2$

unlike terms: terms with different variable(s) or power(s). For example: 3a and 5b or $3a^2$ and 3a

solution: the answer when you solve an equation

3 – Coordinates (x, y)

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

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

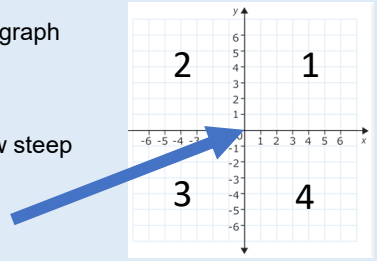
quadrant: one of four regions separated by the x and y axes

intersect: where two or more lines meet

origin: where the axes of a graph intersect. This is (0,0)

gradient : a measure of how steep a line is

Origin (0, 0)



4 – 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

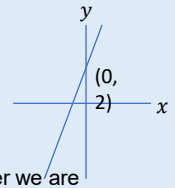
non-linear graph: doesn't produce a continuous straight line

- 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. Parallel lines have the same gradient.

5 – Linear Graphs

Example: Draw a graph of $y = 3x + 2$ for $-3 \leq x \leq 3$



Step 1 : Sketch a graph based on the gradient (3) and y intercept (0, 2).

Step 2: Create a table of coordinate values. Remember we are multiplying by 3 and adding 2.

x	-3	-2	-1	0	1	2	3
y	-7	-4	-1	2	5	8	11
		+3	+3	+3	+3	+3	+3

Step 3: Check your y coordinates are increasing by 3 each time.

Step 4: Plot the coordinates. Check it is a straight line.

6 – Key Command Words

percentage: parts per 100, the symbol is %

operation: a mathematical process e.g. +, -, ×, ÷

simplify: write it in its most compact form

solve: to find the answer of a given equation. We can solve equations by using inverse operations.

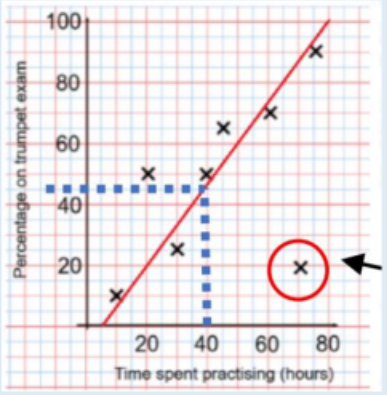
inverse: the inverse of something is its exact opposite e.g. Addition is the inverse of subtraction.

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

Numeracy | Year 8 | Term 2

1 – Using Scatter Graphs

Use the line of best fit to estimate the percentage score if you spend 40 hours practising. Answer is 45.



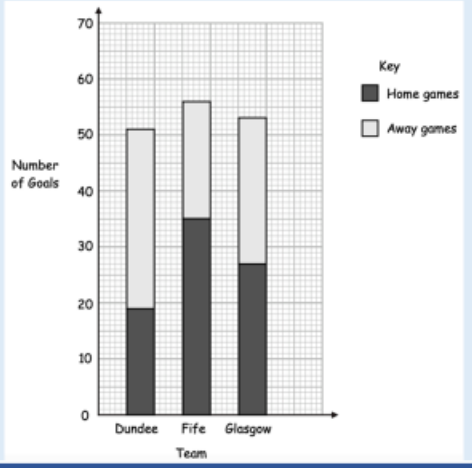
The line of best fit must be a **straight line** through the middle of the points

Outlier (anomaly in science)

2 – Using Bar Charts

Composite bar charts show bars on top of each other.

The number of goals by Dundee in away games is 51 – 19 = 32 goals

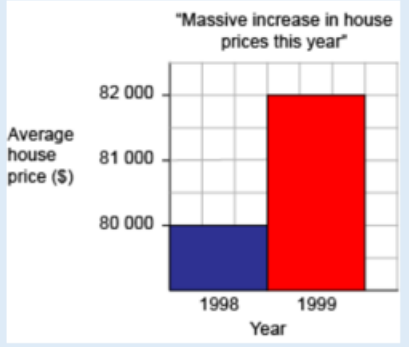


3 – Critical Thinking With Graphs

When you look at graphs read them carefully because they do not always tell the whole story. This is an example of a misleading graph.

It appears that there has been a "massive increase in house prices".

But look at the scale. There is not much difference between the two years. Just £2000.



4 – Probability

Probability is the chance of something happening.

e.g. the chance of flipping a heads on a coin.

We express the probability as a fraction, decimal or percentage. e.g. the probability of flipping a heads on a coin is

$\frac{1}{2}$ or 0.5 or 50%

Probabilities must sum to 1.

e.g. If the probability of it raining tomorrow is 0.4.

The probability of it **not** raining must be 0.6 as there is no other possible outcome

5 – Ordering Decimals

To order decimals place them underneath each other with the decimal point in the same place. Add zeros so they all have the same number of decimal places.

You can then see which order they should be placed in

e.g. order these numbers from smallest to largest

0.401 0.4 0.44 0.044

Write them underneath each other

0	•	4	0	1
0	•	4	0	0
0	•	4	4	0
0	•	0	4	4

So, the correct order is

0.044 0.4 0.401 0.44

6 – Time Calculations

The key to working with time is to understand the following

1 minute = 60 seconds

1 hour = 60 minutes

1 day = 24 hours

If you needed to catch a bus at 13.05 and it took you 13 minutes to walk to it what time would you need to start.

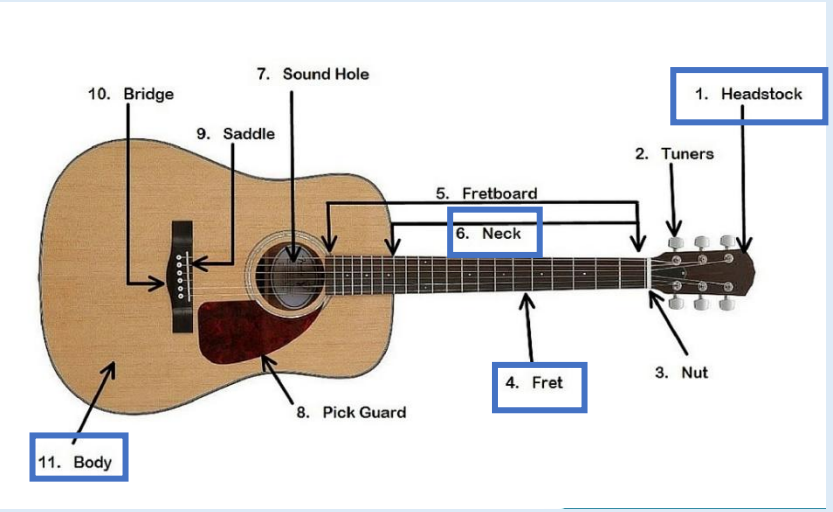
13.05 ↓ -5 minutes

13.00 ↓ -8 minutes

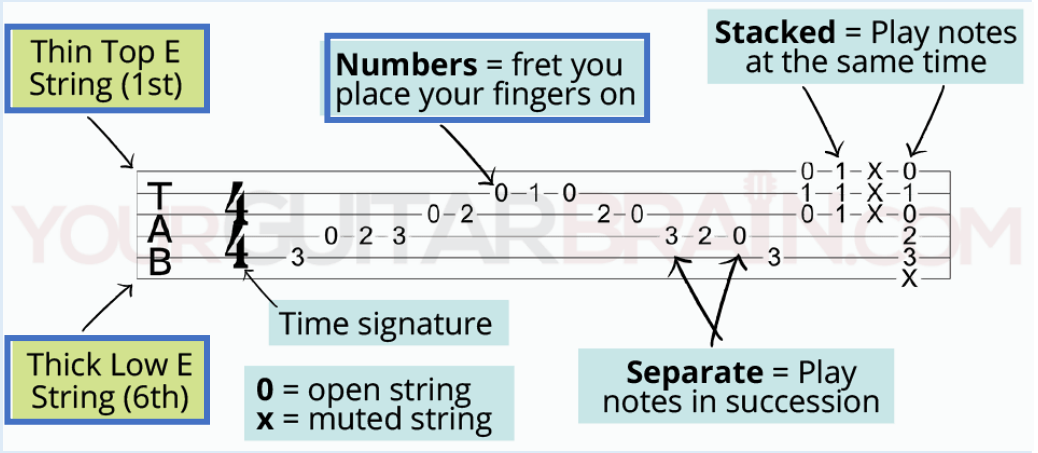
12.52

Music	Hooks & Riffs	Year 8	Term 2

1 – The Guitar



2 – Tablature



3 – Key Vocabulary

Key Vocabulary:

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. Can be melodic or rhythmic

melody: the main tune of the song, sung by the lead singer

counter-melody: a second melody which will play with the original melody to add variation

texture: the different layers of sound

4 – Lead Sheet, Notation and Arrangements

Key Vocabulary:

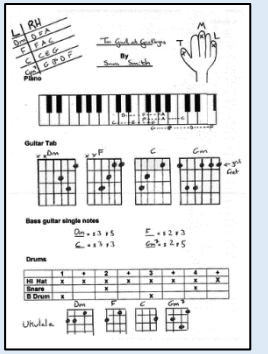
lead sheet: a form of notation which only contains the essential elements including the riff, lyrics, chords and bass line

cover: a new performance, remake or recording by someone other than the original artist

arrangement: a piece of music which has been changed to work with different performers and instruments

full score: when all parts are written meaning no interpretation. Usually used in classical music

lead sheet



PE	Fitness	Year 8	Term 2

1— Circuit Training

circuit training: a training method involving a series of exercise stations completed one after another

- Develops cardiovascular endurance and muscular endurance.
- Exercises can target different muscle groups.
- Work periods are followed by rest periods.
- Intensity can be increased by reducing rest or increasing work time.
- Examples include press-ups, squats, planks and shuttle runs.

2 – Cooper Test

cooper Test: a 12-minute fitness test used to measure cardiovascular endurance

- Aim to cover the greatest distance possible in 12 minutes.
- Measures aerobic fitness.
- Requires good pacing throughout the test.
- Results can be compared against national standards.
- Used to monitor fitness improvements over time.

3 – Fartlek

Fartlek training: a training method that varies between different speeds and intensities

- Combines jogging, running and sprinting.
- Improves cardiovascular endurance and speed.
- Mimics the demands of many team sports.
- Can be adapted to suit all abilities.
- Helps improve recovery between high-intensity efforts.

4 –Safe Exercise

<u>Golden Rules</u>

- Warm up before exercise.
- Cool down after exercise.
- Check equipment before use.
- Use correct technique at all times.
- Report pain or faulty equipment immediately.

5 - Components of Fitness

components of fitness: the different aspects of fitness needed to perform effectively in sport and physical activity

cardiovascular endurance – the ability of the heart and lungs to supply oxygen to working muscles over a prolonged period
muscular endurance – the ability of a muscle or muscle group to repeatedly contract without tiring
muscular strength – the maximum force a muscle can produce
flexibility – the range of movement possible at a joint
speed – the ability to move quickly from one place to another

RS	Hinduism	Year 8	Term 2

1 – Origins of Hinduism

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

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

polytheism: belief in more than one god
monotheism: belief in only one god
deity: a god or goddess
Trimurti: 3 forms

The Trimurti means "three forms". It is the idea that one God can be understood in three different ways. Hindus believe these three forms help explain how the universe works.

Brahma – The Creator- his job is to create the universe

Vishnu – The Preserver: his job is to look after the world

Shiva- the Destroyer: his job is to destroy the universe when the time is right

4 – Creationism

creation: to bring something into being

Aum: the sound that created the universe

Hinduism has many different creation stories but despite this they all try to explain how the universe began. The creation stories link back to the Trimurti.

One example of a Hindu creation story:

A lotus flower grew from Lord Vishnu's navel with Brahma sitting on it. Brahma separated the flower into three parts - the heavens, the Earth and the sky.

5 – The Atman

Atman: a person's soul/essence
eternal: never ending, goes on forever
Brahman: God
reincarnation: being born again

Hindus believe the atman is eternal, this means it has always existed.

Your body can change, grow or die but your atman stays the same forever and lives on through reincarnation. This means when the body dies the atman is reborn into a new life.

6 – Karma

Karma: the idea that actions have consequences
Atman: a person's soul/essence

Hindus believe:

Good actions → good results
Bad actions → bad results
These results might happen in this life or in a future life.

Hindus believe karma is not just what you do, but why you do it. For example:
Helping someone kindly = good karma
Hurting someone or acting selfishly = bad karma

Karma influences what kind of life your atman is reborn into.

Science	Digestive System, Chemical Reactions 2, Series Circuits	Year 8	Term 2

B1 – Nutrient Groups

Key Vocabulary

diet: the kinds of food that an organism normally eats

nutrient: a substance that is essential for survival

carbohydrate: a nutrient group required for energy

protein: a nutrient group required for growth and repair

lipid: a nutrient group required for insulation and energy storage

obesity: when someone has such a high excess of body fat that their health might be affected

B2 – Digestive System

Key Vocabulary

digestive system: the organ system responsible for taking in and breaking down nutrients

stomach: an organ in the body where food is stored and digested

large intestine: an organ in the body where water is absorbed into the blood

small intestine: an organ in the body where nutrients are absorbed into the blood

enzyme: a biological catalyst that speeds up chemical reactions in the body

C1: Chemical Reactions

Key Vocabulary

reactant: substances that start a chemical reaction

product: substances made in a chemical reaction

oxidation: a chemical reaction where oxygen is gained

combustion: a reaction where a substance is burned

displacement: the action of moving something from its place

thermal decomposition: heating a substance to break it into simpler substances

conservation of mass: the mass of reactants always equals the mass of the products

C2 – Chemical Equations

Key Vocabulary

element: a substance made from one type of atom

formula: chemical symbols representing the elements in a substance

compound: two or more elements chemically bonded

mass balance: a tool to find the mass of something

state symbols:

(s)	solid
(g)	gas
(l)	liquid
(aq)	aqueous (mixed with water)

P1 - Circuits

Key Vocabulary

circuit: a complete loop of wires through which an electric current can flow

component: something put in a circuit (e.g., bulb, resistor, buzzer)

series: a circuit with one loop through which current can flow

parallel: a circuit with more than one loop through which current can flow

current: the rate of flow of charge, measured in Amps

potential difference: the difference in energy between two points of a circuit, measured in Volts

P2 – Resistance

Key Vocabulary

resistance: how much the wires and components reduce the flow of charge (current)

ohms (Ω): the unit of measure for resistance

resistance (Ω) =

potential difference (V) ÷ current (A)

variable: a factor which could affect experimental results, it can be measured, changed, or stay the same

control: to keep the same

Technology	Food and nutrition	Year 8	Term 2

The eat well guide

n**utrition** – Nutrition is when we have foods that are needed for health and growth.

eatwell guide – the Eatwell guide is a policy tool which shows how we can eat healthily and have a balanced diet. The Eatwell Guide is made up of 6 parts.

- Carbohydrates
- Protein
- Fats and oils
- Fruits and vegetables
- Dairy and alternatives
- Hydration

Hydration and water

hydration— ensuring the body has enough water to function properly.

Water makes up over two thirds of our body. We need water in our bodies to:

Act as a **lubricant** for joints and our eyes.

- It is helps create saliva
- It helps get rid of waste
- It helps regulate the bodies temperature
- It also helps to carry oxygen to our lungs via the blood stream.

The body loses water all the time, when we go to the toilet, from sweat and also evaporation from skin.

Chopping skills

When using a knife, it is important to use it safely to **prevent** accidents. When carrying a knife, it should be pointed to the floor.

prevent - to avoid (try to stop) something from happening.

A **chopping board** should always be used when preparing and chopping foods.

When washing up ***equipment,*** it is important to use hot soapy water to destroy harmful ***bacteria*** on the equipment.

When washing up equipment, equipment should be placed ***upside down*** on the draining board of a sink to allow the excess water to drain away.

Calcium

Dairy products are good source of energy and protein, and contain a range of vitamins and minerals, including calcium.

The function of calcium is to maintain strong bones, and keeps our teeth strong and healthy through our development

The word **consume** means to soak up or take in.

excess— an excess is too much of a product.

deficiency—a deficiency is having too little of a product.

Vitamins and minerals

vitamins— vitamins and minerals are essential nutrients because they perform hundreds of roles in the body.

Vitamins are **chemicals** found **naturally** in food.

With the **exception of Vitamin D**, which can be manufactured through the action of sunlight on the skin, vitamins cannot be made by the body, and must be **provided by the diet**.

soluble—something that can be dissolved in a liquid, usually water.

fat soluble: vitamins are absorbed into fats in the diet and are stored in the bodies fatty tissue and live.

water soluble: vitamins are carried to the bodies tissue but are not stored.

Weekly Wellbeing	Oral Health, Drugs and Alcohol	Year 8	Term 2

1 – Good dental health

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

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
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

.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

3– Impact of Energy Drinks

energy drink: a drink which gets its energy from glucose or added ingredients

- Energy drinks have a high sugar content. Drinks that are high in sugar are often high in calories.
- Having too many calories can make you more likely to gain weight. Some energy drinks also contain caffeine.
- Caffeine is a stimulant. Drinks containing caffeine can temporarily make us feel more alert or less drowsy.
- Caffeine affects some people more than others, and the effect can depend on how much caffeine you normally consume.
- Checking the nutrition labels on drinks can help you make healthier choices.

4– Medicinal and Recreational Drugs

medicinal: something with healing properties

recreational: something done for enjoyment

- Simple painkillers and remedies an be bought directly from supermarkets and other stores.
- Prescription-only medicines, such as antibiotics, must be prescribed by a qualified health professional.
- Medicinal and recreational drugs can change the way the brain works. This effect will vary depending on the type of drug being taken, the person and the environment.
- There are four categories of recreational drugs: analgesics (heroin), depressants (alcohol), stimulants (cocaine), and hallucinogens (LSD).

5– Impact of Alcohol

alcohol: the intoxicating element of wine, beers or other alcoholic drinks

- Alcohol misuse is when you drink in a way that's harmful, or when you're dependent on alcohol.
- To keep health risks from alcohol to a low level, both men and women are advised not to regularly drink more than 14 units a week.

Risks of Alcohol Misuse

- violent behaviour and being a victim of violence
- accidents and injuries requiring hospital treatment
- serious health problems, unemployment, divorce and homelessness

6– Impact of Nicotine and E-Cigarettes

- Smoking is one of the biggest causes of death and illness in the UK.
- Every year around 78,000 people in the UK die from smoking.
- Smoking causes around 7 out of every 10 cases of lung cancer.
- Second-hand smoke comes from the smoke that the smoker breathes out.
- Breathing in second-hand smoke, also known as passive smoking, increases your risk of getting the same health conditions as smokers.
- E-cigarettes are devices that allows you to inhale nicotine in a vapour rather than smoke.
- E-cigarettes do not burn tobacco and do not produce tar or carbon monoxide.
- Using an e-cigarette is known as vaping.
- They're not completely risk free, but they carry a small fraction of the risk of cigarettes.