



# Trinity Academy Grammar

Year 9 (R)  
Knowledge Organiser  
Term 2

*Your subjects are in alphabetical order.*

## 1 – Vocabulary

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

**tone:** tone describes how light or how dark something is.

**highlight:** part of the object on which the light is strongest

**shadow:** darkest areas on a picture.

**gradient:** a smooth transition from light to dark tone or from one colour to another.

## 2 – Vocabulary

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

**mark making:** the different lines, dots, marks and patterns we create in an artwork.

**hatching:** lines are drawn in one direction.

**cross hatching:** lines are drawn in two or more directions.

## 3 – Vocabulary

**stippling:** Dots which are close together or far apart.

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

**pattern:** a design that is created by repeating a shape. It can be a design on a fabric or a natural pattern, such as the markings on an animal's fur.

## 3 – Artist: Henry Moore

Moore is a British Sculptor from Yorkshire who lived from 1898 to 1986. He is best known for his large semi-abstract sculptures of human figures which are display in public place around the world.

Henry Moore also made a lot of drawings of animals. A mixture between accurate observation and imagination his drawings use mark-making to show the 3D forms and texture of the animals.



## 4 – Artist: Ben Rothery

Ben Rothery is an illustrator who lives in London. He creates very delicate illustrations of insects and animals inspired by his love of nature.

He uses mark making to show detailed texture in his work. This includes stippling to show tone and fine detail. He works slowly and carefully in pencil and colours his work after completing the drawing. He wants to show us the beauty of the natural world and details we might not otherwise see.



## 5 – Artist: Iain Macarthur

Iain Macarthur is a British illustrator who uses complex imaginative patterns to create intricate black and white. His animal drawings take us in to a fantasy world, decorated with complex patterns.



Elephant's  
head (1982)

# Computing

## Binary

### Term 2

### Year 9

### Term 2

## 1. What is Binary?

### Key Vocabulary

**binary:** a numbering scheme in which there are only two possible values for each digit: 0 and 1

**machine code (low level programming language):** is any low-level programming language, consisting of machine language instructions, which is used to control a computer's central processing unit

**high level language:** includes Java, JavaScript, C++, Ruby, BASIC or Python and are closer to human languages and further from machine languages

```
0011110001110010111111000111  
0001111001111111111111111111  
1111011110111111111111111111  
0111011100111111111111111111  
1011001110011111111111111111  
1000011101111111111111111111  
1000100100111111000100011000  
1100110010111100010111111111  
1111000100001010111111111111  
1100001001111001000011000000
```

## 2. Binary Units

### Key Vocabulary

**bit:** is the smallest unit of data in computing. It is represented by a 0 or a 1

**bytes:** a byte is 8 binary digits working together to represent a number that can take a value between 0 and 255



## 3. Binary to Denary

### Key Vocabulary

**ASCII table:** abbreviated from American Standard Code for Information Interchange. ASCII codes represent text in computers

**unicode:** universal character encoding standard. Assigns a code to every character and symbol in every language in the world

**denary:** we use numbers based on combinations of the digits between 0 and 9. This counting system is known as decimal, denary or base 10

**hexadecimal:** is a base 16 system used to simplify how binary is represented. A hex digit can be any of the following 16 digits: 0 1 2 3 4 5 6 7 8 9 A B C D E F

## 4. Binary in Images and Sound

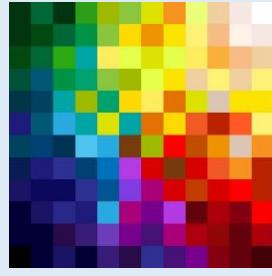
### Key Vocabulary

**pixels:** a pixel is one of the small dots or squares that make up an image on a computer screen

**resolution:** the resolution of a computer monitor or TV screen, is the number of pixels being used

**colour depth:** the number of bits used to store each pixel

**pixelated:** when an image looks blurry or stretched



## 1 – Mickey and Edward

**Mickey:** Mickey has a rough-and-tumble childhood. Mickey has a hard life, getting laid off from his industrial job, to being arrested for a crime carried out by his brother Sammy. The audience watches as Mickey is hardened by his time in prison and addicted to antidepressants. His rage at Linda and Edward for carrying on an affair, and at his mother for keeping him, drives the play's tragic finale.

**Edward:** Edward is a sincere, honest, and good-natured boy. Despite having grown up in the lap of luxury, he is not entitled or arrogant. Unlike Mickey, however, Edward gets every opportunity in life. He becomes city councilman—but also begins an affair with Mickey's wife, Linda, whom Edward has been in love with for years and this fatal mistake leads directly to the play's bloody final scene.

## 2 – Conventions of a Script

**Stage:** the space in which the performance takes place.

**Stage Directions:** instructions in the script of a play that tell actors how to enter, where to stand, when to move.

**Blocking:** the positioning of actors on stage.

**Proxemics:** the distance between actors and what this tells the audience about the relationship.

**Dialogue:** the words that the actors speak.

**Wings:** the parts of the stage that you enter and exit from.

**Director:** a person who supervises the actors and other staff in a play.

## 3 - Characterisation Skills

### Key Vocabulary

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

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

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

**gait:** a person's manner of walking

**pitch:** the degree of highness or lowness of the voice

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

**intonation:** the rise and fall of the voice in speaking

## 4 – Theatrical Techniques

**Status:** our status is the level of power or influence we have over a social group or in a professional setting.

**Stereotype:** a stereotype is a generalised view of a group of people.

**Monologue:** a solo speech.

**Split Stage/Cross Cutting:** where two scenes happen on stage at the same time. Cross-cutting is how you switch between the scenes, one will freeze while the other acts and vice versa.

**Narration:** The action or process of telling a story.

## 1 – Methods

**formality:** speaking with seriousness and by the rules  
**tone:** the attitude of the writer shown through their writing

**direct address:** when a writer uses the words 'you' or 'we' to speak to the audience directly  
**rhetorical question:** a question asked to make the audience think

**Aristotelian triad:** the three modes of persuasion devised by the ancient Greek philosopher Aristotle.

**logos:** using reason and logic

**pathos:** appealing to emotions

**ethos:** appearing credible (believable) and trustworthy

## 2 – Vocabulary

**faithfully (adverb):** if you do not know the name of the person, end a letter with 'yours faithfully.'

**sincerely (adverb):** if you know the name of the person, end the letter with 'yours sincerely'

**perspective (noun):** someone's viewpoint/opinion on something

**salutation (noun):** the way you greet someone in a letter

## 3 - Grammar (Paragraphing)

**paragraph:** a paragraph is a group of sentences all related in some way

**A paragraph should:**

- Introduce the paragraph's main point
- Be at least three or four sentences long
- There should be at least two to three paragraphs per page

**When should I start a new paragraph?**

- Start a new paragraph for each new point or stage in your writing

## 4 - Grammar (Semi Colon)

**Use a semi-colon to link two independent (main) clauses that are about the same topic. This is instead of a full stop.**

e.g. Some people write with a computer; others write with a pen or pencil.

## 5 - Formal Letter Writing

**When writing a formal letter your ideas should be clear, precise and written in the correct tone. You must remain formal and polite, avoiding the use of emotive language.**

**A formal letter should have:**

- Addresses and date
- Start with 'Dear' before the name of the person that you are writing to
- a reason for writing / ask about the person you are writing to / invite the person to write back
- A summary where you say goodbye to the reader

## 6 – Article Writing

**Key vocabulary:**

**headline:** the title of an article

**subheading:** a sentence that outlines the article placed under the headline

**article:** non-fiction writing about news, topics and ideas

**Top Tips for article writing:**

- Ensure the article is led by factual information
- Use the 5 Ws to help structure the article: who, what , when, why and how .

## 1 – Social Media Vocabulary

un adolescent	a teenager	s'abonner	to subscribe	j'adore	I love	amusant/ <b>e</b>	funny
un étranger	a stranger	acheter	to buy	j'aime	I like	barbant/ <b>e</b>	boring
l'écran	screen	cliquer	to click	je déteste	I hate	divertissant/ <b>e</b>	entertaining
l'appareil	device	se connecter	to login	je n'aime pas	I don't like	effrayant/ <b>e</b>	scary
le harcèlement	bullying	enregistrer	to save	j'aime bien	I quite like	émouvant/ <b>e</b>	moving
l'inconvénient	disadvantage	envoyer	to send	je préfère	I prefer	fascinant/ <b>e</b>	fascinating
l'internet	internet	éviter	to avoid				
le mot de passe	password	mettre	to put	parce que c'est because it is	because it is	great	
le vol d'identité	identity theft	poster	to post	car c'est	car c'est	stupid	
trust	trust	revoir	to receive			rubbish	
ICT	ICT	supprimer	to delete				
identity	identity	trouver	to find				
safety	safety	surfer	to browse				
social media	social media	tchatter	to chat				
les réseaux sociaux	social media	télécharger	to download				
l'ordinateur	computer	utiliser	to use				
le portable	mobile						

## 2 – Giving opinions

j'adore	I love	amusant/ <b>e</b>	funny
j'aime	I like	barbant/ <b>e</b>	boring
je déteste	I hate	divertissant/ <b>e</b>	entertaining
je n'aime pas	I don't like	effrayant/ <b>e</b>	scary
j'aime bien	I quite like	émouvant/ <b>e</b>	moving
je préfère	I prefer	fascinant/ <b>e</b>	fascinating
parce que c'est because it is	because it is	great	
car c'est	car c'est	stupid	
		rubbish	
à mon avis	in my opinion	passionnant/ <b>e</b>	exciting
je pense que	I think that	très	very
		un peu	a bit
When using an opinion phrase, it must be followed by the <b>infinitive</b> form of the verb. e.g. J'aime <b>regarder</b> les films d'action. = I like <b>to watch</b> action films.			

## 3 – Infinitive Structures

Il faut = it is necessary to (you must)	Il faut = it is necessary to (you must)
on peut = you can	on peut = you can
Il vaut = it is better to	Il vaut = it is better to
These expressions are always followed by a verb in the infinitive. For example:	

Il faut respecter les autres. - You must respect others.	Il faut respecter les autres. - You must respect others.
On peut utiliser un portable. - You can use a mobile.	On peut utiliser un portable. - You can use a mobile.
Il vaut tchatter avec les amis. - It is better to chat with friends.	Il vaut tchatter avec les amis. - It is better to chat with friends.
We can also make these expressions negative:	We can also make these expressions negative:
Il ne faut <b>pas</b> = you must not	Il ne faut <b>pas</b> = you must not
On ne peut <b>pas</b> = you cannot	On ne peut <b>pas</b> = you cannot

## 4 – The Present Tense (ER verbs)

## 5 – The Present Tense (IR and RE verbs)

## 6 – The Perfect Tense

To **conjugate** verbs in the present tense we remove the –infinitive ending and add the correct ending to match the person doing that action:

Pronoun	ER verb ending	Example tchatter = to chat
je	e	je tchattere
tu	es	tu tchattes
il/elle/on	e	il/elle/on tchatte
nous	ons	nous tchattons
vous	ez	vous tchattez
ils/elles	ent	ils/elles tchattent

To **conjugate** verbs in the present tense we remove the –infinitive ending and add the correct ending to match the person doing that action:

Pronoun	IR verb ending	RE verb ending
je	is	s
tu	is	s
il/elle/on	it	-
nous	issont	ons
vous	issez	ez
ils/elles	issent	ent

1. A pronoun or noun (e.g. je, nous, or a name)
2. The auxiliary verb (usually avoir, but sometimes être)
3. A past participle (e.g. regardé, fait)

## Past participles

Some past participles are **irregular**, for example:  
 faire → fait (did)  
 voir → vu (saw)

For verbs which **take être** the past participle must agree with the subject. For example:

elle est **allée** – she went  
 nous sommes **allés** - we went  
 attendre → vous attendez = you wait/you are waiting

regarder → je regarde = I watch/I am watching  
 finir → nous finissons = we finish/we are finishing  
 attendre → vous attendez = you wait/you are waiting

## 1. Impacts of Fossil Fuels

### Key Vocabulary:

**fossil fuels:** are energy resources formed from dead animals and plants, such as oil, coal and gas

## 2. Global Energy Use

### Key Vocabulary:

**consumption:** the usage of resource

- **Advantages of burning fossil fuels:** they can be burned at all times; jobs are created for people.
- **Disadvantages of burning fossil fuels:** pollution is created; mining for the fuels are dangerous; they cause breathing problems for living creatures; they will run out.

## 3. Energy in Yorkshire

### Key Vocabulary:

**deindustrialisation:** the moving of industries abroad

- In 2017, non renewables were 47.5% of UK energy.
- In 2017, renewables were 29% of UK energy.
- In 2017, nuclear were 21% of UK energy.
- The UK imports around 40% of its energy. In the UK we are expanding our technology to focus more on renewable energies.
- Many industries have left the UK because labour is cheaper in countries like China and India.

## 4. Nuclear energy

### Key Vocabulary:

**nuclear energy:** uses uranium to power a thermal power plant

## 5. Wind and solar energy

### Key Vocabulary:

**sustainable:** preserving resources now so future generations can benefit as well

## 6. Energy reduction

### Key Vocabulary:

**energy efficiency:** using as little energy as possible and reducing energy waste

- 10% of heat is lost through single glazed window
- 25% of heat is lost through an uninsulated roof.
- Methods of energy reduction: loft insulation; double glazed windows; take shorter showers; smart meters; turning off electrical equipment.
- Britain's first solar powered bus– number 52 bus in Brighton has solar panels on the roof.
- available to 598 million people in Africa.

## 1 – Long-term Causes of War

### Key Vocabulary

cause: the reason for something

conflict: a disagreement or argument

long-term: something which happens for a long time

### In 1938:

- In September Germany took the German-speaking part of Czechoslovakia – the Sudetenland.
- The Munich Agreement made Germany promise not to take more land.
- On 1<sup>st</sup> September Germany invaded Poland. This caused World War 2 between Britain and Germany.

## 2 – Phoney War

### Key Vocabulary

phoney: not real

stalemate: no-one is winning

### Between September 1939 and April 1940, there was very little fighting. A stalemate was happening.

- The Phoney War ended when Germany invaded Norway by sea.
- Shortly after, Germany launched an attack on France and Belgium as well and so the war continued.
- At this time, Winston Churchill became the British Prime Minister in May 1940.

## 3 – Dunkirk

### Key Vocabulary

defeat: to lose

evacuation: to remove someone from a dangerous situation

### victory: to win

- Dunkirk is a beach in France where an evacuation happened in May 1940 and lasted for 10 days.
- The British Expeditionary Force was evacuated when the Nazis attacked British and French soldiers.
- It is debated whether Dunkirk was a victory or a defeat for the British and French.

## 4 – The Blitz

### Key Vocabulary

bombing: to attack someone using bombs

raid: a surprise attack on an enemy

- The Blitz was an air raid on the British by the Germans between September 1940 and May 1941.
- The German air force (the Luftwaffe) dropped bombs on important areas including cities such as London.
- The British air force (the RAF) bombed Germany's capital – Berlin – in revenge.
- The Blitz caused the evacuation of children in Britain.

## 5 – Evacuations

### Key Vocabulary

evacuate: to move someone for their protection

countryside: fields and farmland



countryside

## 6 – Pearl Harbour

### Key Vocabulary

harbour: a place on the coast where ships come

military: related to the army

navy: soldier at sea

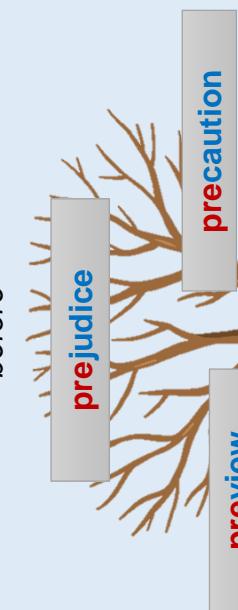


harbour

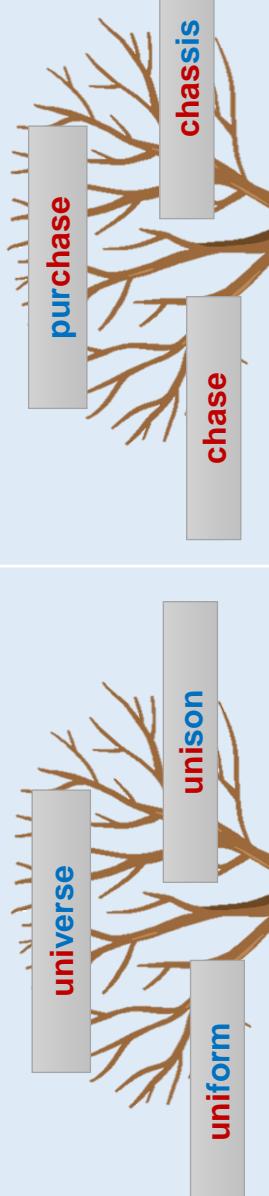
- In December 1941, the Japanese launched a military attack on Pearl Harbour.
- Pearl Harbour was owned by America.
- The attack caused America to enter World War 2 on the side of Britain, France and Russia.

**pre-**

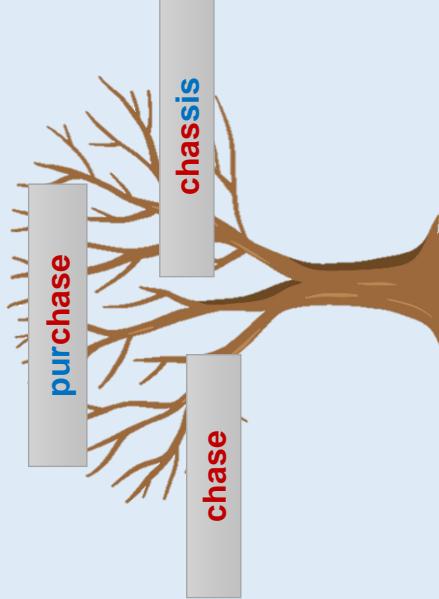
'pre-' means 'before, in front'

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

'uni' links with the idea of 'one'

**-chase**

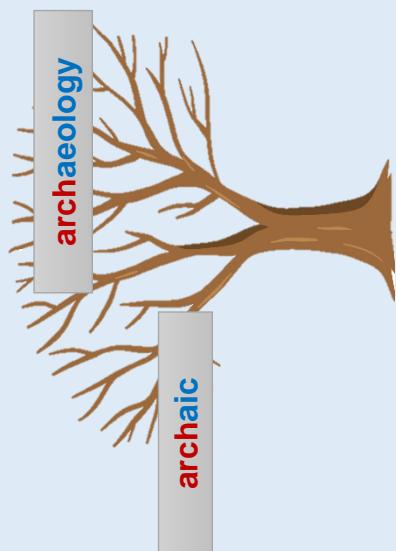
'chase' means to 'take' or 'seize'

**arch-**

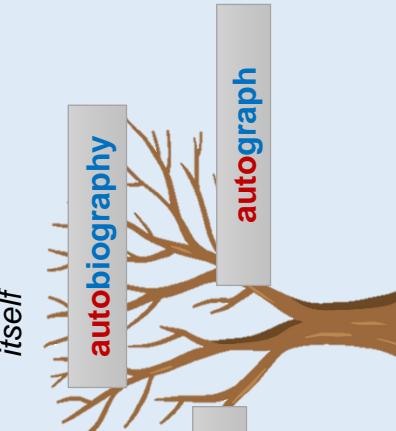
'arch' links with 'ancient'

**auto-**

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

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

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

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

# Mathematics

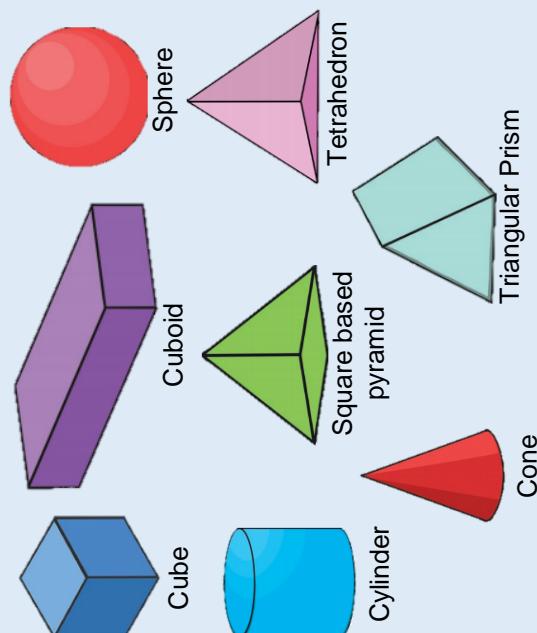
# Constructing in 2 and 3 Dimensions

# Year 9

# Term 2

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

### 1 – 3D Shapes



### 2 – Geometric Language

**faces:** flat surfaces on a solid 3D shape

**vertex:** a corner where two or more line segments meet. A vertex can be on a 2D or 3D shape.

**edge:** a line segment that joins two vertices together

**prism:** a 3D shape that has identical end faces, flat faces and the same cross section all along its length

**cross section:** of a prism is the shape revealed by a straight cut through it

**polygons:** 2D shapes made up only of straight sides

**plan view:** view of an object from above it

**side elevation:** looking at an object from a side

**front elevation:** looking at an object from the front

### 3 – Volume and Surface Area

#### Key Vocabulary

**volume:** the amount of space that a 3 dimensional object takes up

**surface area:** the total area of all faces of a 3 dimensional shape.

**net:** a pattern made up of polygons that you can cut and fold to make a model of a solid shape.

- To find the **volume** of a **prism** you multiply the area of the **cross section** by the depth
- Volume is measured in **cubic** units e.g.  $\text{cm}^3$
- Surface area is measured in square units e.g.  $\text{m}^2$

### 4 – Congruency

**congruent:** shapes that are exactly the same size

To prove that two triangles are congruent you must use one of the four reasons:

- SSS** (Side Side Side) – All the sides are the same size.
- ASA** (Angle Side Angle) – An angle, a side, and another angle are the same size
- SAS** (Side Angle Side) – A side, an angle and another side are the same size
- RHS** (Right angle Hypotenuse Side) – There is a right angle and the hypotenuse and another side are the same size.

### 6 – Cube Numbers

**locus:** a path of points that follow a rule

**loci:** the plural of locus

**equidistant:** points are the same distance from a point

**bisecting:** an angle or a line is to cut it into two equal parts

**perpendicular:** lines that intersect at a right angle

Some examples of constructions are:

- An angle bisector
- A perpendicular bisector
- Perpendicular line from a point
- Constructing different types of triangles

$1^3 = 1$

$7^3 = 343$

$8^3 = 512$

$9^3 = 729$

$10^3 = 1000$

$11^3 = 1331$

$12^3 = 216$

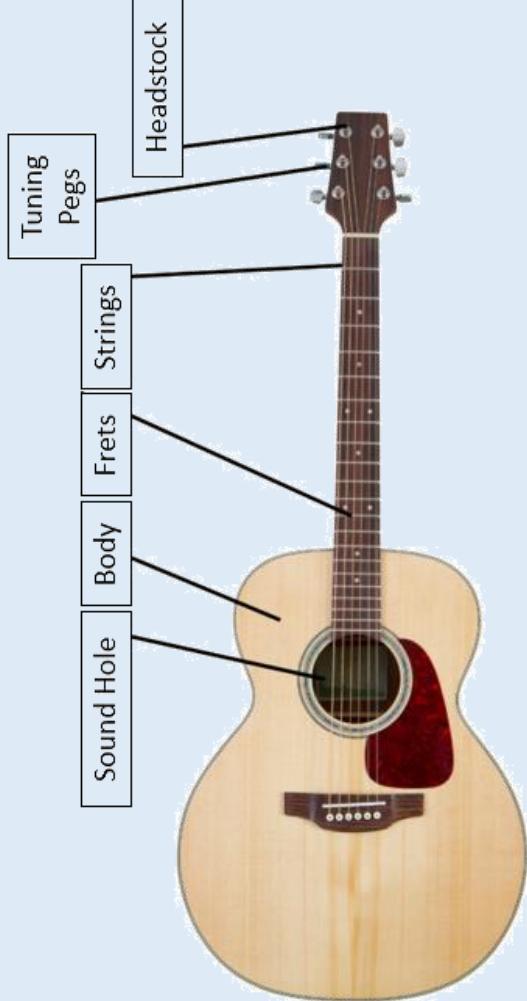
$13^3 = 2197$

$14^3 = 2744$

$15^3 = 3375$

$16^3 = 4096$

## 1 – The Parts of the Guitar



## 2 – Key Vocabulary

<b>lyrics</b>	the words of a song
<b>hook</b>	the 'catchy' section of a song which the listener will remember.
	Can be melodic, rhythmic or lyrical
<b>riff</b>	a repeated musical pattern usually used in the intro or instrumental sections. Can be melodic or rhythmic
<b>chord</b>	two or more notes played at the same time
<b>plucking</b>	playing an individual string
<b>strumming</b>	playing multiple strings at the same time

## 3 – The Musical Elements

**Stacked** = Play notes at the same time

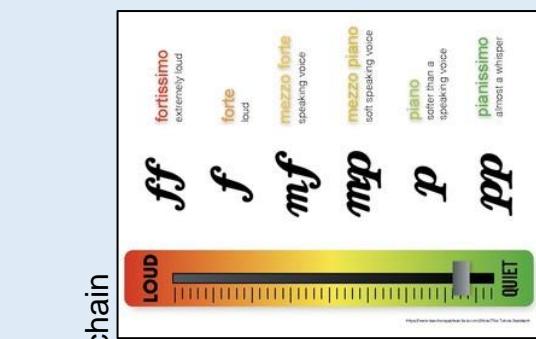
**Numbers** = fret you place your fingers on

**Time signature**

**Thin Top E String (1st)**

**Thick Low E String (6th)**

**Separate** = Play notes in succession



- Dynamics:** the term used for the volume
- Rhythm:** different note lengths played in a chain
- 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

## 1 – Dribbling

### Key Vocabulary

**ability:** the ability to change direction quickly

**step-over:** moving one foot over the ball without

taking it then taking the ball in the opposite direction.

Technique for a step-over:

- Roll one foot over the top of the ball
- Feint body in the same direction
- Push ball in the opposite direction
- Accelerate away from defender



## 2 – Passing

### Key Vocabulary

**drilled pass:** passing the ball with power using the laces

Technique for a drilled pass:

- Non kicking foot by the side of the ball
- Arms out for balance
- Keep chest and head over the ball
- Strike the ball with the laces



## 3 – Receiving

### Key Vocabulary

**scan:** looking behind and around for space and players

**moving screen:** turning with the ball without touching it.

Technique for moving screen:

- Shield the ball from the defender
- Open the body up to be side on
- Allow the ball to roll across the front of it
- Accelerate away from defender



## 4 – Defending

### Key Vocabulary

**overload:** having more defenders than attackers in an area.

**prevent:** to stop the attacker from scoring a goal.

Technique to curl the ball:

- Place non kicking foot by the ball
- Make contact on the outside of the ball with the inside of the ball
- Aim to apply spin to the ball



## 5 – Shooting

### Key Vocabulary

**curl:** curving the ball around an object.

**placement:** the action of placing something somewhere specific.

Technique to curl the ball:

- Move up the pitch as a team
- Make the pitch as big as possible
- Support teammates who have the ball

**formation:** the arrangement of players on the pitch



## 6 – Positional play

### Key Vocabulary

**In possession:** Have all players between the ball and your goal

**Out of possession:** Make the pitch small (compact)

Technique to curl the ball:

- Move up the pitch as a team
- Make the pitch as big as possible
- Support teammates who have the ball

## Term 2

### Netball

### PE

### Year 9

## 1 – Passing

### Bounce pass teaching points:

- bounce from chest height
- ball should hit the floor two-thirds of the distance towards the receiver

### Shoulder pass teaching points:

- from head height,
- opposite foot forward,
- elbow in

### Overhead pass teaching points:

- above head, elbows in
- spread fingers around the ball
- used for longer distance.

## 2 – Footwork

### Key Vocabulary

**running footwork:** to receive the ball on the move landing 1, 2 then pass the ball before the third step.

### Teaching point for footwork:

- Turning in the air before landing is beneficial because it saves time so you don't have to land and then pivot.



## 3 – Attacking

### Key Vocabulary

**counter attacking:** When the defending team win the ball unexpectedly and immediately attack, taking advantage of the fact that there will be gaps on the court

- court linkage:** this is when you make the most of the space on the court and the position of team members by passing the ball down the court. For example, GK – GD – WD – C – WA – GA – GS.



## 4 – Defending

### Key Vocabulary

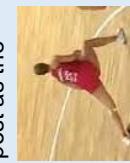
**blocking:** to face your player front on, and use quick side steps to prevent them running past you



## 5 – Shooting

### Key Vocabulary

**split landing:** to receive the ball in the goal circle in a lunge, to then use the foot closest to the post as the landing leg to get a closer shot



## 6 – Positional Play

### Key Vocabulary

**Shooting teaching points:**

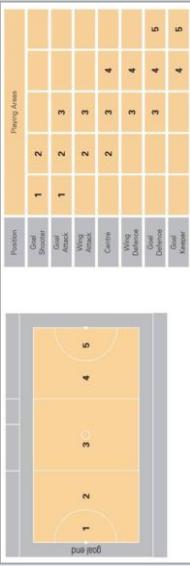
- ball held by dominant hand and high above the head
- second hand is placed at the side of the ball to steady its position
- aim for a point above the ring to gain height. Do not let the ball drop behind the head
- Flick wrists to put a backward spin on the ball

## 7 – Positional Play

### Key Vocabulary

**Stages of defence:**

- Stage 1: mark the player even when they do not have the ball. Stay close to your opposing player.
- Stage 2: mark the ball. 1m away from the landing foot. Arms up.
- Stage 3: mark the space. Time your run to intercept a pass.



## 1 – Wesak

### Key Vocabulary

**festival:** a period of celebration for religious reasons

**enlightenment:** the Buddhist belief that one has escaped suffering

**temple:** a Buddhist place of worship and reflection

**monasteries:** places where monks live



- There are many Buddhist festivals, but Wesak is one of the most important.
- Wesak celebrates the birth, Enlightenment and death of the first Buddha: Siddartha Gotama.
- Wesak is held on the day of the full moon in either May or June.
- During Wesak, people visit temples and monasteries and show their respect to the Buddha.

## 2 – The 5 Precepts

### Key Vocabulary

**precept:** a rule to live by

• The 5 precepts are a set of rules which Buddhists try and live by.

• These rules help them stay on the right path and help them be the best people they can be.

### The 5 precepts are:

1. I will avoid taking life
2. I will avoid what is not given
3. I will avoid harmful sexual activity
4. I will avoid saying what is not true
5. I will avoid drinking alcohol and taking harmful drugs

## 3 – Denominations of Buddhism

### Key Vocabulary

**denomination:** a branch of a religion

**meditation:** focusing ones mind



**monks / nuns:** a man or woman who dedicates their life to their religion

- There are two main denominations in Buddhism: Theravada and Mahayana.
- Mahayana Buddhists believe in Bodhisattvas: people who have become enlightened but remain on earth to guide others.
- Theravada Buddhists follow the original teachings of the Buddha and live a very simple life.
- Theravada Buddhists prioritise meditation over everything else and many choose to become monks or nuns.

## 4 – Life and Death

### Key Vocabulary

**monk**

**samsara:** the cycle of life, death and rebirth

**karma:** the sum of a person's actions

**nirvana:** a state of perfect peace

- Buddhists believe in samsara. At the end of life, a person is reborn again.
- How they are reborn depends on the karma they have built up in their lives.
- All rebirths involve some form of suffering.
- A Buddhists ultimate aim is to become enlightened.
- Once they have reached enlightenment, they escape the cycle of samsara and reach a state of perfect peace known as Nirvana.

## B1 – The Nervous System

## P1 – Electricity in Parallel Circuits

### Key Vocabulary

**neurone:** a single nerve cell that carries electrical impulses

**central nervous system (CNS):** the brain and the spinal cord

**effector:** a muscle or a gland that carries out a response

**sensory neurone:** pass impulses from a receptor to the CNS

**motor neurone:** pass impulses from the CNS to an effector

**receptor:** detects changes in the environment

## C1 – Chemical Equations

## P1 – Electricity in Parallel Circuits

### Key Vocabulary

**chemical reaction:** a process which involves the rearranging of atoms to form new a substance

**symbol equation:** using symbols to represent the reactants and products in a reaction

**state symbol:** a symbol used to tell you the state of matter of a substance e.g., solid (s), liquid (l), gas (g) and aqueous (aq).

**reactant:** the substances at the start of a reaction

**product:** the substances formed at the end of a reaction

### Key Vocabulary

**parallel circuit:** a circuit that contains multiple loops

**potential difference:** a measure of difference in energy between two points in a circuit

**current:** the rate of flow of charge

**ammeter:** equipment used to measure the current which is place in series in a circuit

**voltmeter:** equipment used to measure the potential difference and is placed in parallel to a component in a circuit

## P1 – Electricity in Parallel Circuits

### Key Vocabulary

**reflex/involuntary response:** a response that doesn't involve the brain which protects the organism from danger

**coordinated response:** a voluntary action that has been decided by the brain

**stimulus:** a change in the external environment

**sensory organ:** an organ containing receptors e.g. eyes, ears, tongue, nose and skin

**reflex arc:** the pathway an impulse takes during a reflex

**balanced equation:** a symbol equation to show the same number of atoms of each element in the reactants and products

## C2 – Conservation of Mass

## P2 – Electromagnets and Motors

### Key Vocabulary

**the law of conservation of mass:** matter is neither created nor destroyed during chemical or physical changes

**compound:** a substance containing 2 or more different particle chemically joined together

**balanced equation:** a symbol equation to show the same number of atoms of each element in the reactants and products

### Key Vocabulary

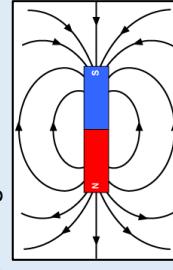
**magnetic field:** the region around a magnet where attraction or repulsion occur between magnetic materials

**wire coil:** continuous loops of conductive material carrying wire

**electromagnet:** a magnet which is induced by a current

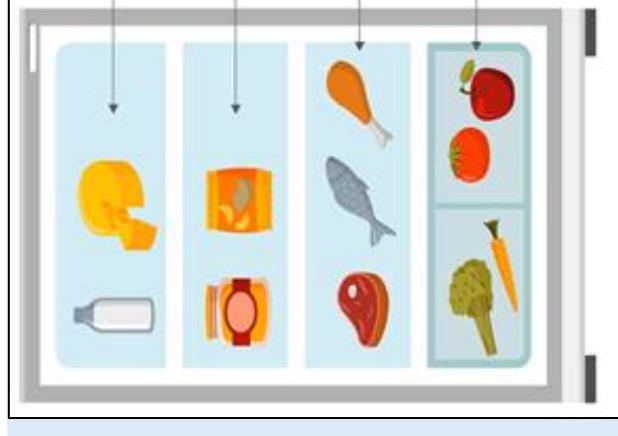
**motor effect:** a force exerted on a current carrying

**within a magnetic field**



**reaction time:** the time taken for an organism to respond to a stimulus

**element:** a substance made of one type of particle

Technology	Food	Year 9	Term 2
<h2>1 – Types of Flour</h2> <p><b>plain flour:</b></p> <ul style="list-style-type: none"> <li>Contains just the seed head's endosperm.</li> <li>It is much more shelf-stable than whole wheat flour.</li> <li>it contains less nutritious qualities, like fibre and protein.</li> <li>Plain flour can be bleached or unbleached.</li> </ul> <p><b>bread flour/strong plain flour:</b></p> <ul style="list-style-type: none"> <li>High protein content</li> <li>Made from hard wheat and</li> <li>Contains a greater amount of gluten</li> <li>The gluten is developed during bread making and gives a chewier consistency</li> </ul> <p><b>self-raising flour:</b></p> <ul style="list-style-type: none"> <li>It contains a protein level of about 8-9%</li> <li>Self-raising flour is milled to an ultra-fine consistency.</li> <li>Bleaching slightly damages the flour's starches.</li> <li>It is an ideal quality for fairy cakes.</li> </ul>	<h2>2 – Key Temperatures</h2> <p><b>Key Vocabulary:</b></p> <p><b>chiller:</b> a place to keep food cold but generally has one side open to allow for display</p> <p><b>not holding:</b> keeping food warm once cooked e.g. in a school canteen</p> <p><b>The Food Safety Act (Temperature Control) Regulations:</b> the legislation (laws) surrounding food temperatures</p> <p><b>Key Temperatures:</b></p> <p><b>freezers:</b> from -18°C to -24°C</p> <p><b>chillers:</b> from 3°C to 8°C</p> <p><b>fridges:</b> from 1°C to 5°C</p> <p><b>cooked:</b> core temperature at 75°C or above</p> <p><b>not holding:</b> above 63°C</p>	<p><b>Bacteria need 4 conditions to thrive</b></p> <ol style="list-style-type: none"> <li>time</li> <li>moisture</li> <li>food</li> <li>warmth</li> </ol>	
<h2>3 – Fridge Layout</h2> 	<p><b>READY TO EAT FOOD</b></p> <p>E.G Dairy products, yoghurt and cream</p> <p><b>READY TO EAT FOOD</b></p> <p>E.G. Cream cakes, butter, cooked meats, leftovers and other packaged food.</p> <p><b>RAW MEAT, POULTRY &amp; FISH</b></p> <p>E.G Always cover and keep in sealed containers.</p>	 	   

## 1 – Healthy Relationships

### Key Vocabulary

**relationships:** the way in which two or more people know each other and are connected

- There are many different types of relationships: family relationships, friendships, people we work with or go to school with, romantic relationships
- All relationships should be healthy.
- Healthy relationships include honesty, trust, respect and an ability to speak without fear.
- In a healthy relationship, there should not be fear of another person.

## 2 – Types of Families

### Key Vocabulary

**family:** a group of two or more people related by birth, marriage, adoption or people living in the same household

**divergent:** things that are different from expected

- There are many different types of family and it's important to respect all of them.
- There are families such as stepfamilies; single-parent families; families headed by two unmarried partners, either of the opposite sex or the same sex; adoptive families; foster families; and families where children are raised by their grandparents or other relatives.

## 3 – Family Changes

### Key Vocabulary

**divorce:** the legal end of a marriage

**conflict:** a serious disagreement or argument

- Sometimes when there is conflict in relationships, families change as relationships change.
- Nobody has the right to harass or harm someone else because they end a relationship.

## 4 – Dealing with Conflict

### Key Vocabulary

**support:** help with a situation

- Everyone should feel safe with adults and children inside and outside of their family.
- Everyone has a right to help if they need support when dealing with conflict.



### Look

Look at the information carefully.

Read it three times.

It may help to say it as you read it.

## Flash Cards



### Cover

Cover it with your hand or a piece of paper.

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



### Write

Write it out, from memory.

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



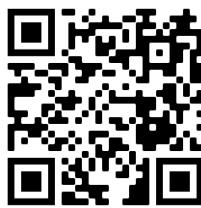
### Check

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



### Correct

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



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