MALTBYLEARNINGTRUST
Exceptional Experiences. Successful Lives.

MALTBY ACADEMY

YEAR 9 TERM 1 2023-2024

KNOWLEDGE ORGANISER

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Introduction

Foundational Knowledge and Retrieval Practice

If we try and build a house on sand it will fall down, as the foundations are not secure and over time will disappear. That's a bit like what happens if your teacher tries to get you to understand complex ideas, but you haven't yet grasped the basics on which to connect the new information, and therefore you cannot build on it and develop what scientists call **schema** in your mind.

To support you in having foundational knowledge in each subject, your teachers have identified some key basic knowledge that they will teach you first, but then you will be asked to consolidate this by reviewing it at home and completing a quiz about it for homework - this process is called **retrieval.**

Research tells us that the process of **keep reviewing key chunks of material by reading it**, **rehearsing it, trying to recall it** and **checking you got it right** will help you to remember it longer term, so that you feel more confident in your lessons when teachers do refer to it.

Introduction

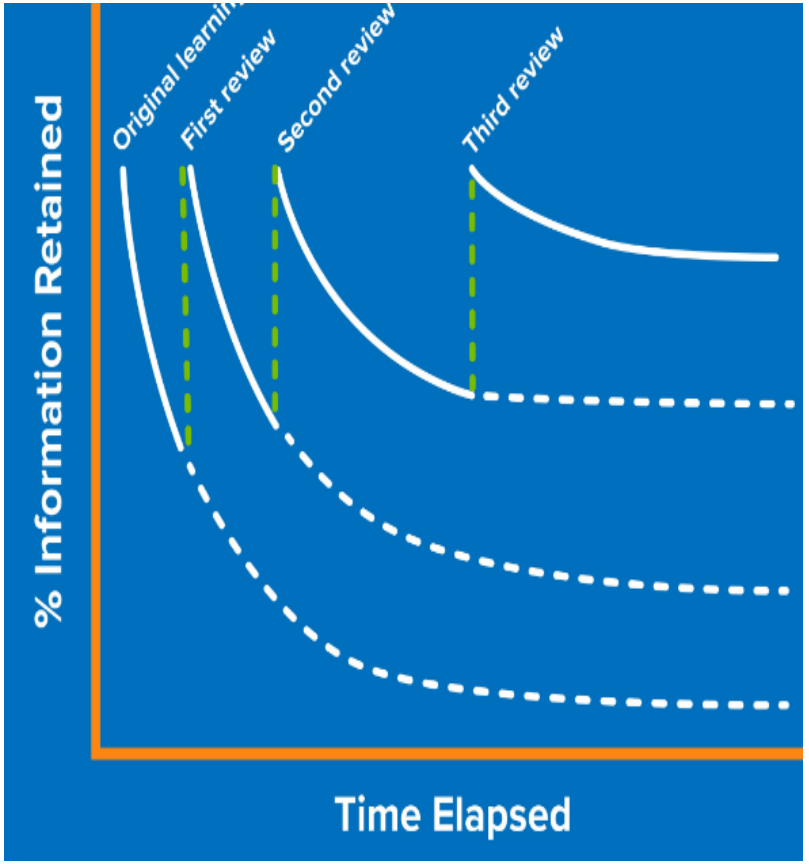
The Forgetting Curve

A psychologist called Hermann Ebbinghaus discovered that shortly after you have learned something, you quickly forget some of it. He represented this process with this' **forgetting curve'.**

He found however that if you reviewed that information at specific time points after having first learned it – the rate at which you forget can be reduced. He called this **'spaced practice'**

To help you to remember key information your teachers will do the following:

- Identify in lesson key terms or pieces of information that are important to learn.
- Tell you which bits of the subject knowledge organiser to review and recall at home.
- Set you a homework quiz to check what you can recall.
- In future quizzes include some questions already tested.
- Revisit key questions that most of the class struggled with.



MALTBY ACADEMY

OUR **KEY DRIVERS**

RESILIENCE

Learn from failures, work through problems and never give up. Be better today than you were yesterday.

ASPIRATION

Aim high and set yourself challenging goals both academically and personally. What does the future hold for you?

COMMUNITY

Accept support and offer it. Give something back to the Academy and the community.

RESPONSIBILITY

Be responsible for your actions, celebrate successes and learn from your failures. Do not make excuses.

CONFIDENCE

Don't be afraid to get things wrong. Believe in yourself and your abilities and step outside your comfort zone.

English

Using this knowledge organiser:
Every **Week A** you will be given **ten pieces of vocabulary**.

Across this week, you will need to find a coherent definition for each piece of vocabulary and practice the spelling.

This will be tested as part of your English lessons, across that week.

In **Week B**, you will use these same words to complete a short piece of **transactional writing**. You will use the information on this sheet to support you.

At the end of the term, you will complete a project that utilises all you have learnt across this half term.

The Great Gatsby:
Lost after his experiences in the First World War, Nick Carraway spends a summer in New York, trying to make a career on the infamous Wall Street. Here, Nick finds he lives next door to the mysterious Jay Gatsby. A self-made millionaire, Gatsby's fortune has been won with the intention of impressing Daisy Buchanan, a woman he loved in his younger years.

Fitzgerald often sought to question the American Dream: the belief that anyone, regardless of where they were born or their class, can attain their own version of success. It is built on the idea of the pursuit of happiness, equality and hard work.

The novel is set throughout the Prohibition. Within the United States, this was a nationwide constitutional ban on the production, importation, transportation, and sale of alcoholic beverages from 1920 to 1933. This led to bootlegging (the illegal manufacture and transportation of alcohol) and speakeasies (undercover bars). These were key features of the Jazz Age.

Week A/B 1:
1. Fundamental
2. Consequence
3. Unjust
4. Abnormal
5. Intricate
6. Impressionability
7. Elations
8. Prominent
9. Hesitant
10. Scarcely

Week A/B 2:
1. Motionless
2. Imperceptible
3. Reciprocal
4. Contemptuous
5. Languid
6. Inconsequence
7. Anticipation
8. Profound
9. Fervent
10. Infinitesimal

Week A/B 3:
1. Assert
2. Inquire
3. Libel
4. Peremptory
5. Nourish
6. Ego
7. Dismal
8. Prosperous
9. Rapture
10. Regal

Week A/B 4:
1. Hazy
2. Innumerable
3. Proprietary
4. Moderate
5. Shrill
6. Regard
7. Triumphant
8. Deft
9. Majestic
10. Vehement

Week A/B 5:
1. Persistent
2. Yield
3. Dignified
4. Vacuous
5. Jovial
6. Condescending
7. Conscientious
8. Retract
9. Instinctive
10. Unfathomable

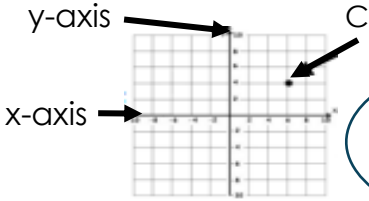
Week A/B 6:
1. Modest
2. Sceptical
3. Obliged
4. Exhilarating
5. Distraught
6. Enchanting
7. Astounding
8. Inconceivable
9. Colossal
10. Vitality

Maths

Keywords

Quadrant: Four quarters of the coordinate plane.
Coordinate: A set of values that show an exact position.
Horizontal: A straight line from left to right (parallel to the x-axis).
Vertical: A straight line from top to bottom (parallel to the y-axis).
Origin: (0,0) on a graph. The point where the two axes cross.
Parallel: Lines that never meet.
Gradient: The steepness of a line.
Intercept: Where lines cross.

Coordinates in four quadrants



Coordinate **(3,2)**

From the origin, this coordinate is 3 places along the positive x- axis and 2 places up the positive y-axis

$(0, a)$ Will always be a point on the y-axis

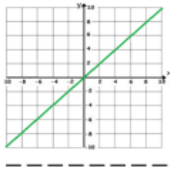
(x, y)

Always position on the x-axis first

Always position on the y-axis second

$(a, 0)$ Will always be a point on the x-axis

Recognise and use the line y=x



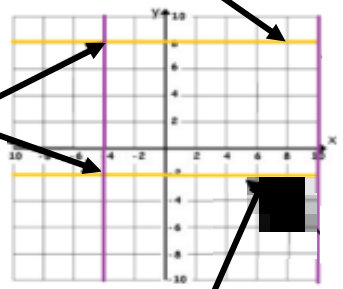
This means the x and the y coordinate have the same value

Examples of coordinates on this line (0,0), (-3,-3) (8,8).
The axes **scale is important-** if the scale is the same y=x will be a straight line

Line parallel to the axis

All the points on this line have an x-coordinate of 10

Intersection points



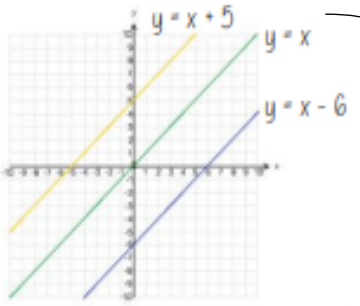
All the points on this line have an y-coordinate of -2
E.g. (3,-2), (7,-2) (-2,-2) all lay on this line because the y-coordinate is -2

Lines parallel to the y-axis take the form x=a and are vertical.

Lines parallel to the x-axis take the form y =a and are horizontal.

('a' can be ANY positive or negative value including 0)

Lines in the form y=x+a



All the lines are parallel because the gradients are the same

This shows where the graph crosses the y axis

$$y = x + a$$

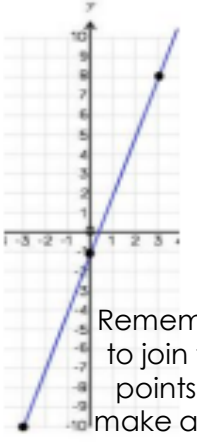
Plotting y=mx+c graphs

$y = 3x - 1$ → 3 x the x coordinate then -1

x	-3	0	3
y	-10	-1	8

This represents a coordinate pair (-3,10)

You only need two points to form a straight line, plotting more just helps to make sure its accurate



Remember to join the points to make a line

Maths

Finding Functions from Expressions

$y = \frac{f+5}{3}$ $f \rightarrow +5 \rightarrow \div 3 \rightarrow y$ $y = \frac{f}{3} + 5$ $f \rightarrow \div 3 \rightarrow +5 \rightarrow y$

Keywords

Function: a relationship that instructs how to get from an input to an output.
Input: the number / symbol put into a function.
Output: the number / expression that comes out of a function.
Operation: a mathematical process.
Inverse: the operation that undoes what was done by the previous. operation (the opposite e.g. $\times$ & $\div$ $+$ & $-$ ^{2} & $\sqrt{\ }$).
Commutative: the order of the operations do not matter.
Substitute: replace one variable with a number or a new variable.
Expression: maths sentence with a minimum of two numbers and no = sign.
Linear: the difference between terms is the same value from term to term.
Sequence: items or numbers put in a pre-decided order.
Term: a single number or variable.

Two Step Function Machines

Calculate the value at the end of each operation

INPUT ➡ ▢ ➡ ▢ ➡ OUTPUT

The number that goes IN — The number that comes OUT

To find the **input** use the **INVERSE** operations

Substituting into Expressions

4y ⟵ 4 lots of y

If **y=7** this means you the expression is asking for **4 lots of 7 = 28**

e.g. y-2 7-2 = 5

$y = 2(x + 3)$

Put the expression into a function machine…
"add 3 to the input then times 2"

INPUT ➡ +3 ➡ × 2 ➡ OUTPUT

If x=10
10+3=13… 13×2=26

Represent Functions Graphically

Take the function and generate a sequence

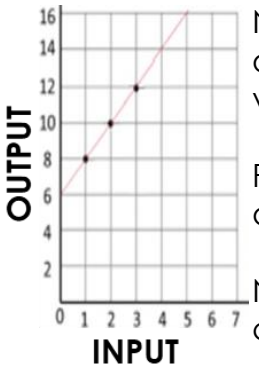
$y = 2(x + 3)$

INPUT ➡ +3 ➡ × 2 ➡ OUTPUT

This becomes a coordinate pair (2,10) to plot on a graph

To **represent graphically** the **input** becomes the **x co-ordinates** and the **output** becomes the **y coordinates**

INPUT (X)	1	2	3
OUTPUT (Y)	8	10	12



Not all graphs will be linear, only those with an integer value for x

Powers and fractions generate differently shaped graphs

Note: because this is linear you can predict other values

MATHS

Multiples: Found by multiplying any number by positive integers
Factor: Integers that multiply together to get another number
Prime: An integer with only 2 factors
Conjecture: A special type of example that disproves a statement.
Expression: A maths sentence with a minimum of two numbers and at least one maths operation (no equals sign)
HCF: Highest common factor (biggest factor two or more numbers share)
LCM: Lowest common multiple (the fist times table of two or more numbers match)

Common Factors and HCF

Common Factors are factors two or more numbers share

HCF-Highest Common Factor

HCF of 18 and 30

18 1,2,3,6,9,18

30 1,2,3,5,6,10,15,30

Common Factors (factors of both numbers)

1,2,3,6 HCF-6

6 is the biggest factor they share

Common multiples and LCM

Common Multiples are multiples two or more numbers share

LCM-Lowest Common Multiple

LCM of 9 and 12

9 9,18,27,36,45,54…

12 12,24,36,48,60…

LCM - 36

36 is the first time their multiples match

Multiples

The 'times table' of a given number

All the numbers in the lists below are multiples of 3

3,6,9,12,15…

The list continues and doesn't end

$3x, 6x, 9x…$

x could take any value and as the variable is a multiple of 3 the answer will also be a multiple of 3

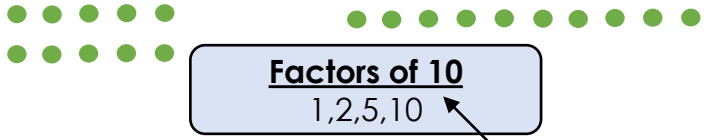
Non example of a multiple

4.5 is not a multiple of 3 because it is 3 × 1.5

Not an integer

Factors

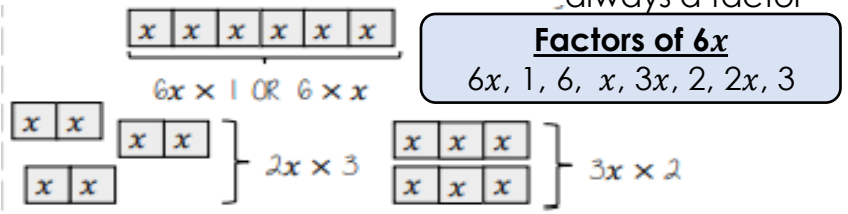
Arrays help represent factors



Factors of 10
1,2,5,10

The number itself is always a factor

Factors and expressions



Factors of $6x$
$6x$, 1, 6, x, $3x$, 2, $2x$, 3

MATHS

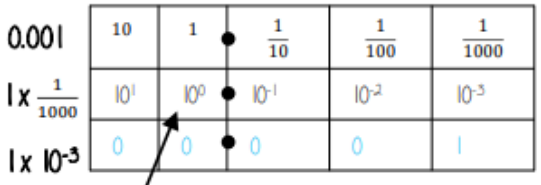
Keywords

Standard (index) form: A system of writing very big or very small numbers
Commutative: An operation Is commutative if changing the order does not change the result
Base: The number that is raised to a power
Power: The number that tells you how many times to use the number in multiplication
Indices (index): the power
Negative: A value below zero

Positive powers of 10

1 billion – 1 000 000 000
10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10
$=10^9$

Negative powers of 10



Any value to the power 0 is always =1

Negative powers do not indicate negative solutions

Standard form with numbers > 1

$A \times 10^{n}$

Any number greater than or equal to 1, less than 10

Any integer (whole number)

Example
3.2×10^4
$=3.2 \times 10 \times 10 \times 10 \times 10$
= 32000

Non – example

0.8×10^4
$2.3 \times 10^{0.7}$

Addition and Subtraction

$6 \times 10^5 + 8 \times 10^5$

Method 1
600,000 + 800,000
=1,400,000
$=1.4 \times 10^5$

More robust method
Less room for misconceptions
Easier to do with negative indices
Can use for negative powers

Method 2
(6 + 8) x
$=14 \times 10^5$
$=1.4 \times 10^1 \times 10^5$
$=1.4 \times 10^5$

Only works if the powers are the same

Multiplication and Division

For multiplication and division, look at the values for A and the powers of 10 as two separate calculations

$$\frac{1.5\times10^5}{0.3\times10^3} \qquad (1.5 \times 10^5) \div (0.3 \times 10^3)$$

$$(1.5 \div 0.3) \times (10^5 \div 10^3)$$

$$= 5 \times 10^2$$

Addition for Indices
$a^m \times a^n = a^{m+n}$

Subtraction for Indices
$a^m \div a^n = a^{m-n}$

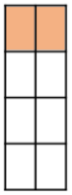
Maths

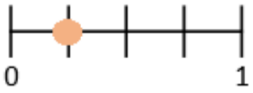
Keywords

Numerator: the number above the line on a fraction. The top number represents how many parts are taken.
Denominator: the number below the line on a fraction. The number represents the total equal parts something is split into.
Equivalent: of equal value.
Mixed Numbers: a number with an integer whole and a proper fraction.
Improper Fractions: a fraction with a bigger numerator than a denominator.

Representing Fractions

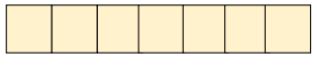
$\frac{1}{4}$ is represented in all the images



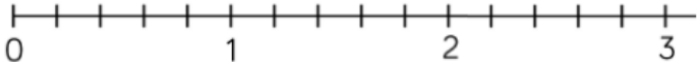


$1 \div 4$

Mixed Numbers and Fractions



$\frac{7}{5}$ Improper Fraction



$1\frac{2}{5}$ Mixed Number

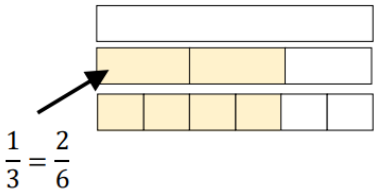
In this model, 5 parts make up a whole

Fractions can be bigger than a whole

Equivalent Fractions

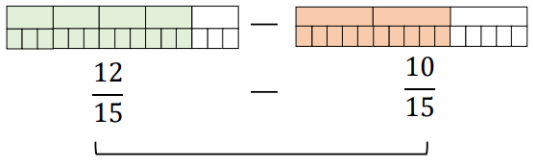
Numerator and denominator have the same multiplier

$\frac{2}{3} = \frac{4}{6}$



Add & Subtract Any Fractions

$\frac{4}{5} - \frac{2}{3} = \frac{2}{15}$



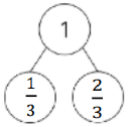
Use equivalent fractions to find a common multiple for both denominators

Add & Subtract Fractions

Same Denominator

$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$

Sequences



$\frac{1}{3}, 1, 1\frac{2}{3}, 2\frac{1}{3}, 3, \ldots$

$+\frac{2}{3}$ $+\frac{2}{3}$

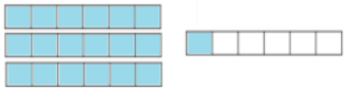
Represent this on a number line to help

Add & Subtract from Integers

$1 - \frac{2}{6}$

$= \frac{4}{6}$

$3 + \frac{1}{6}$



$= 3\frac{1}{6}$

The denominator indicates the number of parts a whole is made from

MATHS

Keywords

Numerator: The number above the line on a fraction. The number represents how many parts are taken.
Denominator: The number below the line on a fraction. The number represents the total number of parts.
Whole: A positive number including zero without any decimal or fractional parts.
Commutative: An operation is commutative if changing the order does not change the result.
Unit Fraction: A fraction where the numerator is one and the denominator is a positive integer.
Dividend: The amount you want to divide up.
Divisor: The number that divides another number
Quotient: The answer after we divide one number by another. eg dividend ÷ divisor = quotient.
Reciprocal: A pair of numbers that multiply together to give the answer of 1.

Multiplying non-unit fractions

Shade in 3 parts

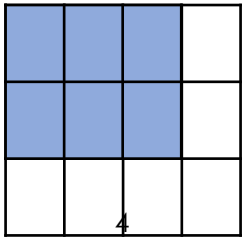
Repeat on this many rows

$\frac{3}{4} \times \frac{2}{3}$

This many columns

This many rows

$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$



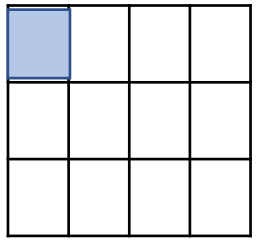
Multiplying unit fractions

$\frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$

Parts shaded

Total number of parts in the diagram

Modelled:



The Reciprocal

When you multiply a number by its reciprocal, the answer is always 1.

$3 \times \frac{1}{3} = 1$

$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1$

The reciprocal of 3 is $\frac{1}{3}$ and vice versa

Dividing any fractions

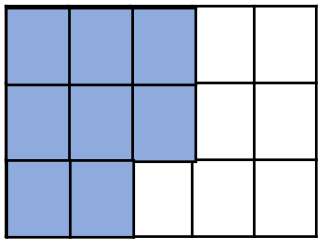
Remember to use reciprocals

$\frac{2}{5} \div \frac{3}{4}$

$\frac{2}{5} \times \frac{4}{3}$

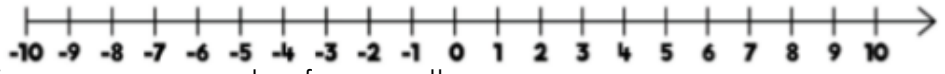
Multiply by a reciprocal gives the same outcome

Represented



$= \frac{8}{15}$

MATHS

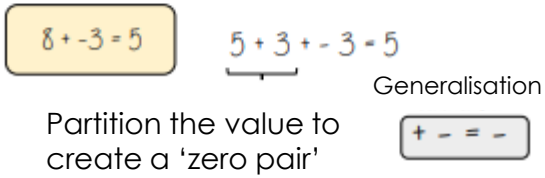


Keywords

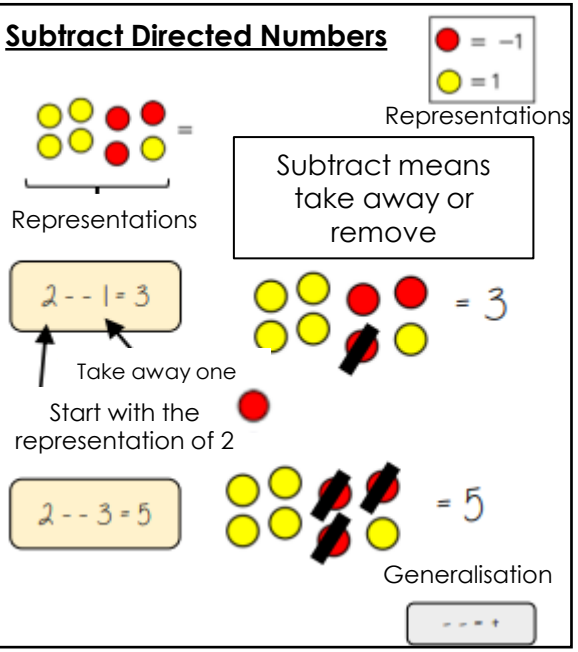
Subtract: taking away one number from another
Negative: a value less than zero
Commutative: changing the order of operations does not change the result
Product: multiply terms
Inverse: the opposite function
Square root: a square root of a number is a number that when multiplied by itself gives the value (symbol √)
Square: a term multiplied by itself
Expression: a maths sentence with a minimum of 2 numbers and at least one math operation (no equal sign)

Add Directed Numbers

Partitioning

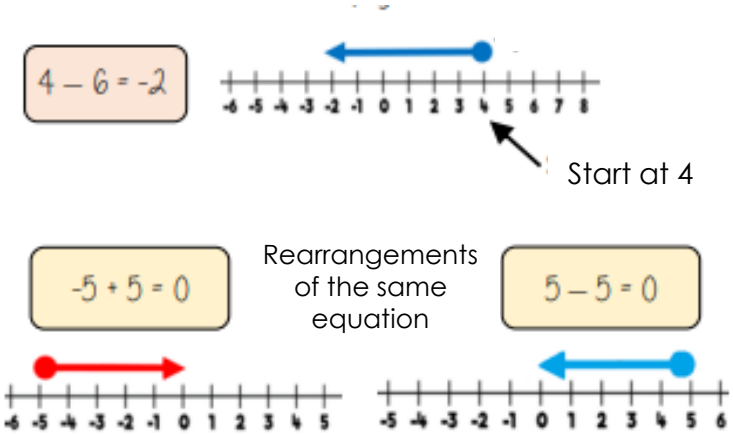


Subtract Directed Numbers

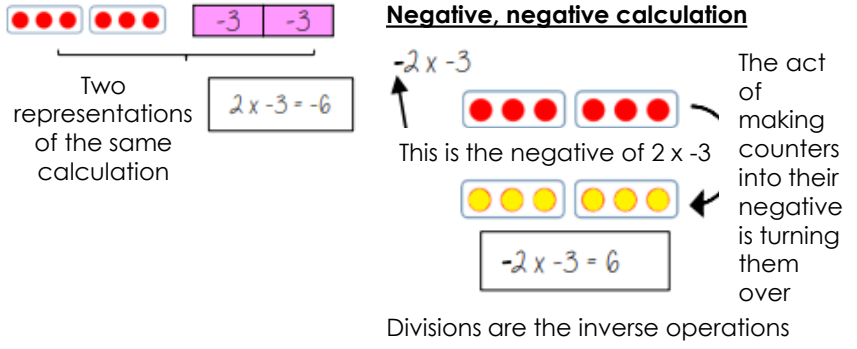


Perform Calculations that cross zero

Number lines are useful to help you visualise the calculation crossing 0

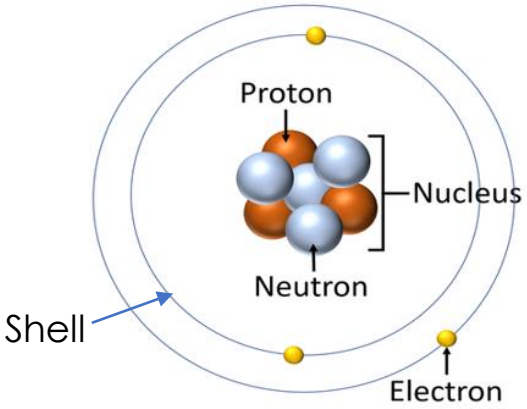


Multiply/Divide directed numbers



Science: Atomic Structure & Periodic Table

Structure of an Atom

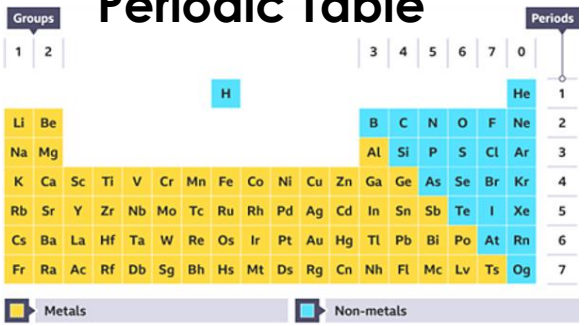


Elements: made of only one type of atom.
Compound: made of two or more types of atoms chemically bonded together.
Mixture: different elements/different compounds/elements and compounds not chemically bonded.

- If there are two elements in a compound add the ending '-ide.'
- Zinc and oxygen is zinc oxide.
- If there are two elements plus oxygen, add the ending '-ate'.
- Lithium, nitrogen and oxygen is lithium nitrate.

In 1869 Dimitri Mendeleev overcame some of the problems of the early Periodic Table by taking 50 elements and arranging them (mainly by atomic weight) with gaps in between. This was to ensure elements with similar properties stayed in the same group. Some of these gaps were undiscovered elements, however Mendeleev could predict their properties based on where the gap was.

Periodic Table



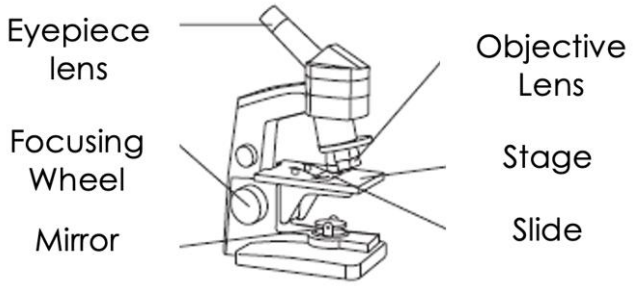
Groups go **DOWN** the Periodic Table.
Periods go **ACROSS** the Periodic Table.

In H_2O there is two hydrogen atoms and one oxygen atom. A number belongs to the element to the left of it and tells you how many atoms of that element there are.

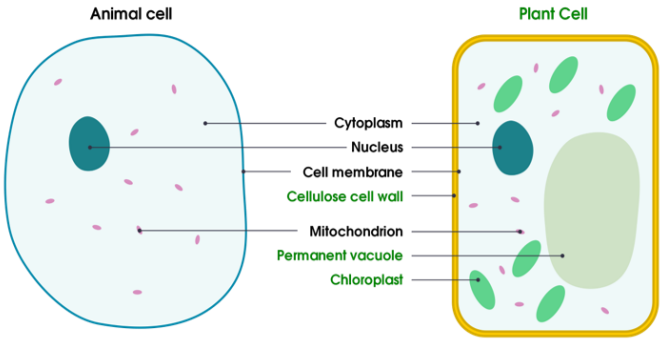
Group 1: alkali metals are soft, react with water to produce hydrogen gas and an alkaline solution. They become more reactive down the group.
Group 7: halogens, fluorine and chlorine are gases, bromine is a liquid, iodine and astatine are solids. They are diatomic so are found as two atoms chemically bonded together.
Group 0: noble gases or group 8 are all gases, they are inert (unreactive). They are monoatomic so are found as single atoms.

Science: Cells & Transport

Parts of a Light Microscope



Parts of Cells

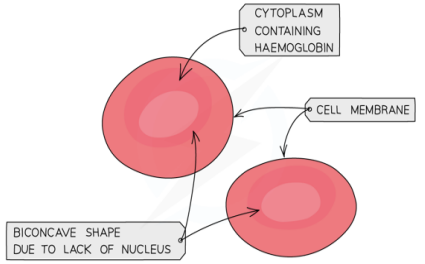


Diffusion: movement of gases or liquids from a high concentration to a low concentration. Passive process (no energy required). Along the concentration gradient.
Osmosis: movement of water through a partially permeable membrane (has small holes in it) from a low concentration of solute to a high concentration of solute.
Active transport: movement of substances from a low concentration to a high concentration. Energy from respiration is required. Against the concentration gradient.

Nucleus: contains DNA.
Cytoplasm: jelly-like substance where most chemical reactions take place.
Cell membrane: allows substances into and out of the cell.
Mitochondria: site of respiration (transfers energy to the cell).
Ribosomes: site of protein synthesis (where proteins are made).
Cell wall: outermost part of a plant cell **ONLY**, made of cellulose so is rigid and keeps the plant cell's shape.
Vacuole: where cell sap is stored, plant cell **ONLY.**
Chloroplast: site of photosynthesis (a chemical reaction only plants do that forms glucose, a simple sugar) plant cell **ONLY.**

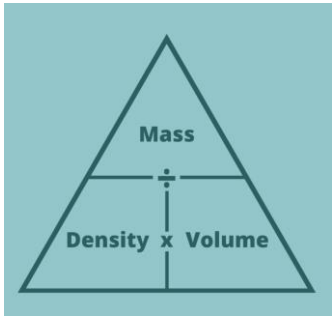
Eukaryotic cells: DNA is enclosed in a nucleus e.g. animal cells, plant cells, protists (single celled organism) and fungi cells.
Prokaryotic cells: DNA is not enclosed in a nucleus and floats freely in the cytoplasm, e.g. bacteria cells.

Red blood cells are specialized cells. They have structures which allow them to do their function (carry oxygen around the body). They have a bi-concave disc shape to increase surface area for diffusion and no nucleus, so they have more haemaglobin (protein that oxygen attaches to).



Science: Particle Model

Density: the 'compactness' of a substance, how much volume it takes up in relation to its mass (kg/m3).



Mass = density x volume

Density = mass / volume

Volume = mass /density

Physical Change: the material changes state and will recover it's properties if the change is reversed, e.g. ice melting.

Chemical Reaction: a change in bonding leading to new properties, e.g. cooking food.

Conservation of mass: the mass of products made is equal to mass of products reacted. Mass cannot be created or destroyed.

Mass appears to decrease: one of the products is a gas, leaves the reaction and it's mass cannot be found.

Mass appears to increase: one of the reactants was a gas, it is now part of a solid product. Its mass could not be found when it was a gas.

Specific Heat Capacity: the energy needed to raise the temperature of 1kg of substance by 1°C (J/kg°C). The higher the number the more energy the substance holds.

$$\Delta E = m \times c \times \Delta\theta$$

ΔE: change in thermal energy (J).

m: mass (kg).

C: specific heat capacity (J/kg°C)

Δθ: change in temperature (°C).

Temperature: measure of the average kinetic energy of particles in a substance (°C).

Heat: a type of energy that transfers into the kinetic energy of particles (J).

Internal energy: total kinetic and potential energy of particles in a system.

Specific Latent Heat: the amount of energy required to change the state of 1kg of a substance with no changes in temperature.

$$E = m \times L$$

L: latent heat (J/kg)

History: World War 1

Write like an Historian

Key term: alliance	
Variations: Alliances	Definition: A union or association formed for mutual benefit, especially between countries or organizations.
Use it in a sentence: A defensive alliance between Britain, Russia and France was known as the Triple Entente.	
Links to: Association Union League Treaty	Digging deeper: How might alliances cause problems for countries?

Key term: nationalism	
Variations: Nationalistic	Definition: identification with one's own nation and support for its interests, especially to the exclusion or detri ment of the interests of other nations.
Use it in a sentence: Their nationalism is tempered by a desire to join the European Union.	
Links to: Jingoism Flag-waving Ethnocentrism	Digging deeper: What factors lead a person to feel a strong sense of nationalism?

Key term: naval	
Variations: Navies	Definition: Relating to a navy or navies
Use it in a sentence: Pearl Harbour was a naval base that was attacked by the Japanese in 1941, destroying many ships in the process.	
Links to: Shipping Boats	Digging deeper: Why do you think naval power has been so historically important to Britain?

History: World War 1

Write like an Historian

Key term: imperialism	
Variations: Imperial Imperialistic	Definition: A policy of extending a country's power and influence through colonisation, use of military force, or other means.
Use it in a sentence: Imperialism was a key cause of WWI, as different countries tried to build their empires.	
Links to: Empire Expansionism Colonies	Digging deeper: What are the benefits of having an empire?

Key term: militarism	
Variations: Militaristic Military	Definition: The belief that a country should maintain a strong military capability and be prepared to use it aggressively to defend or promote national interests.
Use it in a sentence: In the lead up to WWI, the policy of militarism followed by many nations led to great tension.	
Links to: Aggression Belligerent Warmonger	Digging deeper: To make a country feel safe, what are the alternatives to militarism?

Key term: conscription	
Variations: Conscripted Conscript	Definition: Compulsory enlistment for state service, typically into the armed forces. "conscription was extended to married men"
Use it in a sentence: The German army grew larger as conscription meant men over 18 had to sign up.	
Links to: Enlistment Drafting Service	Digging deeper: What emotions might people feel when they are conscripted to join the armed forces?

History: World War 1

Write like an Historian

Key term: munitions	
Variations: Munition Munitionette	Definition: Military weapons Ammunition Equipment Stores.
Use it in a sentence: The production of munitions was essential for the war effort.	
Links to: Artillery Guns Weapons Equipment Gear supplies	Digging deeper: What would have happened in WWI had women not been so productive in making munitions?

Key term: propaganda	
Variations: Propagandist Propagandise	Definition: Information, especially of a biased or misleading nature, used to promote a political cause or point of view.
Use it in a sentence: The Nazi Party were particularly skilful in using propaganda to brainwash people.	
Links to: Information Promotion Advertising publicity Brainwashing Indoctrination Persuade	Digging deeper: What makes effective propaganda? What makes propaganda less effective?

Key term: artillery	
Variations:	Definition: Large calibre guns used in warfare on land
Use it in a sentence: The sound of artillery fire was deafening.	
Links to: Big guns Cannon Battery	Digging deeper: How has artillery changed over the years?

History: Civil Rights

Write like an Historian

Key term: civil rights	
Variations:	Definition: The rights of citizens to political and social freedom and equality.
Use it in a sentence: Rosa Parks is a famous example of a person fighting for civil rights, refusing to give up her seat on a bus.	
Links to: Human rights Equal rights Liberty Justice Fair treatment	Digging deeper: What 'civil right' do you feel is most important to your life?

Key term: passive resistance	
Variations:	Definition: Non-violent opposition to authority, especially a refusal to cooperate with legal requirements.
Use it in a sentence: Martin Luther King encouraged his followers to use forms of passive resistance, such as marching and boycotting.	
Links to: Peace Moral high ground	Digging deeper: What are the positive and negatives sides to this form of protest?

Key term: active resistance	
Variations:	Definition: Achieving justice by using form of force or violence.
Use it in a sentence: Malcolm X encouraged his followers to use forms of active resistance, such as fighting back or using weapons.	
Links to: Violence Conflict Challenge	Digging deeper: What are the positive and negatives sides to this form of protest?

History: Civil Rights

Write like an Historian

Key term: boycott	
Variations: Boycotts Boycotted Boycotting	Definition: Withdraw from commercial or social relations with (a country, organization, or person) as a punishment or protest.
Use it in a sentence: A bus boycott was used in Montgomery, Alabama in 1955 to fight against racist laws.	
Links to: Spurn Snub Cold-shoulder Shun Avoid	Digging deeper: Why is boycotting something an effective form of protest?

Key term: segregation	
Variations: Segregated Segregates Segregating	Definition: The action or state of setting someone or something apart from others.
Use it in a sentence: Black and white children had to attend different schools in the South of the USA until 1954, due to segregation policies that were followed.	
Links to: Keeping apart Separating Exclusion Shielding Division Quarantine	Digging deeper: Why did some people feel that segregation was something to be encouraged?

Key term: freedom	
Variations: Freed Free Freeing	Definition: The power or right to act, speak, or think as one wants.
Use it in a sentence: Many enslaved people gained their freedom after the Abolition of Slavery in 1833.	
Links to: Liberty Liberation Release Emancipation Prerogative	Digging deeper: What impact did the lack of freedom have on different groups you have studied?

History: Civil Rights

Write like an Historian

Key term: emancipation	
Variations: Emancipated	Definition: The fact or process of being set free from legal, social, or political restrictions; liberation.
Use it in a sentence: Abraham Lincoln led the calls for emancipation from slavery in the United States.	
Links to: Freedom Liberation	Digging deeper: Do you think enslaved people were truly 'emancipated' the moment the slave trade was abolished?

Key term: lynch	
Variations: Lynching Lynched	Definition: Kill (someone) for an alleged offence without a legal trial, especially by hanging.
Use it in a sentence: Her father had been lynched for a crime he didn't commit.	
Links to: Hang Execute Put to death	Digging deeper: Why did so many people get away with lynching African Americans in the United States?

Key term: racism	
Variations: Racist	Definition: Prejudice, discrimination, or antagonism by an individual, community, or institution against a person or people on the basis of their membership of a particular racial or ethnic group,
Use it in a sentence: The government set up a programme to combat racism.	
Links to: Prejudice Discrimination Xenophobia *Intolerance*	Digging deeper: Is the problem of racism in Britain growing or reducing?

Geography

Plate boundaries

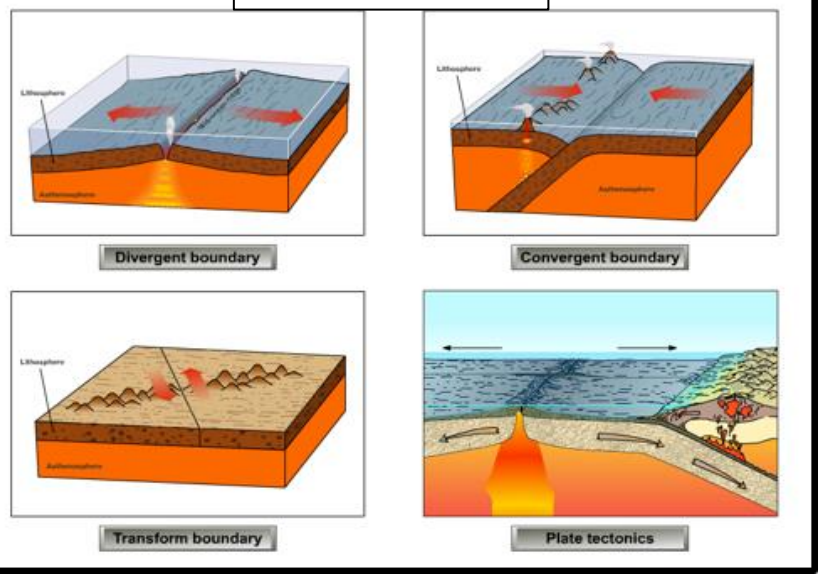
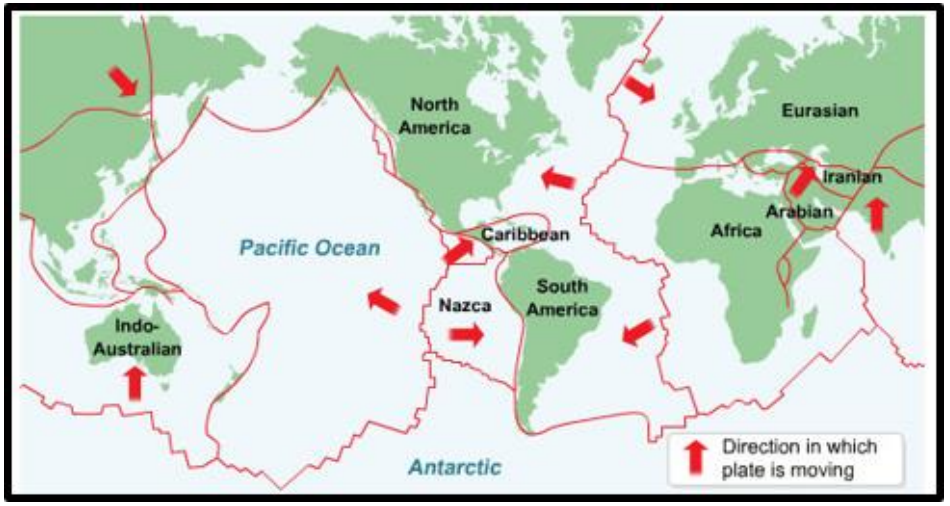
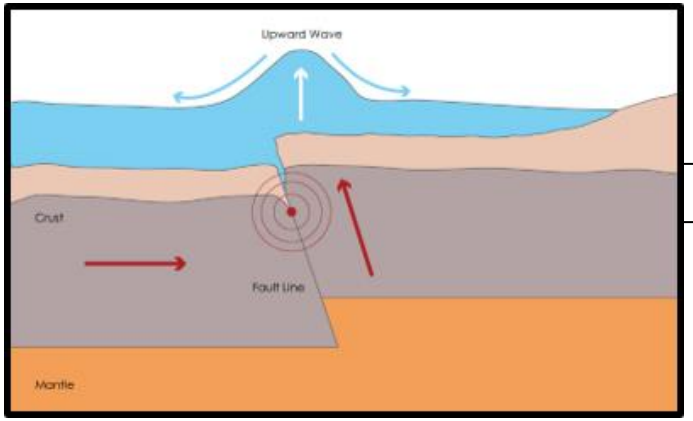
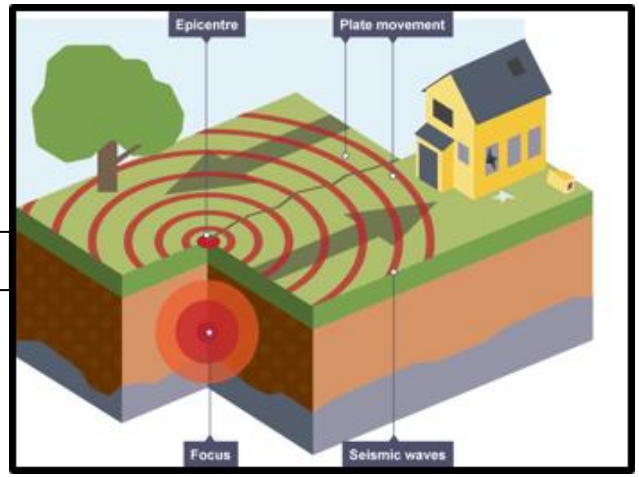


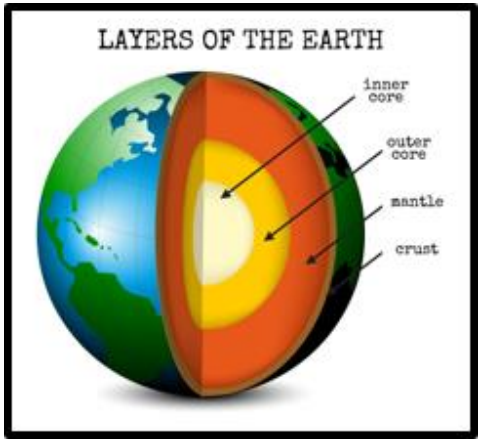
Plate boundaries





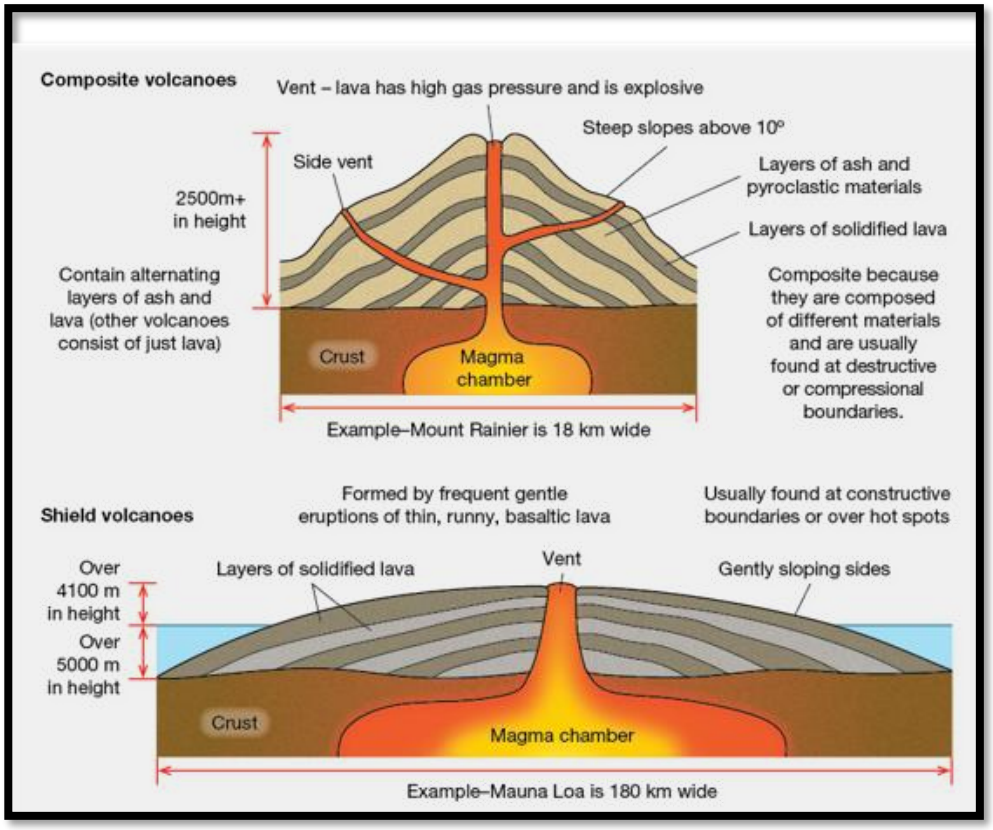
Earthquakes





Geography

Types of Volcano

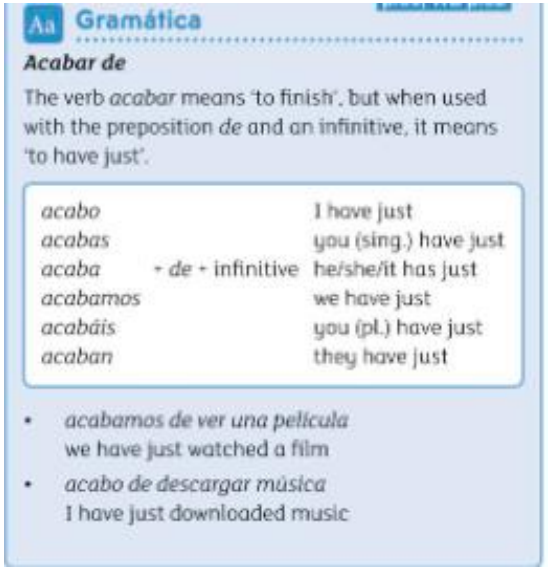


Living near Hazard Zones

Advantages		Vocabulary:		Disadvantages	
	hot springs swimming bathing			lava flows dangerous buildings	
	geothermal energy clean renewable			ash clouds health issues lung problems	
	tourists employment (jobs) walking guides			major eruption pyroclastic flows mud flows	
	minerals sulphur matches			landslide dangerous destroy	
	volcanic soil fertile crops			ash clouds damage flight cancellations	

Spanish

Todos los días (everyday) De vez en cuando (From time to time) Siempre (Always) Los fines de semana (At the weekend) Normalmente (Normally) A veces (sometimes) Cada semana (every week)	leo un libro hago la compra descargo música subo fotos veo vídeos juego videojuegos llamo por vídeo llamada saco fotos	I read a book. I shop online. I download music. I upload photos. I watch videos. I play videogames. I video call I take photos
Nunca (Never) Casi nunca (almost never) Ya no (No longer)	leo un libro hago la compra descargo música subo fotos veo vídeos juego videojuegos llamo por vídeo llamada saco fotos	I read a book. I shop online. I download music. I upload photos. I watch videos. I play videogames. I video call I take photos

Me gusta ver I like to watch No me gusta ver I don't like to watch Acabo de ver I've just watched Acabas de ver You've just watched Acaba de ver He/she has just watched Acabamos de ver We've just watched Acabáis de ver You've just watched (+1) Acaban de ver They've just watched	Un concurso A quiz show Los dibujos animados Cartoons Un documental A documentary Una película A film Un programa de deportes A sports programme Un programa de humor A comedy programme Un programa musical A music programme Una serie A series El telediario / las noticias The news Una telenovela A soap	

Spanish

Prefiero I prefer Me encantan I love Me gustan I like No me gustan I don't like Odio I hate	las películas de acción action films las películas cómicas comedies las películas de ciencia ficción science fiction films las películas de dibujos animados animations las películas de miedo horror films las películas del oeste western films los musicales musicals las películas de misterio mystery films las películas románticas romantic films	porque son because they are	Cautivadores Captivating Complejas Complex Decepcionantes Disappointing Entretenidas Entertaining Espeluznantes Terrifying impactantes striking mejores better / best memorables memorable nuevas new	peores worse predecibles predictable profundas deep sangrientas gory tristes sad

Aa Gramática

Mejor* and *peor

As adjectives, *mejor* (best) and *peor* (worst) are placed before the noun and can be singular or plural.

- *la mejor película* the best film
- *los peores libros* the worst books

As nouns, the expressions *lo mejor* and *lo peor* can be used to describe the best or worst thing.

- ***Lo mejor** de la película es la música.*
  The best thing about the film is the music.
- ***Lo peor** de mi profesor es que es muy estricto.*
  The worst thing about my teacher is that he is very strict.

me da miedo	*it scares me*
me hace pensar	*it makes me think*
me hace reír	*it makes me laugh*

Spanish

Toco I play	la guitarra the guitar
Tocas You play	la batería the drums
Toca He/she plays	la flauta the flute
Tocamos We play	la gaita the bagpipes
Tocáis You play	la pandereta the tambourine
Tocan They play	la trumpeta the trumpet
Prefiero tocar I prefer to play	el violín the violin
Tocaba I used to play	el teclado the keyboard
Toqué I played	la guitarra eléctrica electric guitar
Voy a tocar I'm going to play	
Tocaría I would play	
Me gustaría tocar I would like to play	

Quiero ser I want to be	Actor / actriz – actor / actress	es agradable
	Arquitecto/a – architect	it's pleasant
Me gustaría ser I would like to be	Bibliotecario/a – librarian	
	Bloguero/a – blogger	es estimulante
Voy a trabajar de I'm going to work as	Carnicero/a – butcher	it's stimulating
	Científico/a – scientist	
Trabajaré de I will work as	Cocinero/a – chef	es exigente
	Dentista – dentist	it's demanding
Mi padre trabaja de My dad works as	Electricista – electrician	
	Enfermero/a – nurse	es gratificante
Mi madre trabaja de My mum works as	Escritor/a – writer	it's satisfying
	Fontanero – plumber	
	Fotógrafo/a – photographer	el sueldo es alto
	Granjero/a – Farmer	the wage is high
	Jugador/a de fútbol – football player	
	Mecánico/a – mechanic	tengo que trabajar
	Médico/a – doctor	durante la noche
	Pescadero/a – fishmonger	I have to work at night
	Piloto/a – pilot	
	Professor/a – teacher	el jefe es agradable
	Policía – police officer	The boss is pleasant
	Recepcionista – receptionist	
	Secretario/a – secretary	no vale mucho
	Jefe/a - boss	It's not very worthwhile

Gramática

The future tense

The Spanish simple future tense is the equivalent of the English 'will' or 'shall'. It is formed by adding the appropriate ending to the infinitive.

yo	*é*
tú	*ás*
él/ella	*á*
nosotros/as	*emos*
vosotros/as	*éis*
ellos/as	*án*

jugaré	I will play
trabajarás	you will work
seremos	we will be

Computing

What is the World Wide Web?

The **internet** is a global network of computers. The **World Wide Web** is the part of the **internet** that can be accessed through **websites**. **Websites** consist of **webpages** which allow you to see information.

Websites are accessed using a **web browser**. A **browser** is a **program** designed to display the information held on a **website**. Every **website** has an address at which it can be found, a bit like a house address.

Considering your audience

Define your audience clearly

- For example, young or old!
  - **What is the purpose of your website?**
- To entertain or to inform?
  - **How will this affect your design?**

Responsive Design

Websites are viewed on different size screens. **Webpages** must automatically adjust to fit. To achieve this, set widths as **percentages** rather than pixels

Using HTML to create websites

All **web** pages on the **internet** are created using a language called **Hypertext Markup Language** (**HTML**). **HTML** describes:

- what information appears on a webpage
- how it appears on the page (formatting)
- any links to other pages or sites

HTML can be written in specialist software, or in a simple text editor like Notepad++. As long as the document is saved with the file extension **'.html'** it can be opened and viewed as a **webpage** from a **browser**.

This example **HTML** code displays a message on a webpage:

```
<html>
        <body>
                <h1>Hello world</h1>
                <p>This is my first webpage</p>
        </body>
</html>
```

The code uses **tags** to describe the appearance of the information:

<html> - states that the document is a HTML document

<body> - states what will appear in the body of the page

<h1> - formats the text to appear as a prominent heading

<p> - formats the text to start a new paragraph

CSS (Cascading Style Sheets)

HTML defines the structure and content of your **web page**

CSS defines the style and layout of **web pages**

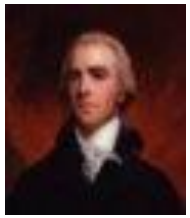
CSS can be used to change the style of a whole **website**, one **web page** or a single occurrence of an element, e.g.

<h1 style="text-align:center">

Common Web Design Features

- Basic colour palette and font selection
- Consistent pages
- Navigation bar

Religious Education




There are also examples when people have used religion to perpetrate great evil, one such example in the Holocaust. During WW2, a man called Adolf Hitler murder over six million Jewish people because he believed that they were not a god as other people, he blamed them for problems that were not their fault. Hitler believed that he was a Christian and that he was being guided by the Bible.

There are many examples that we know of where a person's religion has guided them to do great good. One example of this was the Christian, William Wilberforce. Wilberforce was an abolitionist and Member of Parliament in 17th Century. At a time when most MPs were in favour of the slave trade, he stood up and spoke out, guided by the Christian principle that all people are equal and created by God.

People disagree on whether following a religion makes a person more likely to be moral than someone who doesn't. Some people believe that we need religion to guide our morals and ensure that society doesn't fall into chaos. Others believe that human beings are capable of making moral choices without the framework that religion offers.

Key Words:

Morals- An accepted way of behaving that most people agree on.
Immoral- When an action goes against agreed morals.
Religious teachings- Rules and principles that are set out in holy books.
Abolitionist- Somone who took action to end the slave trade.
Holocaust- An event during WW2 when millions of Jews and others were systematically murdered.
Transatlantic Slave Trade- In the mid 17th Century millions people from Africa had their freedom taken away and were forced into a life of slavery.
Situation Ethics- A way to decide on what is most moral by following the principle of love.
Sewa- In the Sikh religion Sewa means selfless service to others
Langar- Every Sikh temple (Gurdwara) has a kitchen, where free meal are given out daily. The langar is a symbol of equality.
Zakat- One of the five pillars of Islam. Zakat is giving a set amount of your income to charity each month.
Equality- The belief that all humans are equal, regardless of race, religion, gender, sexuality etc.

Design Technology

Characteristics of materials

• **Malleability** - being able to bend or shape easily would make a material easily malleable, eg sheet metal such as steel or silver is malleable and can be hammered into shape

• **Ductility** - materials that can be stretched are ductile, eg pulling copper into wire shows it is ductile

• **Hardness** - the ability to withstand **impact** without damage

• **Durability** - the ability of a material to withstand wear or damage

• **Toughness** - the ability of a material to absorb shock without breaking

• **Elasticity** - the ability of a material to bend without cracking

• **Tensile strength** - the ability of a material to withstand a pulling force without stretching

• **Compressive strength** - the ability of a material to withstand a pushing force without being squashed

Types of materials.

Metals
Most metals are strong, hard and shiny materials that can be hammered into different shapes without breaking. They are good conductors of heat and electricity and some are magnetic. Their properties make them useful for objects such as cutlery, saucepans, cars and coins.

Plastics
Plastics are materials made from chemicals and are not found in nature. They are strong and waterproof. They can be made into any shape by applying heat. Plastics are not magnetic. They are good insulators and don't conduct heat or electricity. They're used to make things like bags, bottles and toys.

Wood
Wood comes from trees. It is strong, flexible and long-lasting. It is an insulator of heat and electricity. It's used to make things such as furniture.

Design Technology - Tools

Coping saws:

are used for cutting a range of woods and are very useful for cutting unusual shapes or curves. In a modern workshop these shapes are normally cut using machine fretsaws. However, there are times when these machines are not available. Also, using a coping saw is a test of skill as it can be difficult to control and requires practice.

The Tenon saw:

is quite heavy; this weight of the saw as well as the forward cutting motion enables the saw to cut relatively easily. The Tenon saw is a type of back saw this is because it has a steel or brass back to the saw. The tenon saw is generally used for cutting mortise and tenon joints. The tenon saw is good at cutting straight lines in wood.

A Pillar drill:

is a fixed drill that is mounted or fixed to a floor so it cannot be pushed over. It can drill larger pieces of material quickly and easily. It is made up of a base, a pillar, a table and a drill head. The drill table can be adjusted vertically and is moved up and down depending on the what you are drilling. A pillar drill can only drill down at 90 degrees unlike a hand drill, however it is very stable and is relatively safe as you can clamp your work to the table.

Design Technology - Tools

The wood workers try-square:

is used for marking straight lines on wood. The try-square is pushed against a straight edge of wood and a marking knife or pencil is used to cut a straight line across the wood. The try square has a brass face plate which is added to its stock. The metal section attached to the stock or handle is called the blade

Steel rules:

are more accurate than plastic rulers. Steel rules measurements start at the beginning of the rule unlike plastic rulers whose measurements start around half a centimetre from the beginning.

A chisel:

is used to remove wood by carving it. A chisel has a shaped cutting end made of metal and a wooden handle. The chisel is pushed into the wood using a mallet to gain force. Chisels are named by the shape of the chisel the main types are bevel, firmer and paring.

Art

AO1	AO2	AO3	AO4
Develop ideas through investigations, demonstrating critical understanding of sources.	Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.	Record ideas, observations and insights relevant to intentions as work progresses.	Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.
25% of your project mark	25% of your project mark	25% of your project mark	25% of your project mark
Theme exploration. Mindmaps / Collected images. Facts & statistics. Interviews. Artist research & analysis. Art movements & time periods. Trips, museums & galleries.	Experimenting with different materials. Improvements. Testing ideas. Contact sheets with selections. Repeating ideas in materials. Developed ideas.	Observational drawings. Photography. Annotations. Ideas. Planning for tests or photoshoots. Thumbnail sketches.	Final outcomes. Final design plan explaining links to prior learning. Meaningful connections within the work.

Art

Tone is the darkness or lightness of an object.

Reminders

Lighter tones are used to indicate the light source, or where the light reflects off of, and/or shines on an object.

Darker tones are used to indicate the lack of light.

Highlight – Where light directly hits the object it is the lightest part.

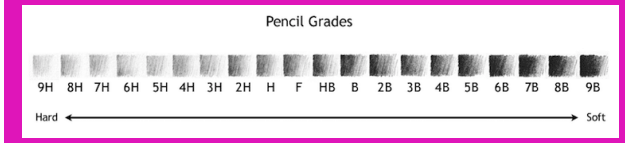
Midtone - A medium tone, one that is neither very dark nor very light.

Shadow - Is the dark side on an object not facing the light.

Continuous line drawing – Drawing without taking your pen or pencil off the page.

Shading pencils – get darker the higher the number B.

To create lighter tones – lessen the pressure applied on your pencil.
To create darker tones add pressure to your pencil.



In school we use HB, 2B, 4B and 6B pencils

To create darker areas, start with a mid-tone and build it up in smooth layers.

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

Tone can be used for a range of effects:

- to create the illusion of form
- to create a particular atmosphere
- to create contrast and focus attention
- to suggest depth and distance

Shading
Shading is used to create different tones in a drawing. A range of different techniques can be used to build up tones.

Hatching
Hatching involves building tone using lines. The thickness and number of lines and the distance between them creates the illusion of form. There are different types of hatching:
Hatching uses parallel lines.
Crosshatching uses lines that cross at different angles to each other.
Contour hatching uses curved lines that follow the form of a subject.

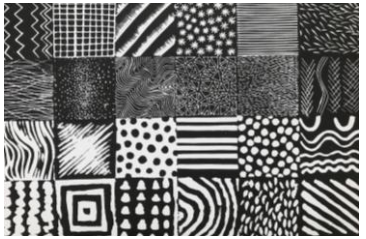
The grid drawing method is used to create realistic drawings based on an image such as a photo or magazine.

Art

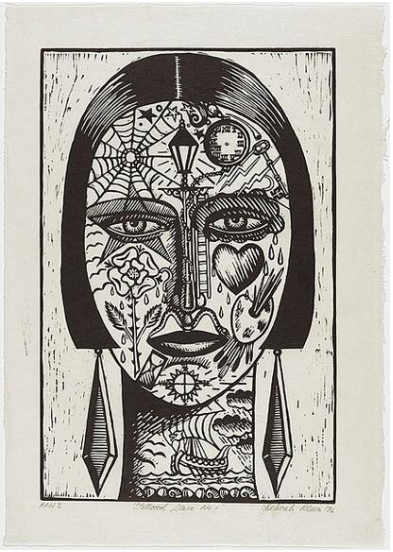
Positive space – Areas where lino remains and will print.
Negative space – Areas where lino will be removed and no colour will print.
Reduction print – A multicolour print in which the separate colours are printed from the same lino piece at different stages.
Monochrome – single colour

Lino in printmaking

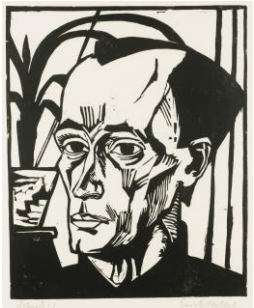
The use of Lino to create art is attributed to **German Expressionists** such as Erich Heckel (1883-1944) and Gabriele Munter (1877-1962). Black-and-white linocuts appeared in the UK in 1912, with one of the first being by Artist Horace Brodzky.



Features, textures and details are added through varying the use of the Lino cutting tool to produce different marks and patterns, in monochrome pieces, you can use directionality to define different sections.



Deborah Klein



Erich Heckel

Gabriele Munter

The development of color linocuts was influenced by Claude Flight (1881-1955) who taught linocut in London at the Grosvenor School of Modern Art between 1926 and 1930.

Picasso is known to have produced linocuts between 1939 - 1960s. Picasso was one of the first artists to use **reduction linocuts**, where a piece of lino is used multiple times in one print, being recut after each colour has been printed.

Lino can be used in many different ways, and before being used by artists, was used by commercial printers to create posters.

Horace Brodsky

John Ndevasia Muafangejo

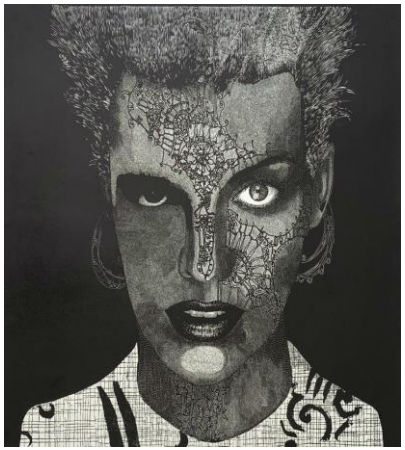
Contemporary examples

Picasso

Matisse

Claude Flight

Steve Bennet



Anna Gawlikowska

Art

- **Pay attention – Do not mess around and make sure you concentrate!**
- **Do not run with these tools. These are SHARP. Do not 'playfight'. 'throw' them or 'poke' people with them.**
- **Cut away from your hand! (and yourself!) Keep your free hand closer to your body.**
- **Keep your lino on the table, not on top of paper as it is more likely to slide.**
- **Move the lino – NOT your body!**
- **Never use a defective cutting tool such as one with a broken handle or blade.**
- **Return each lino cutter to the rack when finished.**
- **Never leave cutting tools lying around.**

Lino cutters have different nibs that are interchangeable for the different style of cutting someone wants to do.

Please ensure you have the one like is shown – a dipped nib like a scooper

Otherwise it will be harder to cut!!

Roller and Ink
Used to transfer your Design onto paper!

APRON
Wear me as soon as the ink comes out!!!

Adigraph
This a polymer version of lino **much easier and smoother to cut** into!

A **Bench hook** can be used if you are struggling to keep the lino still!

Lino Cutting Health and Safety

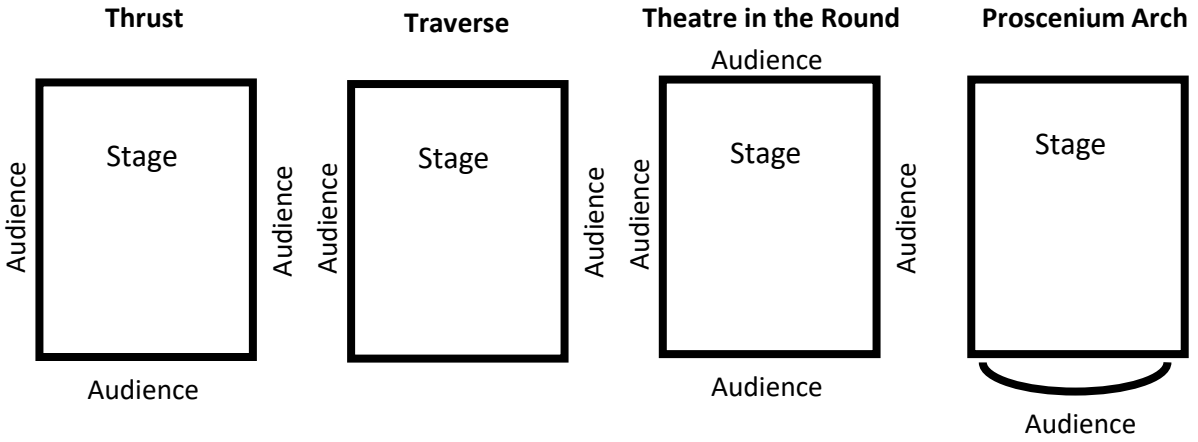
Performing Arts - Grease

Text related terminology

Greasers were not all gang member's but they shared and assimilated the tough language of the street. Many of the terms below, first heard in the 50's, have since become part of our everyday vocabulary. Some common terms in the text include:

Bop – Fight
Bread – Money
Busted – arrested
Dig – understand
Hustle – a con
Dig – understand
Jazz – meaningless talk
Pad – room
Piece – gun/weapon
Pusher – drug dealer
Rep – reputation
Rumble – gang fight
Sneaky Pete – cheap wine

Types of Staging



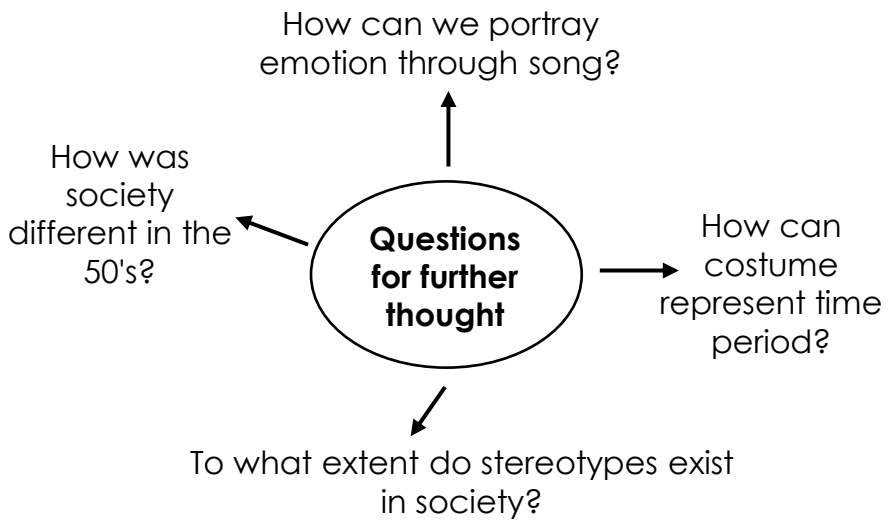
Skills and techniques

Accent – how to pronounce words
Ensemble – working as a chorus/group
Tempo – the speed words are spoken at
Formations – positions on stage
Characterisation - creating a character through body language and facial expressions

Stage Positions

Upstage Right	Upstage Centre	Upstage Left
Centre Right	Centre	Centre Left
Downstage Right	Downstage Centre	Downstage Left

Audience



Music – The Music Industry

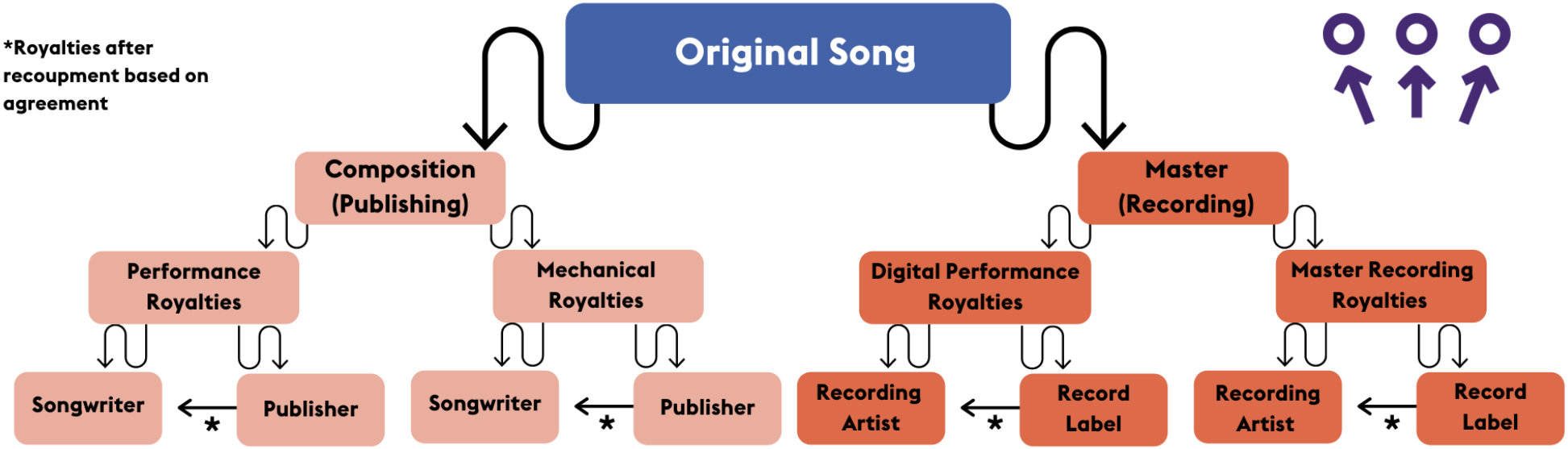
- Full time
- Part Time
- Fixed Term
- Permanent
- Freelance

- Salary
- Instrument Technician
- Instrument Repairer
- Stage Manager
- Sound Engineer

- Live Performer
- Recording Artist
- Composer
- Songwriter
- Rehearsal
- Recording

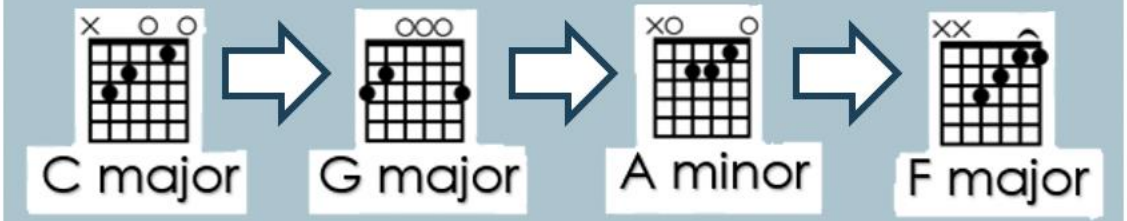
ROYALTY BREAKDOWN

*Royalties after recoupment based on agreement

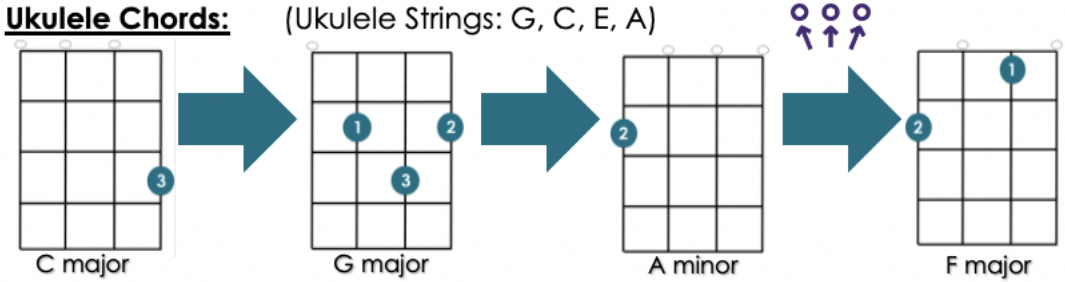


Music – The Music Industry

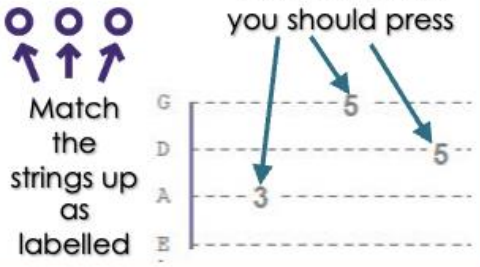
Guitar Chords: (Guitar Strings: E, A, D, G, B, E)



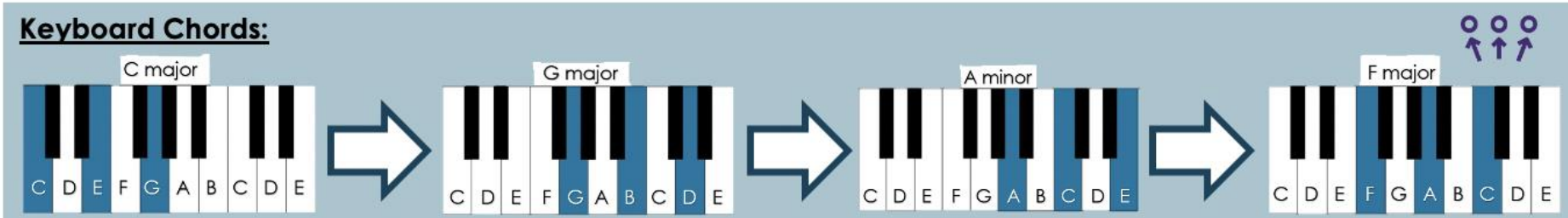
Ukulele Chords: (Ukulele Strings: G, C, E, A)



Bass Guitar TAB: The number fret you should press



Keyboard Chords:



Chords on String instruments

TOP TIPS

- Double check the string & fret being used.
- Only press down the string needed.
- Use your finger tip – no flat fingers.
- Strum all strings for a chord. (Unless diagram says not to)

Keywords

Tempo
Ukulele
Guitar
Bass Guitar
Keyboard
Rhythm
Ensemble
Chords
- C major
- G major
- A minor
- F major

Tab
Chord Symbol
Fret
Fretboard
String
Key
Open String
Strumming pattern
Finger picking
Block Chord
Broken Chord

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