YEAR 9 – CONSTRUCTING IN 2D/3D...

Constructions & congruency

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Draw and measure angles
- Construct scale drawings
- Find locus of distance from points, lines, two lines
- Construct perpendiculars from points, lines, angles
- Identify congruence
- Identify congruent triangles

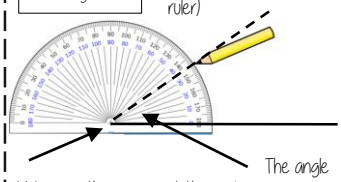
Keywords

Protractor: piece of equipment used to measure and draw angles
Locus: set of points with a common property
Equidistant: the same distance
Discorectangle: (a stadium) – a rectangle with semi circles at either end
Perpendicular: lines that meet at 90°
Arc: part of a curve
Bisector: a line that divides something into two equal parts
Congruent: the same shape and size

Draw and measure angles (R)

Draw a 35° angle

Make a mark at 35° with a pencil and join to the angle point (use a ruler)



The angle

Make sure the cross is at the end of the line (where you want the angle)

Scale drawings (R)

A picture of a car is drawn with a scale of 1:30

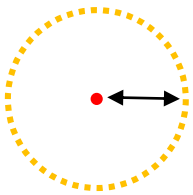
For every 1cm on my image is 30cm in real life

The car image is 10cm

Image	Real life
1cm	30cm
10cm	300cm

(×10 / ×10)

Locus of a distance from a point

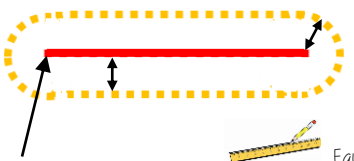


All points are equidistant (the same distance) from the fixed point in the middle

Equipment needed
The radius is the distance from the fixed point

If the point is in the corner it can only make a quarter circle

Locus of a distance from a straight line

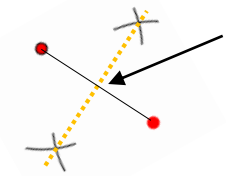


All points are equidistant (the same distance) from line

The ends of the line are fixed points

Equipment needed
The line is straight so a ruler is used for the straight lines parallel to your original line

Locus equidistant from two points



Also a perpendicular bisector
Because if the points are joined, this new line intersects it at a 90°

Keep the compass the same size and draw two arcs from each point

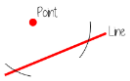
Join the intersections with a ruler
All points on this line are equidistant from both points

Construct a perpendicular from a point

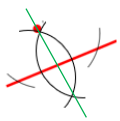
Point

Line

Use a compass and draw an arc that cuts the line. Use the point to place the compass



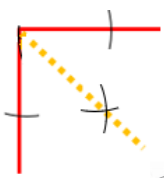
Keep the compass the same distance and now use your new points to make new interconnecting arcs



Connecting the arcs makes the bisector

If P is a point on the line the steps are the same

Locus of a distance from two lines



Also an angle bisector
This cuts the angle in half

From the angle vertex draw two arcs that cut the lines forming the angle

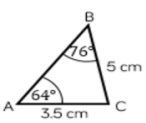
Keep the compass the same size and use the new arcs as centres to draw intersecting arcs in the middle

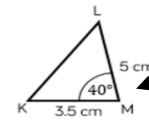
Join the vertex to the intersection

Congruent figures

Congruent figures are identical in size and shape – they can be reflections or rotations of each other

Congruent shapes are identical – all corresponding sides and angles are the same size





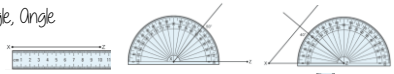
$A\hat{C}B = K\hat{M}L$

Because all the angles are the same and AC=KM BC=LM triangles ABC and KLM are **congruent**

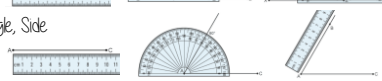
Constructing Triangles

Link to steps (R)

Side, Angle, Angle



Side, Angle, Side



Side, Side, Side

Congruent triangles

Side-side-side

All three sides on the triangle are the same size

Angle-side-angle

Two angles and the side connecting them are equal in two triangles

Side-angle-side

Two sides and the angle in-between them are equal in two triangles (it will also mean the third side is the same size on both shapes)

Right angle-hypotenuse-side

The triangles both have a right angle, the hypotenuse and one side are the same

YEAR 9 – REASONING WITH NUMBER...

Numbers

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Identify integers, real and rational numbers
- Work with directed number
- Solve problems with number
- Find HCF/ LCM
- Add/ Subtract fractions
- Multiply/ Divide fractions
- Write numbers in standard form

Keywords

Integer: a whole number that is positive or negative
Rational: a number that can be made by dividing two integers
Irrational: a number that cannot be made by dividing two integers
Inverse operation: the operation that reverses the action
Quotient: the result of a division
Product: the result of a multiplication
Multiples: found by multiplying any number by positive integers
Factor: integers that multiply together to get another number

Integers, real and rational numbers

Rational – root word: ratio

Real numbers: $\frac{2}{3}$ stems from 2 : 1 ($\frac{2}{3}$ of the whole)

Irrational numbers: $\sqrt{2}$ the solution is a decimal that never ends and does not repeat

The square root of a negative is not a real number and cannot be found

HCF/LCM (R)

1 is a common factor of all numbers

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

HCF = 6

LCM – Lowest common multiple

LCM of 9 and 12

9: 9, 18, 27, 36, 45, 54
12: 12, 24, 36, 48, 60

LCM = 36

The first time their multiples match

Standard form (R)

Any number between 1 and less than 10 × 10^{n} ← Any integer

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

$= 600000 + 800000$

$= 1400000$

$= 1.4 \times 10^5$

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

$15 \div 0.3 \times 10^5 \div 10^3$

$= 5 \times 10^2$

Directed number (R)

Addition

$2 + -4 = -2$

Zero pair ($-1 + 1 = 0$)

Two "–1" left $= -2$

Generalisation: + − = −

Subtraction

$= 2$

Representation for calculation

"Subtract" – means take away or remove

Generalisation: − − = +

$2 - -1 = 3$

Take away one

$= 3$

Start with the representation of 2

Multiplication

= −1
= 1

The act of making counters into their negative is turning them over

$-2 \times -3 = 6$

Divisions are the inverse operations

a = 5 b = −4

Brackets around negative substitutions helps remove calculation errors

$2a - b = 2 \times 5 - (-4) = 10 + 4 = 14$

Addition/ Subtraction of fractions (R)

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

$\frac{12}{15} - \frac{10}{15} = \frac{2}{15}$

Use equivalent fractions to find a common multiple for both denominators

Multiplication/ Division of fractions (R)

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

Shade in 3 parts

Repeat it on this many rows

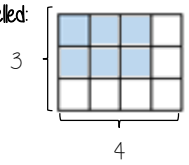
This many columns

This many rows

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

Total number of parts in the diagram

Modelled:



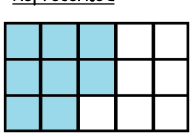
Remember to use reciprocals

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

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

Multiplying by a reciprocal gives the same outcome

Represented



$= \frac{8}{15}$

YEAR 9 – REASONING WITH NUMBER...

Using Percentages

@whisto_maths

What do I need to be able to do?

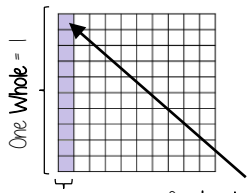
By the end of this unit you should be able to:

- Use FDP equivalence
- Calculate percentage increase and decrease
- Express percentage change
- Solve reverse percentage problems
- Solve percentage problems (calculator and non calculator problems)

Keywords

Percent: parts per 100 – written using the % symbol
Decimal: a number in our base 10 number system. Numbers to the right of the decimal place are called decimals.
Fraction: a fraction represents how many parts of a whole value you have.
Equivalent: of equal value.
Reduce: to make smaller in value.
Growth: to increase/ to grow.
Integer: whole number, can be positive, negative or zero.
Invest: use money with the goal of it increasing in value over time (usually in a bank).
Multiplier: the number you are multiplying by.
Profit: the income take away any expenses/ costs.

FDP Equivalence (R)



$\frac{10}{100} = \frac{1}{10} = 0.10$

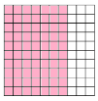
One **hundredth** (one whole split into 100 equal parts)

Percentage
100% = a whole = 100 hundredths

10 hundredths
10 out of 100
10%

ones	tenths	hundredths
	●	●

Converting FDP (R)

$\frac{70}{100}$ → This also means 70 ÷ 100 → 70 out of 100 squares → **70 "hundredths"** = **7 "tenths"** = **0.7** →  → 70 hundredths = 70%

Using a **calculator**

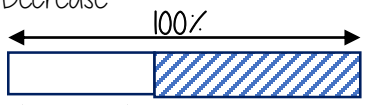
$\frac{\blacksquare}{\square}$ → S⇔D Convert to a decimal

× 100 converts to a percentage

Be careful of recurring decimals
e.g. $\frac{1}{3} = 0.3333333$
$= 0.\dot{3}$
The dot above the 3

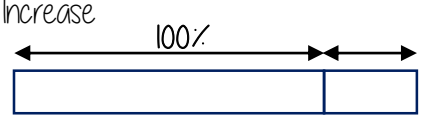
Percentage Increase/ Decrease (R)

Decrease



100 – 0.58 = 0.42 ← **Multiplier** Less than 1

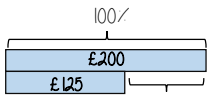
Increase



100% + 12% = 112%
100 + 0.12 = 1.12 ← **Multiplier** More than 1

Percentage change (R)

I bought a phone for £200. A year later sold it for £125



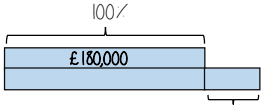
All values of change compare to the ORIGINAL value

Percentage loss

$\frac{75}{200} \times 100 = 37.5\%$

$$\frac{\textit{Difference in values}}{\textit{Original value}} \times 100$$

I bought a house for £180,000, I later sold it for £216,000



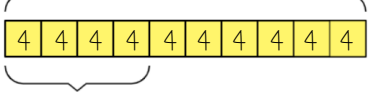
Percentage profit

Money made (profit value) → $\frac{36000}{180000} \times 100 = 20\%$

Reverse Percentages

40% of my number is 16. What am I thinking of?

Original Number (100%)

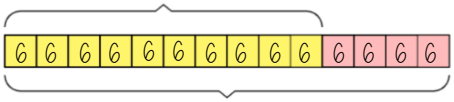


16

40% = 16
10% = 4
100% = 40

140% of my number is 84. What is the original number?

Original Number (100%)



84

140% = 84
10% = 6
100% = 60

Try to scale down to 10% or 1% and then scale back up to 100%

YEAR 9 – REASONING WITH NUMBER...

Maths & Money

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Solve problems with bills and bank statements
- Calculate simple interest
- Calculate compound interest
- Calculate wages and taxes
- Solve problems with exchange rates
- Solve unit pricing problems

Keywords

Credit: money being placed into a bank account
Debit: money that leaves a bank account
Balance: the amount of money in a bank account
Expense: a cost/ outgoing
Deposit: an initial payment (often a way of securing an item you will later pay for)
Multiplier: a number you are multiplying by. (Multiplier more than 1 = increasing, less than 1 = decreasing)
Per Annum: each year
Currency: the type of money a country uses.
Unitary: one – the cost of one.

Bills and Bank Statements

Bills – tell you the amount items cost and can show how much money you need to pay.

Some can include a total

Look for different units (Is it in pence or pounds)

Menu	Price
Milk	89p
Tea	£1.50

Bank Statements

Bank statement can have negative balances if the money spent is higher than the money coming into the account

Date	Description	Credit	Debit	Balance
19th Sept	Salary	£1500		£1500
19th Sept	Mortgage		£600	£900
25th Sept	Bday Money	£15		£915

Simple Interest

For each year of investment the interest remains the same

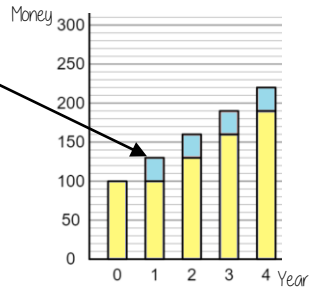
$$\frac{\text{Principal amount} \times \text{Interest Rate} \times \text{Years}}{100}$$

Principal amount is the amount invested in the account

e.g Invest £100 at 30% simple interest for 4 years

$\frac{100 \times 30 \times 4}{100} = £120$

This account earned **£120** interest
At the end of year 4 they have **£220**



Compound Interest

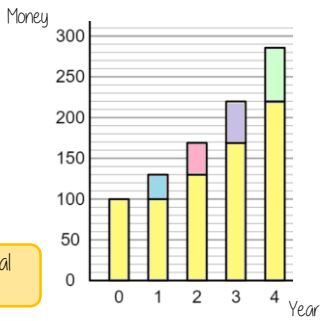
Interest is added to the current value of investment at the end of each year so the next year's interest is greater.

$$\text{Principal amount} \times \text{Multiplier}^{\text{Years}}$$

e.g Invest £100 at 30% compound interest for 4 years

$100 \times 1.3^4 = £285.61$

This account has **£285.61** in total at the end of the 4 years.



Value Added Tax (VAT)

VAT is payable to the government by a business. In the UK VAT is 20% and added to items that are bought.

Essential items such as food do not include VAT.

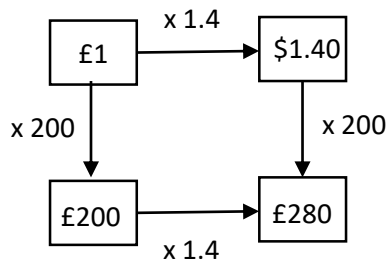
Wages and Taxes

Salaries fall into tax brackets – which means they pay this much each month from their salary.

Taxable Income	Tax Rate
£12 501 to £50 000	20%
£50 001 to £150 000	40%
over £150 000	45%

Over time:
Time and a half – means 1.5 times their hourly rate
Double – 2 times their hourly rate

Exchange Rates



When making estimates it is also useful to use estimates to check if our solution is reasonable.

Use inverse operations to reverse the exchange process

Common Currencies

United Kingdom	£	Pounds
United States of America	$	Dollars
Europe	€	Euros

Unit Pricing

4 Oranges £1	5 cupcakes £1.20

$4 = £1.00$ ÷ 2 → $2 = £0.50$ ÷ 2 → $1 = £0.25$

$5 = £1.20$ ÷ 5 → $1 = £0.20$

Cost per Unit

To calculate unit per cost you divide by the cost.

Cupcakes are the best value as one item has the cheapest value

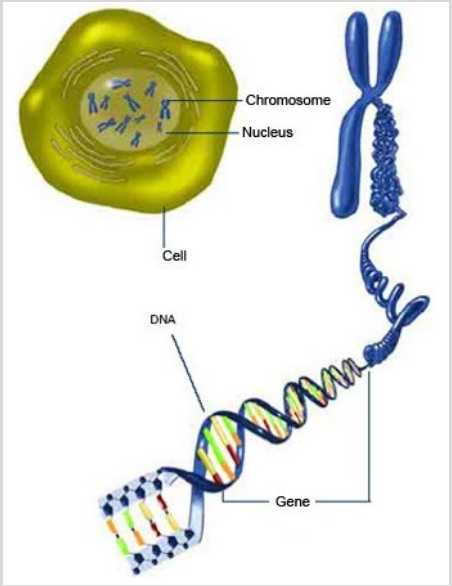
There is a directly proportional relationship between the cost and number of units.

Year 9 Science Summer Term Knowledge Organiser – Genetics

Key Vocabulary

1	**Allele**	A version of a gene. *The mouse contained two **alleles** which both coded for white fur.*
2	**Amino Acid**	A monomer (single unit) of proteins. *A protein is made of a sequence of **amino acids**.*
3	**Base**	The variable part of a nucleotide. *The **bases** in DNA pair up to form a double helix structure.*
4	**Chromosome**	A section of DNA that contains many genes. *Human cells contain 23 pairs of **chromosomes**.*
5	**Clone**	An identical copy of an organism. *The two daughter cells made during mitosis are **clones**.*
6	**Daughter Cells**	New cells that are produced during cell division. *During mitosis, two genetically identical **daughter cells** are produced.*
7	**DNA**	A chemical substance which carries genetic information.
8	Meiosis The type of cell division by which gametes are produced. After meiosis, gametes have half the number of chromosomes.	
9	Mitosis The type of cell division which results in two genetically identical daughter cells. The cells are dividing by mitosis.	
10	Protein A sequence of amino acids folded into a specific structure.	

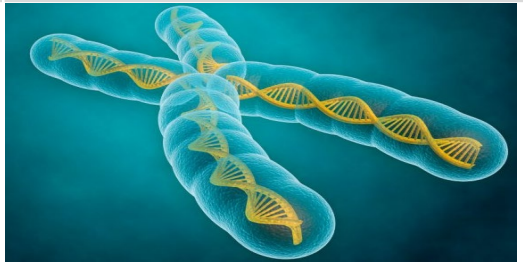
11



12 A gene is a section of a chromosome that codes for a particular protein.
genes and chromosomes
9.DNA is a polymer. It is made of two strands which form a double helix.
10.The DNA is contained in structures called chromosomes.

Variation

21	Differences between individuals of the same species. There was clear variation in height between pupils in different year groups.
22	Phenotype The expressed characteristic determined by the organism's genotype and its interaction with the environment.
23	Genotype The combination of alleles possessed for the same gene. The mouse's genotype for fur colour is Bb.
24	Mutation A change in the genetic material of an organism. There was a mutation in the DNA which altered the structure of the protein.



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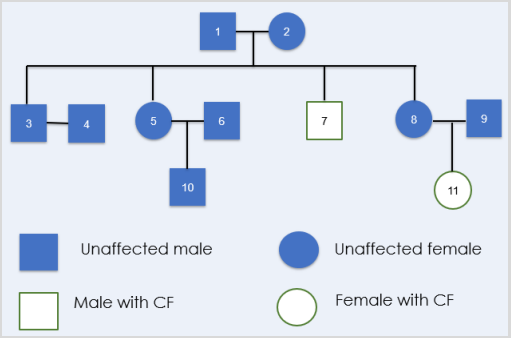


Year 9 Science Summer Term Knowledge heating

Key Vocabulary:

1	**Kinetic energy**	A store of energy that any object or particle has when moving. *Particles in a gas have the greatest store of **kinetic energy**.*
2	**Potential energy**	A store of energy related to the position of objects or particles. *Particles in a gas have the greatest store of **potential energy**.*
3	**Radiation**	Thermal transfer as a wave, by infrared radiation. ***Radiation** is the method of thermal transfer that does not require particles.*
4	**Specific Heat Capacity**	The energy required to heat 1 kg of a material by 1 ºC. *The greater the **specific heat capacity** of a material, the more energy it will require to increase its temperature.*
5	**Specific Latent Heat**	The energy required to change the state of 1 kg of a material (with no change in temperature). *Each different material has a different **specific latent heat**.*
6	**Specific Latent Heat of Vaporisation**	***Specific latent heat of vaporisation** is used when calculating how much energy is required to turn 1 kg of water into steam.*
7	**Temperature**	Related to the average kinetic energy of particles in a system. ***Temperature** is measured in ºC.*
8.	**Vacuum**	An area where there are no particles. *Radiation can occur in a **vacuum** but conduction and convection cannot.*

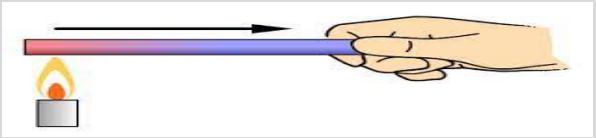
Internal Energy

9.

Internal energy = kinetic energy of the particles in a system + potential energy of particles in a system.
Particles in solids, liquids and gases have kinetic energy because they are always moving.
The hotter a material is the faster its particles move and the larger the kinetic store of energy.
Particles have potential energy because their motion keeps them separated. The further apart the particles the larger the potential energy.
Particles in a gas have more internal energy because they have more kinetic energy and potential energy.
Heating changes the energy stored in the system by increasing the energy of the particles that make up the system.
Heating either raises the temperature of the system or produces a change of state.
The thermal energy of an object depends on its mass, temperature and what it is made of.

10. Thermal transfers

Energy transfers from hotter substances to cooler substances.
Temperature is a measure of the motion and energy of the particles. It is related to their kinetic energy.
When thermal energy is transferred to an object by heating, its temperature depends on what the substance is made from, its mass and the amount of energy transferred.
The more thermal energy transferred the higher the temperature unless there is a change in state.
Conduction is thermal transfer by the vibration of particles. Metals are good thermal conductors because they contain delocalised (free) electrons which can move freely through the metal.



Convection is thermal transfer when particles in a heated fluid rise.
A fluid is a substance with no fixed shape – a liquid or a gas.
Liquids and gases expand when they are heated, the gaps between particles increases.
The liquid or gas becomes less dense and rises. The denser, colder fluid sinks, forming a convection current.

Radiation is the transfer of thermal energy as a wave.
Thermal transfer by radiation can occur in a vacuum as it does not require particles.
Some surfaces are better than others at absorbing and reflecting radiation. Shiny silvered surfaces are good at reflecting radiation.

11 Specific heat capacity

Specific heat capacity is the energy needed to raise the temperature of 1 kg of substance by 1 ºC.

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

ΔE = energy change (J)
m = mass (kg)
c = specific heat capacity (J/kg ^{o}C)
$\Delta\theta$ = temperature change (^{o}C)

Different materials require different amounts of energy to heat up or change state.

13 Specific latent heat

Specific latent heat of a material is the energy needed to change the state of 1 kg of the substance with no change in temperature.

$E = m\ L$

E = energy for a change of state (J)
m = mass (kg)
L = specific latent heat (J/kg)

Specific latent heat of fusion refers to a change of state from solid to liquid.
Specific latent heat of vaporisation refers to a change of state from liquid to vapour.

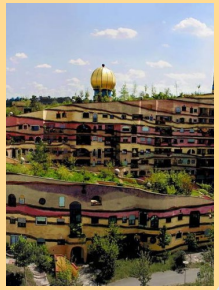
Year 9 ART HT3&4 Knowledge Organiser - Architecture

Antoni Gaudi

Antoni Gaudi was an architect born in 1852. His works can be found in Barcelona, Spain. His building designs are inspired by nature. His masterpiece La Sagrada Familia will be completed in 2026, 100 years after his death. Many of Gaudi's buildings have Art Nouveau elements of design, for example Casa Batllo.

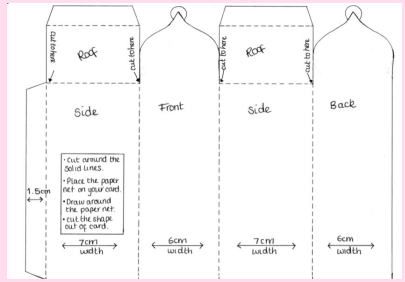
Friedensreich Hundertwasser

Hundertwasser was an Austrian artist and architect who spent his whole career championing the curve of organic nature against the straight line. His buildings can be found in Austria and Germany. Hundertwasser was an environmental artist and used foliage to cover the roofs of buildings. Several trees grow from inside the rooms and out of windows.

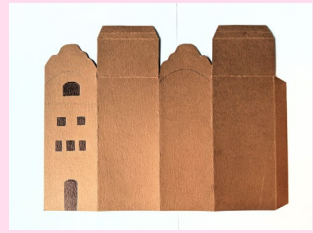


Making a Building Sculpture

Step 1 – Draw your chosen net onto cardboard which when folded will create a 3D model of a building.

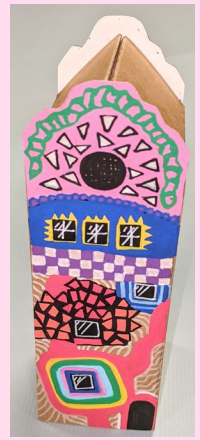


Step 2 - Add windows and doors to your cardboard net.



Step 3 – Using oil pastels, decorate the front, and one of the sides of your sculpture with the sgraffito technique. The patterns should be inspired by Gaudi or Hundertwasser.

Step 4 – Decorate the back of your cardboard net using Posca paint pens.
Use organic shapes and patterns inspired by Natural Forms.



Step 5 - Add Graffiti lettering to the side of your sculpture using Posca pens. Add finishing touches such as a tiled roof and bricks.

Keywords

Architecture - The profession of designing buildings and open areas, usually with some regard to aesthetic effect.

Natural Form – An object in nature in its original form, such as leaves.

Organic– Associated with natural things like plants. Flowing and not angular or straight.

Line – Defines shape, the outer edge of something.

Mixed Media – The use of two or more medias mixed together, like using watercolour and fine liner.

Art Nouveau – A movement that combines art and nature. It is characterized by its use of long, curved and organic lines often seen in architecture.

Year 9 ART HT3&4 Knowledge Organiser - Architecture

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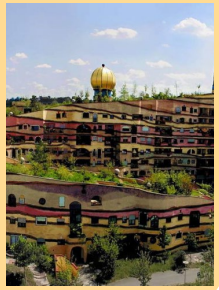

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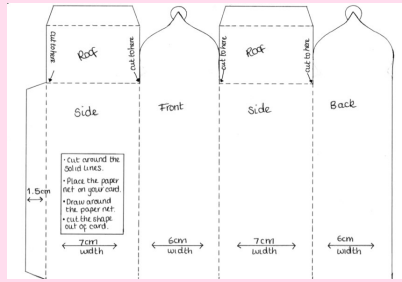

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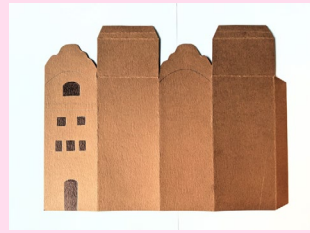

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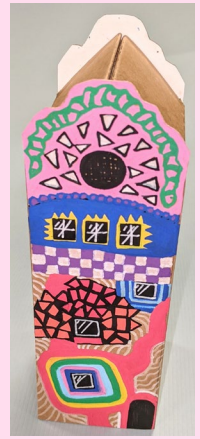

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Year 9 Subject Term Knowledge Organiser: Business Studies

Topic 1.1 Enterprise and Entrepreneurship

An Entrepreneur
Someone that has a business idea and then takes the risk to start their own business.

Famous Entrepreneurs
- Steve Jobs – Apple
- Mark Zuckerberg – Facebook
- Kylie Jenner – Kyle Cosmetics
- Richard Branson – Virgin

What is a Dynamic Business?
A business that responds to what customers want

Why new business ideas come about:
- changes in technology
- changes in what consumers want
- products and services becoming obsolete (don't need it anymore e.g. CD player.

Key Words
Independence = making your own decisions

Lack of security = not having enough money to pay your bills

Gap in the market = no competition

Obsolete = no one wants it anymore

Why must a business be dynamic?
To keep customers happy = so they won't go to competitors = more repeat purchase = more sales and Profit
Why must a business keep up with changes in consumer demand?
Otherwise customers won't be happy/satisfied = they will go to your competitors = less sales and profit

Ways an entrepreneur might identify a new business idea?
- original ideas – *completely new idea*
- adapting existing products/services/ideas – *make it better*

Risk: - *reduced by carrying out market research*
- Business Failure
- Financial loss
- Lack of Security *(no guaranteed pay check)*
- **Reward** *(also reason why you would set up your own business):* Business Success
- Profit
- Independence (being your own boss)

An original idea
+ no competition = can charge a higher price
- Expensive to create as will have to do research to see if people want the idea

Adapt an existing idea
+ You know that people already like it
- Not original so you have competition

Added Value
- Unique selling Point
- Quality
- Branding
- Improved Product Design
- Convivence

Year 9 PE Knowledge Organiser- Badminton

Key Words	Description	Coaching Points
Drive	A fast and flat shot that travels horizontally over the net. It can be played on both forehand and backhand sides. The drive is an attacking shot that is usually played from the sides of the court when the shuttle has fallen too low for it to be returned with a smash.	Forehand : Use Panhandle grip. Backhand : Use the traditional backhand grip. The drive is a simple shot to learn because it doesn't require a lot of movement. A drive is nothing more than a quick flick of the wrist with your forearm providing force and guidance. Make sure you hit the shuttlecock as soon as you can. This means that if a shot is coming straight at you, take a step forward as you hit it to provide extra power. Also, the sooner you return a shot, the less time your opponent has to react.
Flick Serve	The flick serve is also played upward but much more shallowly than the high serve. Idea is to deprive the opponent of time and force them to hit shuttle when it is behind their body. Flick serves are used more frequently in doubles.	Appear as though you are performing a low serve. Then as you are bringing your racket head forward increase the speed and angle of trajectory.
Drive Serve	The drive serve is played fast and flat towards the receivers back court, passing low over the net. Idea is to force a mishit of your opponent by catching them unaware. The drive serve is a gamble because if your opponent reacts fast you are likely to lose point as you will be out of position / unable to respond to shot. As a result professional players will very rarely use this serve. Drive serves are favoured more in doubles than singles due to the opponent generally standing nearer the net.	Use a short sharp swing with a rebound action, stop racket head after impact. Tighten grip on racket to achieve more power.

Forehand Drive

Effects of exercise

Short term	Long term
Rise in muscle temperature Blood temperature rises The blood vessels near the skin open to allow heat to be lost	Muscles get bigger (Hypertrophy) Increased number of capillaries in muscles Increased oxygen delivered to and carbon dioxide removed from the body

Components of fitness

Component of fitness	Definition	Example of use in the game
Reaction Time	How fast a person can respond to a stimuli.	Players will need good reactions to respond to a smash to successfully return it.
Speed	Is the maximum rate at which an individual is able to perform a movement or cover a distance in a period of time.	Speed is needed to quickly move around the court and return the shuttle. Especially when responding to clears and drop shots.

Year 10 HT3 Drama Knowledge Organiser

Summary of topic

They must understand the GCSE requirements of the devising plays unit and understand what constitutes successful devised work

Aims of the topic

To use given stimuli to create and develop a devised piece of theatre

'Life itself is the most wonderful fairy-tale' **– Hans Christian Anderson**

Devising Plays Knowledge Organiser

Y10 GCSE

What's the point of having a voice if you're gonna be silent in those moments you shouldn't be?' **–** The Hate U Give by Angie Thomas

Devising Rules

- Every actor should have a monologue that is at least 90 seconds long and everyone should have an equal part.
- Divide the work up evenly – script writing (everyone write/plan their own scene), sourcing costume, planning technical theatre (staging, music, lights)
- Help each other out – but only when your own work is done. Even though this is a group project, you still get marked individually.
- Find an idea that every person is happy with and don't rule anything out.
- Try to get it on its feet early – the best ideas come from when you try to act something out, not sit there discussing it.

Assessment & Rehearsal Tips

- **You will be offered 4 pieces of stimuli given to us by the exam board. 1 song, 1 quote, 1 phrase and 1 picture.**
- **In your given groups, you will generate ideas for each stimuli**
- **You will then decide on a stimuli and an idea. Then you will decide on a practitioner to use for your idea**
- **In your groups you will create a piece of drama around your idea, linked to the stimuli and using practitioner techniques**
- **Try everything – even if something doesn't work, you may discover something useful.**

'Superheroes' – The Script

Skills & Definitions

Ensemble – Collaborated group performance.
Characterisation – The creating, development and performance of a created character.
Improvisation – Spontaneous acting and suggestions that further develop a performance.
Devised – Original created performance material, often using a stimulus.
Stimuli – The starting point set by exam board e.g. picture, quote, word or song. You chose one.
Practitioner – Brecht or Artaud and how they influenced the performance.
Brecht – Famous for Political and Epic Theatre. (See practitioner knowledge organiser). Made the audience think and bring real change.
Artaud – Famous for Theatre of Cruelty (See practitioner knowledge organiser). Made the audience feel uncomfortable.
Genre – Physical theatre is NOT a practitioner, it is a STYLE of drama focused upon storytelling using movement.
Techniques – The key skills which are relevant to the practitioner or genre (see practitioner knowledge organiser).
Final performance – The end performance of the piece.
Rehearsal – The process of creating and developing your piece of theatre
Monologue – A one person speech in character. Often around 2 minutes in length.

Year 9 HT2 HT3 Drama Knowledge Organiser

Knowledge Organiser Year 9 Drama

DNA by Dennis Kelly

You need to KNOW this to include in your answers.

'Is it right to sacrifice the individual for the many? This for me is the central question in the play' *Dennis Kelly*

The plot.

DNA by Dennis Kelly is about a group of teenagers, who could be described as a 'gang', who have accidently killed one of their classmates. When they realise their terrible mistake, they try to cover it up, but inadvertently implicate an innocent man in the process. At each moment when they could come clean, the group instead weaves a darker, more complex web of lies.

The Original Staging

PRODUCTION FACTS

- DNA was first written by Dennis Kelly for the National Theatre Connections Programme in 2007.
- It was performed in the Cottlesloe at the National Theatre, London.
- It was directed by Paul Miller
- Set, Costume and Video Design by Simon Daw.
- The lighting was designed by Paule Constable.
- Sound Designer Rich Walsh

The structure

It has been constructed with a **cyclical narrative**, in three different locations.

A street, a field, a wood.

There is a pattern to the sequence, Jan and Mark introduce the problem of that particular section, then it's Leah and Phil before moving onto to the wood where everyone is present and the problem is solved. **The structure is broken in the final section when it is just a street, then a field.**

Themes

Bullying – the most obvious character that is bullied is Adam which happens before the beginning of the play and seemingly has caused his death. However, it is worth considering who the main bullies are and what types e.g. verbal, mental and physical.

Gangs – Adam is not only desperate to be part of the gang but consider what the others are prepared to do to remain part of the gang.

Power – there are numerous power struggles within the play and it shifts throughout. It is Cathy that ultimately takes on the role as gang leader in the end, we should consider why?

Other themes are **Responsibility, Violence, Fear and Friendship.**

Original staging and style

DNA was originally staged in 2007 at The National Theatre, in **Proscenium Arch staging**. The locations were conveyed through **Projections across a bare stage** and the street/field/wood could be anywhere in Britain. The year could be any year.

The play was written with the intention that it could be interpreted or staged in different ways leaving it up to the director to consider their own artistic intentions. Although the **acting is naturalistic** the set doesn't have to be and its fast transitions between scenes to keep the tension will need to be considered with any choice of set or staging. The gender of the characters is also left up to the director and are easily interchangeable.

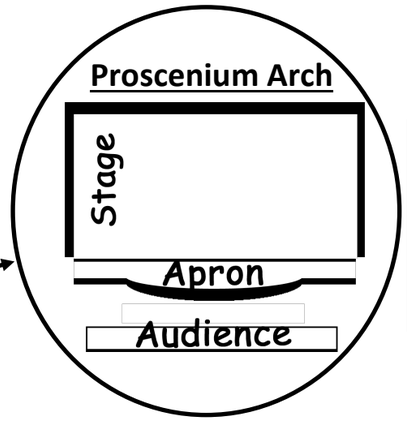
Use of colour – the colour blue was prominent creating a cold tense atmosphere. The school uniform ties were blue and the plastic bag was blue.

Costume – school uniform but each character wore a jacket or hoody to create an individual image, the ties were loosened. Adam's shirt was muddied and bloodied.

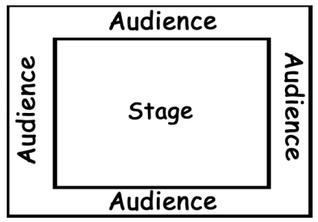
Space – the grey stage remained bare and if they sat, they sat on the floor. The focus was on the dialogue and the characters listening to the instructions. The acting was stripped down and there was strength in the stillness and the space between the characters.

Transitions – the street scene was created by an isolated strip of light downstage. The transitions were swift and stylised movements were kept to a minimum getting character from A to B. SFX were used to show the passing of time, similar to a 'whoosh' sound.

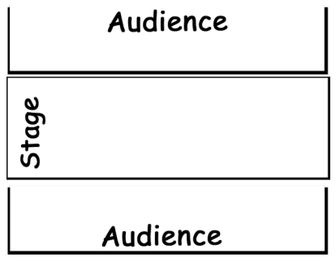
Proscenium Arch



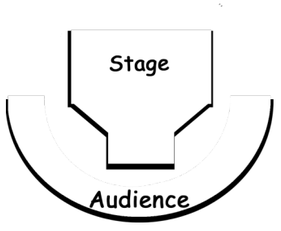
Theatre in a Round



Traverse



Thrust / Arena



Characters

Mark and Jan act as narrators who explain what's happening. They are always together and help in the cover up.

Leah is a moral character who worries about the groups actions. She is insecure and seeks Phil's attention.

Phil is the groups leader for most of the play. He's quiet, emotionless and manipulative.

John Tate starts as the group leader but his authority is weak and he leaves early on in the play.

Danny is a selfish character who is more worried about becoming a dentist than Adam's well being. Richard seems unhappy about the cover-up but he goes along with it. He challenged John Tate's leadership.

Cathy is violent and remorseless about Adam's death. She helps to kill Adam after he reappears.

Lou worries about the group getting caught.she follows whoever is in charge.

Brian is the weakest group member. He's bullied into covering up Adam's death and he suffers a mental breakdown as a result.

Adam is bullied by the group and thought to be dead. He turns out ot be alive but Phil has him killed.

What you need to be able to do

Explain how meaning is conveyed

Explain how an actor conveys meaning on stage through their use of...

Vocals

Volume— *Loud / Soft / Booming and Powerful / Ear piercing / Nervously quiet, conveying...*
Pace— *Slow / Moderate / fast / Hurried / Alarming / Casual / Sluggish / Deliberate / Fearful / Frantic / Rapid, which creates an atmosphere of...*
Pause— *which marks or highlights...*
Tone— *aggressive / questioning / intense / worried / impatient / Anxious, suggests mood and intention.*
Rhythm— *Unfinished / Short sharp / Erratic rhythms, variation of rhythms expressing her rollercoaster of emotions.*
Pitch— *high / low, to indicate...*
Accent— *Upper/Lower class / Regional*
Emphasis— *making certain words stand out and can change their meaning.*
Intonation— *Rise and fall of the voice helps us to say what we mean.*
His/her speech is · erratic · stuttering · varying in pace · attention seeking, · trying to reassure herself · revealing her panic.

Movement

Body language
Gesture
Mime
Physical Theatre– *representing / symbolises*
Slow and Steady gestures *which communicate...*
Over exaggerated hand gestures moving from hips to head to folded highlighting his/her...
Pacing across the stage creating an atmosphere of...
His/her movement / gestures are · threatening · fearful · friendly · sudden · disturbingly in a tentative manner.

Interaction

Repetition of lines not expecting an answer
Isolation from the group suggesting...
Sitting closely for reassurance
Silence and only interacting when necessary
Sudden bursts of physical violence make others wary of her.
Needing to fill the space with words.
Lack of eye contact to suggest...

Motivation

A characters reasons for doing what they are doing. This can relate to their background and how this effects their actions or it may be more in the moment. It also is about how the character is feeling at that moment and what they are perhaps thinking but not saying or revealing .

He wants to exert his power over them and take control in order to protect them from the consequences.
She needs to be loved/liked
She yearns for affection
She won't show any emotion and doesn't appear to have any.

The exam questions will ask you to **consider your role as a director**. You need to consider how to prepare the actor for the role they will play in performance. Be prepared ***to explain how rehearsal techniques prepare actors for their roles and help them to understand the characters motivation and relationships with the other characters. E.g.***

- Hot seating/Thought tracking/Freeze frames
- Improvising outside the text/Vocal games
- Spatial games to consider proxemics and interactions.

1. Naturalism	2. Rehearsal
3. Stanislavski	4. Exploration
5. Technical Theatre	6. Analysis and evaluation
7. Make-up	
8. Set-design	

Set design

Entrances and exits
Rostra
Flats - *static / suspended or moveable*
Backdrop
Levels
Suspended
Projection
Sightlines
Sloping
Rotating
Colours
Naturalistic
Non-Naturalistic
Symbols - *Dressed with - leaves - drinks crate*
Symbols of youth, den, meeting place, proximity to city
Hidden, dark secret

Lighting LFX

Intense — Bright / Dim / Focussed / wash covering larger area.
Flashing / Chase — A chase is a sequenced set of flashing lights
Colour— can be altered by using gels, helps inform mood or can be used to symbolise something.
GOBO— creates shapes / patterns for the lights.

Types of light
Fresnel - *soft edge effect*
Flood - *covers larger areas, can create washes*
Parcan - *good for strong saturated colours*
Profile spot - *Fixed, hard edged spot light*
Follow spot - *Moveable spot light*

Position - *Overhead / side / floor / on stage / rear*

Explain what decisions a designer may make in order to convey meaning through Lighting/sound/set design and costume.

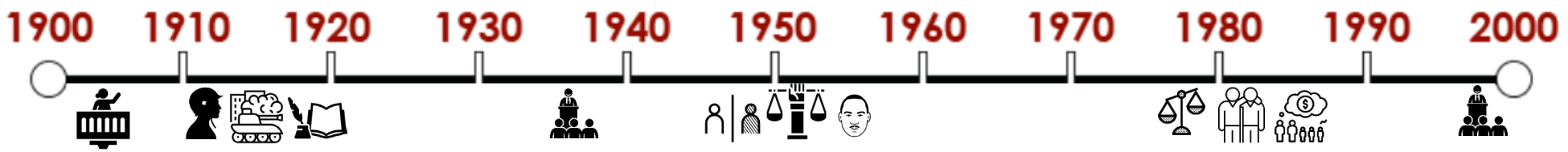
Sound SFX

Sound to mark or Music to highlight transition
Live or recorded sound
Volume
Intense
Calm
Contrasts
Fast paced creating tension, setting a mood of...

Costume

Describe
Head -> Toe
Hat -> Shoe
Makeup
Accessories *which indicate...*
Bags, scarfs, headband, cap *etc...*
Colour / Logo / Uniform
State— *smart / scruffy / trendy / unkept*

This highlights her status...
Conveying her need to fit in...
Portraying her individual nature and desire to stand out.



Adjective:	A word which describes a noun
Adverb:	A word which describes a verb
Analytical Verb:	Language to use in your analysis: the writer *suggests* / indicates / implies / emphasises
Anaphora:	Repetition of the same phrase at the beginning of two or more sentence or clauses
Audience:	Who the text is specifically aimed at
Authorial Intent:	The writer's goals or ambitions for how readers will respond and react to the text
Connotations:	The links or associations you have with a word
Cyclical Structure:	When the end of a text mirrors or is similar to the beginning of the text
Epiphora:	Repetition of the same phrase at the end of two or more sentence or clauses
Ethos:	A persuasive device: the use of your character, credibility and experience to persuade someone
Exclamatory:	A sentence ending in an exclamation mark
Imperative:	A word or sentence giving an instruction or a command
Juxtaposition:	Opposing or contrasting ideas nearby each other in a text
Logos:	A persuasive device: the use of logic or facts to persuade someone
Metaphor:	Figurative language: making a comparison saying something *is* something else (e.g. the moon is a ship in the sky)
Noun:	The name of a person, place or thing (concrete noun: something you can see/touch; abstract noun: an idea/feeling)
Pararhyme:	A half rhyme, where the vowels don't rhyme but the rest of the word does (e.g. 'killed' and 'cold)
Pathos:	A persuasive device: the use of feelings or emotion to persuade someone
Personification:	Giving an object or thing human qualities
Pronoun:	A word which replaces a noun (e.g. I, she, he, it, they, we, you)
Purpose:	Why the text has been written; links to authorial intent
Refrain:	A repeated line in poetry, often repeated at the same point in each stanza
Rhetoric:	The art of crafting language to create a powerful effect
Simile:	Figurative language: making a comparison by saying something is *like* something else (e.g. the stars are *like* diamonds)
Stanza:	The term for each section (like a verse/paragraph) in a poem
Tone:	The mood or emotion of the text
Verb:	An action or a doing word

Year 9 Subject Term Knowledge Organiser

Fitness

Knowledge

Develop an understanding of the benefits of fitness testing. And own ability in comparison to national averages.

Skills

Understand the benefits of fitness testing, Multi stage Fitness Test, 12 minute cooper run, press up/sit up tests

Key Words

Health – A state of physical, mental and social well being, not merely being absent from illness

Fitness – Fit for purpose or the ability to meet the demands of your environment

Intensity – how hard you are exerting yourself

Components of Fitness

Agility – Ability to change direction quickly and precisely without losing balance

Co-ordination – The ability of parts of the body to work together to move smoothly and accurately

Strength – Maximum force that can be generated by a muscle or group of muscles

Cardiovascular endurance - Ability of your heart and lungs to efficiently deliver oxygen to working muscles during exercise

Fitness

Knowledge

Develop an understanding of fitness leading and programming

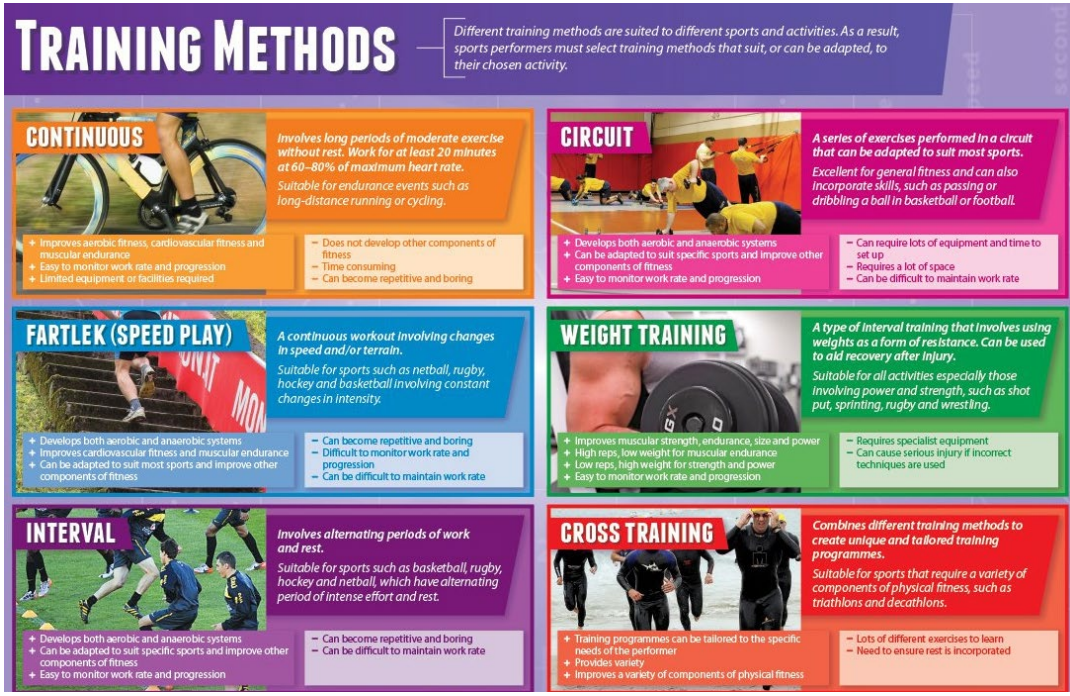
Skills

Understand how to improve fitness levels by using FITT, frequency, intensity, Time and type

Introduce training zones

The different type of training sessions, able to plan a suitable training session, including below and speedwork, HIIT, flexibility, mobility and plyometrics

ZONE	% OF MAX HR	EXERTION LEVEL	FITNESS GOAL
5	90 - 100%	MAX	FOR FIT ATHLETES IN VERY BRIEF DURATIONS, DEVELOP FAST-TWITCH MUSCLE FIBERS TO BOOST SPRINT SPEED
4	80 - 90%	HARD	INCREASE ANAEROBIC THRESHOLD AND MAX CAPACITY FOR SHORTER EFFORTS
3	70 - 80%	MODERATE	IMPROVE AEROBIC FITNESS AND MUSCLE STRENGTH
2	60 - 70%	LIGHT	BUILD BASIC ENDURANCE, FAT BURNING, SUSTAINABLE FOR LONG PERIODS OF EXERCISE
1	50 - 60%	VERY LIGHT	WARM UP, COOL DOWN, AND ACTIVE RECOVERY
0	< 50%	REST	NO MEANINGFUL STRAIN ON THE BODY



Year 9 Subject Term Knowledge Organiser

Football

Knowledge

Develop an understanding of the techniques of passing, throwing, using volleys half volleys where appropriate

Skills

Able to kick/head the ball confidently using the correct techniques and when to use appropriately

Knowing how to do a defensive header and an attacking header

Football Key Skills

Dribbling

Dribbling allows you to move the ball around the field without losing possession. Keep the ball close to your feet at all times, when running with it. Use the inside of your foot to control the ball when moving. Don't look down when running with the ball. Keep your head up.

Passing

Non-kicking foot is closest to the ball.
Kicking foot needs to be at the right angle to the ball. Body over the ball. Eyes focused on the ball and arms are used for balance.

Shooting

Non kicking foot needs to be next to the ball and player needs to keep their body balanced with their head slightly over the top of the ball. Contact the ball either with the side of the foot (placement of ball) top of the foot (to generate power)
Both legs need to be flexed but when striking the ball, kicking foot needs to be fully extended on the follow through. For accuracy, aim between the goalkeeper and the posts.

Heading

The forehead is used to contact the ball. Eye must be focused on the ball. Meet the ball your head by moving your feet or jumping to gain the extra height. Do not wait for the ball to hit your forehead.

Chest

Used when the ball is played in the air, to bring it down on the floor. Player needs to align himself with the ball. Roll their shoulders back to create a bigger surface to control the ball bend your knees to get the ball onto the floor.

Football

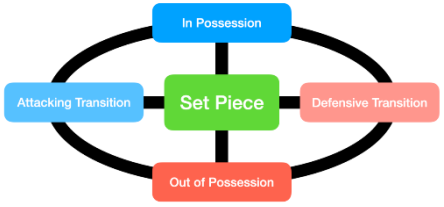
Knowledge

Develop an understanding of the wider game regards tactic and formations

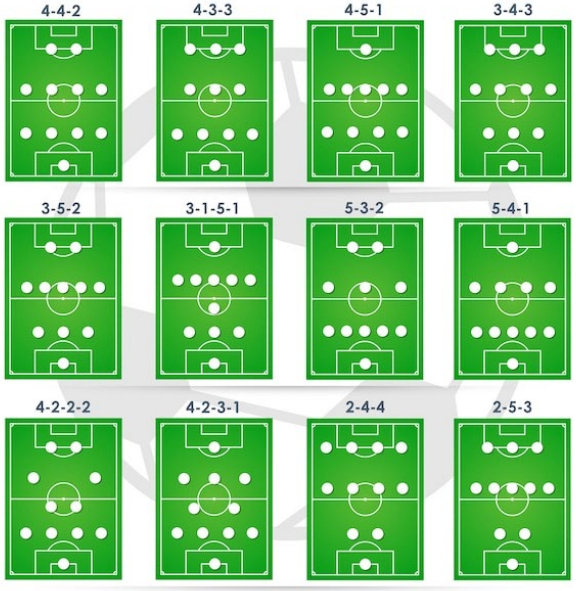
Skills

Lead on set plays/positions from freekicks and corners, develop tactics from different opponents. Know when to use the set play

Able to suggest different formations with reasoning able to play in multiple positions using the off side rule.



Where Is The Set Piece?



Key Words

Decision making, the choices regarding the use of playing methods, the choice of skill, where to move.

Formation. The position of players of the pitch

Set play – a play normally after a stoppage where players have a pre-prepared move to outwit the opponents

Offside. Any part of the attacking player closer to the goal line when the ball is played, with no defenders other than goal keeper is deemed offside

MFL Knowledge Organiser

KO. Yr 9 Describing my house

Tenses

REGULAR **PRESENT TENSE**

	-ER	-IR	-RE
Je	e	is	s
Tu	es	is	s
Il/Elle/On	e	it	
Nous	ons	issons	ons
Vous	ez	issez	ez
Ils/Elles	ent	issent	ent

Habiter = to live	
J'habite	I live
Tu habites	You live
Il/Elle habite	He/She/It lives
Nous habitons	We live
Vous habitez	You all live
Ils/Elles habitent	They live

Opinions & Pronouns

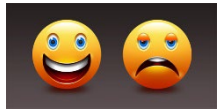
J'aime

J'aime beaucoup

Je n'aime pas

Je n'aime pas du tout

J'adore



Connectives

- **Aussi= also**
- **Et= and**
- **Mais= but**
- **Ce pendant = however**
- **Parce que = because**

Translate it!

Adjectives

Belle/Beau	*Beautiful*
Petit(e)	*Small*
Grand(e)	*Big*
Vivant	*Lively*
Elegant	*Elegant*
Luxieux	*Luxurious*
Moderne	*Modern*
Vieux	*Old*

Les banlieues	outskirts
La zone	area
La rue	street
Le campagne	countryside
Le centre	centre
La ville	town/city
La côte	coast
La village	village
La région	region

Animal Adaptations

Animals have adapted physically & behaviourally to the harsh, polar climate. These include:

- Thick fur for insulation e.g. polar bear
- Thick layer of blubber for insulation e.g. seals.
- Many are camouflaged, some changes seasonally e.g. Arctic hare/fox
- Animals huddle together for warmth e.g. Musk oxen
- Animals migrate during the winter e.g. Caribou
- Hibernation during winter e.g. polar bears

Climate change

- Melting ice from glaciers/ice sheets is increasing sea levels.
- As seas warm, fish stocks move to cooler areas.
- Species are threatened as habitats/hunting grounds are reduced e.g. polar bears.
- Thawing permafrost means infrastructure such as houses and roads are collapsing.
- Inuit are finding it more difficult to hunt, fish, travel and herd animals as temperatures increase.
- Shipping and oil drilling is increasing.

Glacial Retreat

As temperatures rise the size of glaciers is decreasing around the world.

- Lack of snow will impact ski resorts which rely on tourists for income.
- Increased risk of avalanches.
- Lack of fresh water in countries such as Peru.
- Increased risk of flooding.
- Sea level rise will affect island and coastal communities around the world e.g. Maldives.
- Changing weather patterns.

People in the Arctic

Indigenous people (native/first peoples) have lived in the Arctic for 10,000 years. There are populations living in Canada, Greenland, Russia and Scandinavia. They were hunter-gatherers and lived a nomadic life. They hunted woolly mammoth, reindeer, bears, ox, seal, and fish.

They lived in rough shelters or igloos, wore animal skins & fur to keep warm and dried meat & fish to store in winter. Now many Inuit live in small communities but still practice traditional ways of living. Inuit tend to travel, fish & hunt using snow mobiles and dog sleighs. On the water they use kayaks.

Their way of life is threatened today by climate change as temperatures warm, ice melts and animals migrate.

Opportunities & threats

Fishing

As ice melts in the Artic, more fishing boats move in. Lack of fish can affect the food chain for marine life such as seals, birds, whales & sharks.

Mining

Polar regions have a wealth of minerals such as zinc, copper & gold. Mining can cause a lot of dust and noise pollution and contaminate drinking water e.g. Faro, Canada.

Oil drilling

As ice melts, new drilling locations open up. This increases the risk of oil spills which are almost impossible to clean up. They damage ecosystems and kill animals like birds, otters, bears and seals.

Tourism

As polar regions become more accessible the number of visitors increases. This can disturb wildlife and cause pollution from litter to sewage.

Management

Stakeholders are people with an interest/concern in something.

- *Indigenous peoples*
- *Scientists*
- *Governments*
- *Conservation groups*

Polar regions are unique and fragile environments that need protecting. These strategies include:

Sustainable management of tourism

- International Association of Antarctic Tour Operators (IAATO)

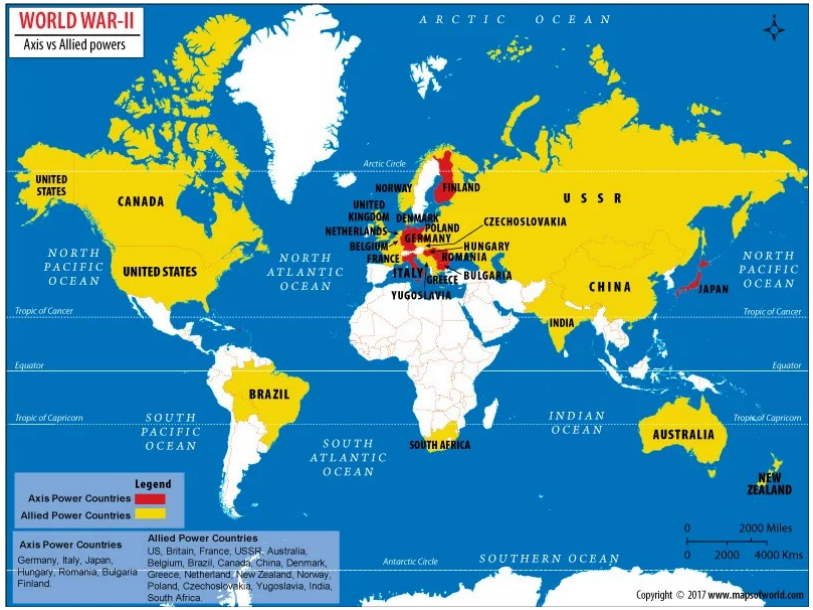
International agreements

- Antarctic Treaty
- Central Arctic Ocean Fisheries Agreement

Year 9 History Term 2 Knowledge Organiser: World War Two

World War II, also called the Second World War. A conflict that involved virtually every part of the world during the years 1939–45. The map below shows the number of countries involved.

Allies/Allied Powers	Axis/Central Powers
Great Britain France Soviet Union from 1941 USA from 1941 China from 1941	Germany Italy Japan



TREATY	A formal agreement between countries.
REPARATIONS	Making amends for something i.e. giving money to someone you have harmed. Compensation.
FASCISM	A type of Nationalist government with strong leadership. A dictatorship.
NATIONALISM	Loyalty and devotion to your country.
GREAT DEPRESSION	A period of economic hardship during the 1930s, when unemployment was high and many businesses failed.
WEIMAR	The name of the democratic German government between 1918 and 1933.
APPEASEMENT	Giving in to someone's demands to avoid conflict
INEVITABLE	Something that is certain to happen and cannot be avoided.
TURNING POINT	A point at which a significant change occurs.
RETREAT	Pulling back from a battle.
EVACUATION	Moving people or soldiers from a place of danger.
CAMPAIGN	A series of planned movements carried out by armed forces
SIEGE	When enemy forces surround a town or building and cutting off essential supplies.
BLOCKADE	Sealing off a place to prevent supplies or people from entering or leaving.
ATOM BOMB	a very destructive nuclear bomb. It's power comes from the release of energy when atoms are split.

TIMELINE OF WORLD WAR TWO

- **The Treaty of Versailles was signed.** 1919
- **Hitler became leader of Germany.** 1933
- **Britain followed the policy of appeasement.** 1935-39
- **Hitler invaded Poland. Britain declared war.** 1939
- **Germany surrender to the Allies.** May 1945
- **The USA dropped atom bombs on Japan.** August 1945

Year 9 PE Knowledge Organiser- Orienteering

The main aim of orienteering is to complete the set course by finding control markers in the correct order in the shortest time.

Skills and Techniques
Orienteering is an exciting outdoor adventure sport that exercises mind and body. It can be done in teams or as an individual.

The aim is to navigate between checkpoints or controls marked on a special orienteering map. There is no set route so the skill and fun come from trying to find the best way to go.

In competitive orienteering, the challenge is to complete the course in the quickest time.

Understanding the importance of the below terms

Cardiovascular fitness- The ability of the heart, lungs and blood to transport oxygen during sustained exercise. Our heart and lungs are able to cope with activity for relatively long periods of time without getting tired.
Pacing- refers to the rate at which you run (i.e., how quickly you run a certain distance).

Terrain - a piece of ground having specific characteristics, hilly, gravel, grass etc
Map Orientation – ensuring the map is relative to the compass directions of north

Human features: Know that a human feature is influenced by man (buildings, benches, fences, walls)

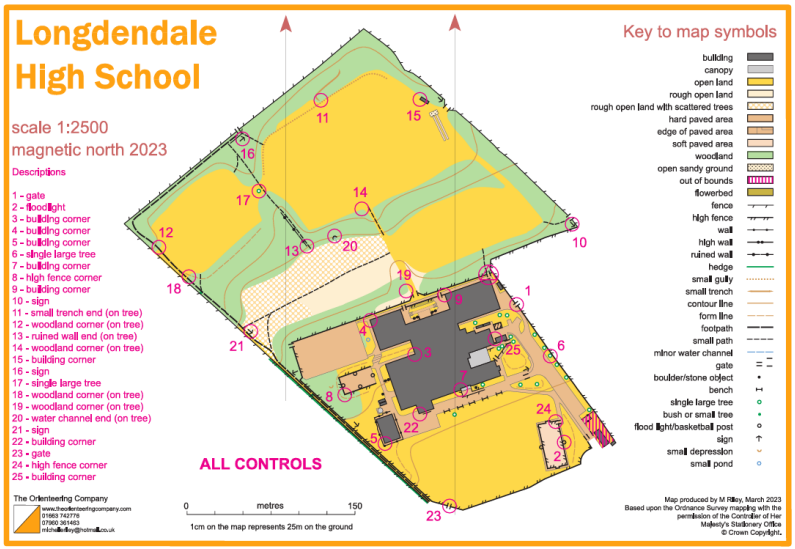
Physical Features: Know that a physical feature is natural (rivers, beaches, hills, forests)

Methods of developing orienteering skills

Head to Head battles
Cross country routes
Designing your own course
Team Clock Challenge

Skills and characteristics

Map reading, compass use, pacing, timings, tactical approaches, planning, communication, cardiovascular fitness, resilience, speed, judgement, navigation.



MFL Knowledge Organiser

KO. Yr 9 Describing my house

Tenses

Verbos Regulares	VERBOS -AR	VERBOS -ER	VERBOS -IR
	HABLAR	COMER	VIVIR
yo	hablo	como	vivo
tú	hablas	comes	vives
él / ella	habla	come	vive
usted	habla	come	vive
nosotros / as	hablamos	comemos	vivimos
vosotros / as	habláis	coméis	vivís
ellos / ellas	hablan	comen	viven
ustedes	hablan	comen	viven

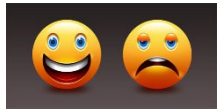
Vivir = to live	
Vivo	I live
Vives	You live
Vive	He/She/It lives
Vivimos	We live
Vivís	You all live
Viven	They live

Opinions & Pronouns

Me encanta(n) Me gusta(n)

Me chifla(n) No me gusta(n)

Me gusta(n) mucho No me gusta(n) nada



Connectives

Porque

Porque es

Dado que

Por eso

También

Sin embargo

Aunque

Translate it!

Adjectives

Bonito/a	*Beautiful*
Hermoso/a	*Good looking*
Pequeño/a	*Small*
Grande	*Big*
Vivaz	*Lively*
Elegante	*Elegant*
Lujoso/a	*Luxurious*
Moderno/a	*Modern*
Antiguo/a	*Old*

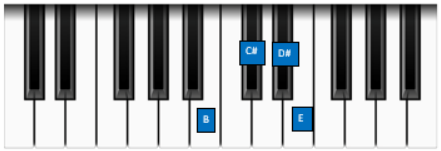
las afueras	outskirts
la zona	area
la calle	street
el campo	countryside
el centro	centre
la ciudad	town/city
la costa	coast
el pueblo	village
la región	region

Year 9 MUSIC HT4 Knowledge Organiser

Shape of You

Part 1 – Right Hand – Higher Part

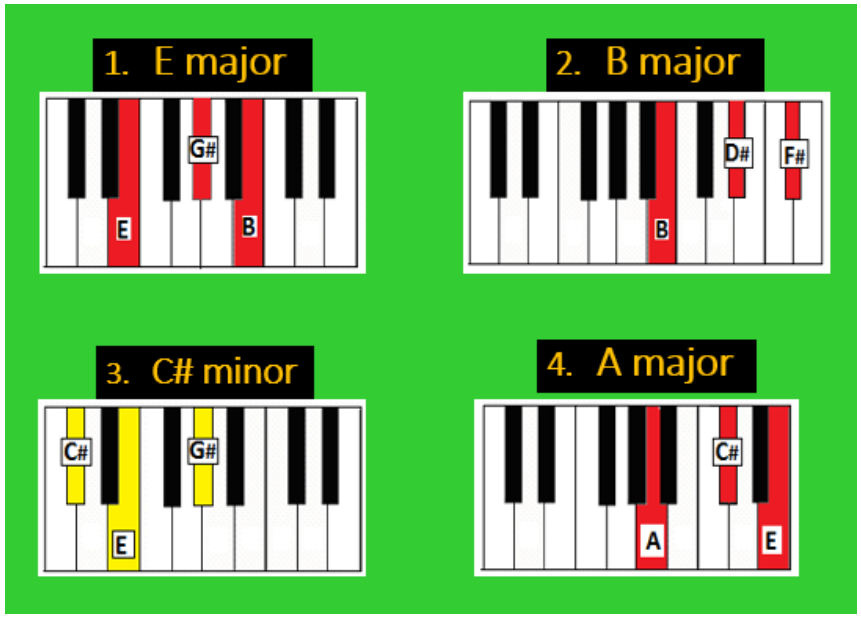
C# E C# C# E C# C# E C# D# C# B



Part 2 – Left Hand - Lower Part

C# C# C# F# F# F# A A A B B B

Don't Stop Believin'



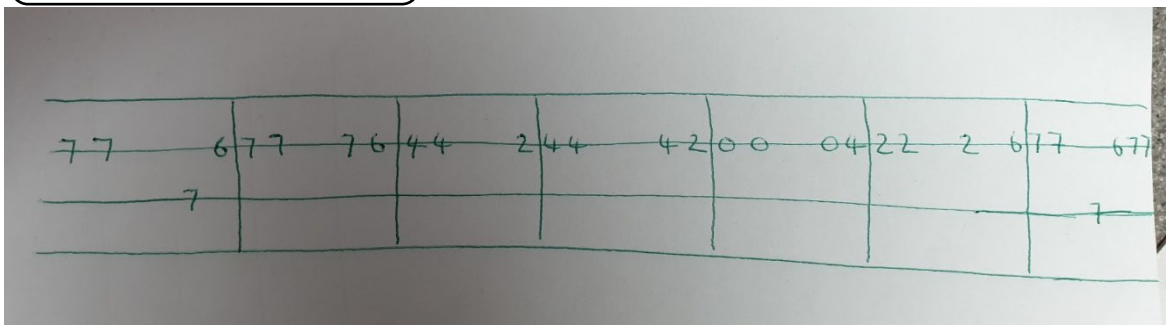
Try each instrument, then specialise.

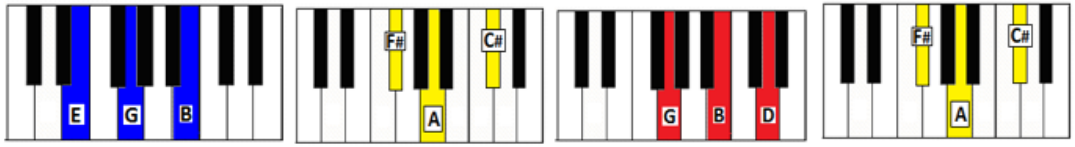
Keyboard ☐

Other ☐

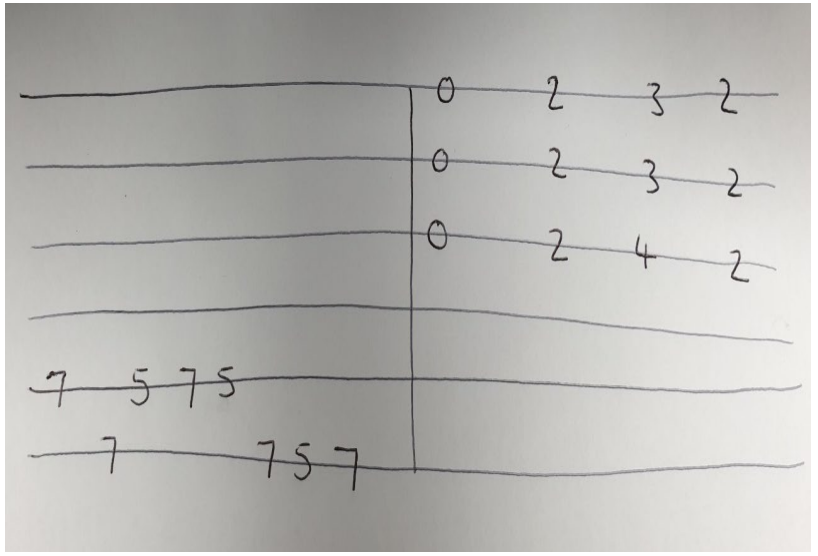
_____

Stand by Me





Billie Jean

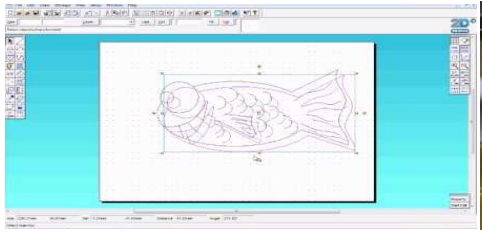


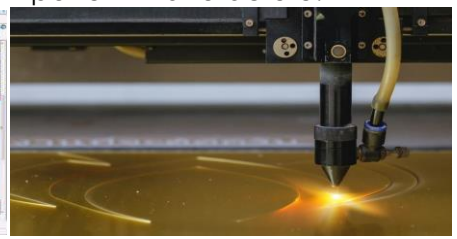
Year 9 Design Knowledge Organiser

Longdendale High School

CAD / CAM

CAD and CAM are a really important part of designing products and manufacturing them. They're used in lots of different industries from food packing to component manufacture.





CAD

Using computers to create/draw/present designs. E.g. 2D Design or Tinkercad. Accurate, easy to adapt/ share/ copy, links to CAM, fast global communication

CAM

Using computers to cut, print, paint, assemble or package products. E.g. robotics, LASER cutters, lathes, 3D printers, CNC milling machines, knitting machines. Accurate and fast mass production, lower product cost.

Health and Safety

Pewter

Pewter is a traditional low-temperature metal-(casting material 170°C - 230 °C).

It is used to make everything from jewellery to goblets.

Pewter is an alloyed metal made primarily from tin(tin 91%, antimony 7.5% & copper 1.5%)

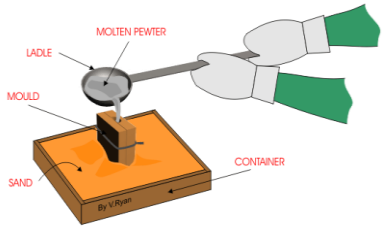
Pewter is grey in colour and was traditionally used to make plates and beer tankards.

Pewter is 100% recyclable.

Junior Hacksaw

Junior hacksaws are commonly used for cutting through metal pipes or plastic tubing. The blade of a junior hacksaw can be used for more precise cutting or for applications that require a neater finish.

Casting



Casting is a manufacturing process in which a liquid material is usually poured into a mould, which contains a hollow cavity of the desired shape.

Casting can be used to mass produce lots of identical products. Engine blocks are cast so that they are very strong and durable.

MDF

Medium-density fibreboard (MDF) is made from pulverized wood fibres blended with resins and pressed into sheets under temperature and pressure. MDF is generally denser than plywood.

Bradawl

A bradawl is a woodworking hand tool with a blade similar to that of a straight screwdriver and a handle typically made from wood or plastic.

Year 9 Design Knowledge Organiser

Longdendale High School

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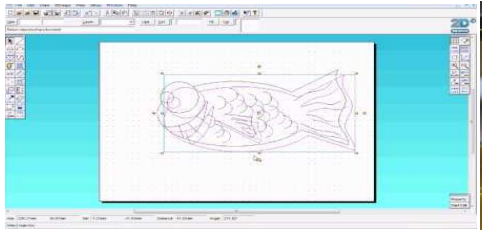

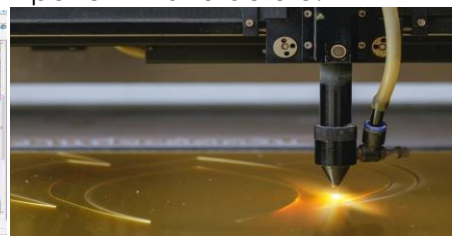

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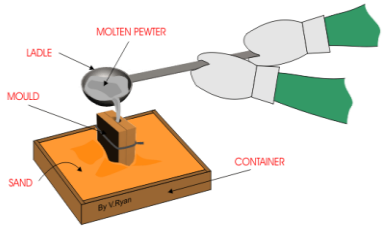

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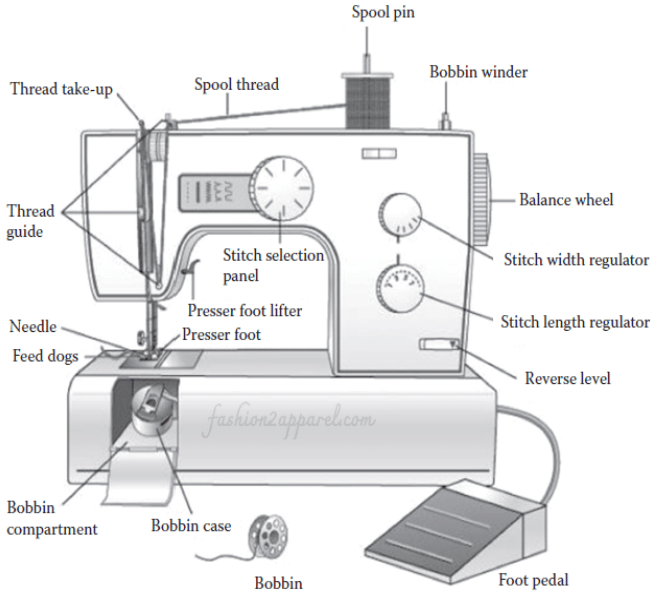
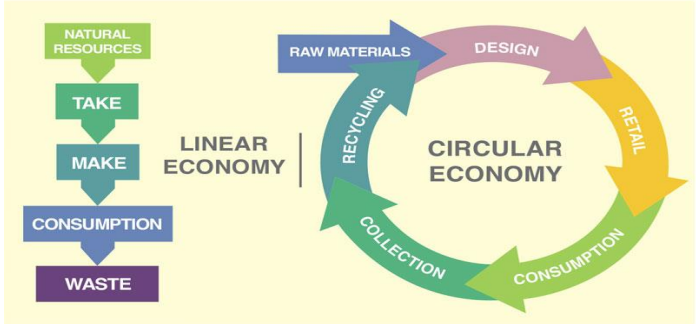
Year 9 Textiles Knowledge Organiser

Longdendale High School

Sewing Machine



Sustainability



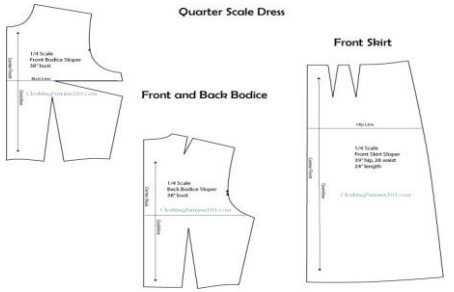
Sustainable textiles refers to fabrics derived from eco-friendly resources, such as sustainably grown fibre crops or recycled materials.

Sustainable textiles includes the use of second-hand retail repair and often utilizes upcycling and recycling of clothing. It also refers to how these fabrics are made.

Hems

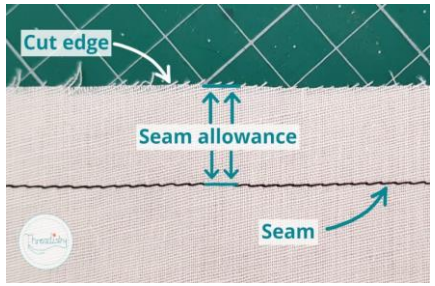
Hems lie at the end of a piece of cloth, where the fabric has been folded and sewn into place to prevent the material from fraying or loosing its shape.

Pattern



A pattern is the template from which the parts of a garment are traced onto woven or knitted fabrics before being cut out and assembled. Deconstructing an existing garment can provide you with a template to base your own pattern on.

Seam Allowance



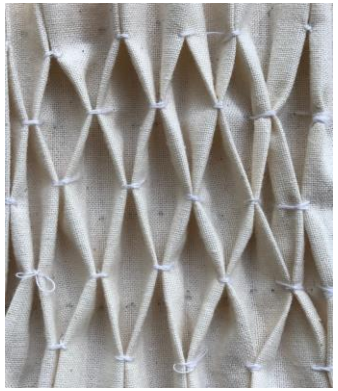
Seam allowance is the distance from the raw edge of the fabric to the seamline (or seam stitch line). Seam allowance allows for the formation of all seams by providing excess fabric for efficiently stitching a seam together

Decorative Textile Techniques

Embroidery

Marbling

Appliqué

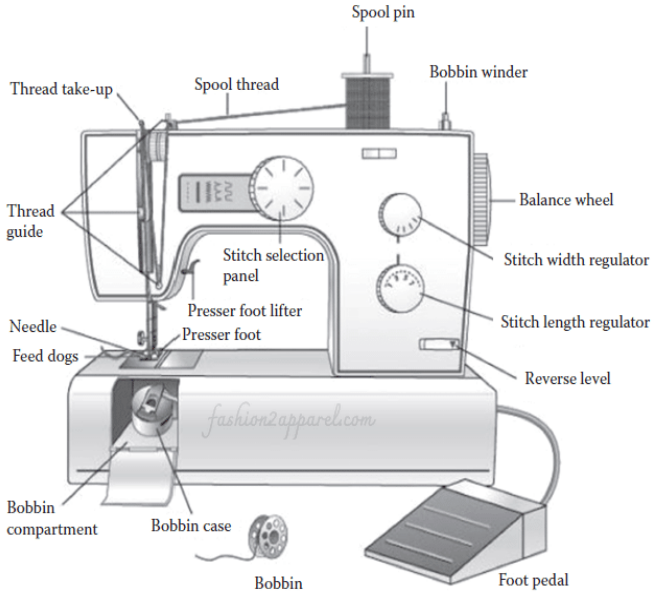


Fabric Manipulation

Year 9 Textiles Knowledge Organiser

Longdendale High School

Sewing Machine



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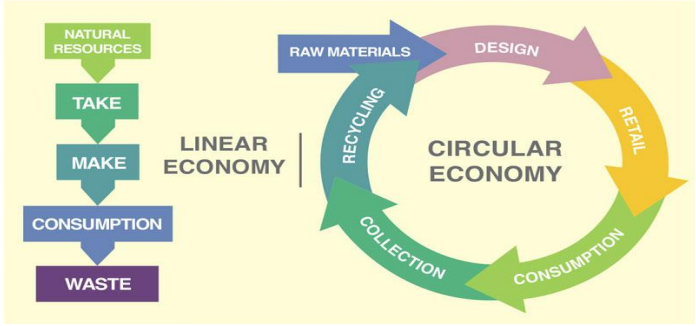

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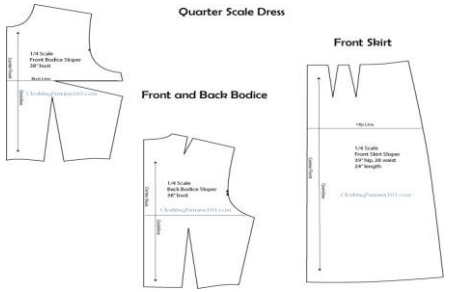
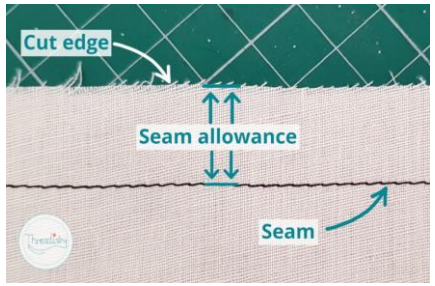
Hems lie at the end of a piece of cloth, where the fabric has been folded and sewn into place to prevent the material from fraying or loosing its shape.

Pattern



A pattern is the template from which the parts of a garment are traced onto woven or knitted fabrics before being cut out and assembled. Deconstructing an existing garment can provide you with a template to base your own pattern on.

Seam Allowance



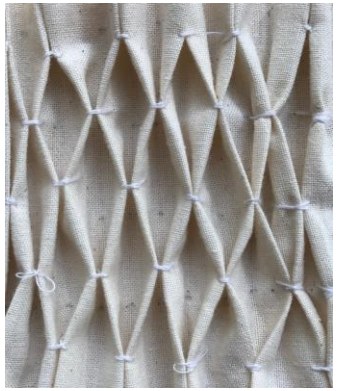
Seam allowance is the distance from the raw edge of the fabric to the seamline (or seam stitch line). Seam allowance allows for the formation of all seams by providing excess fabric for efficiently stitching a seam together

Decorative Textile Techniques

Embroidery

Marbling

Appliqué



Fabric Manipulation

Do we need to prove God's existence?

Key terms

Faith	strong belief in the principles of a religion, based on spiritual belief rather than proof
Contingent	Depending on something else in the future in order to happen.
Infinite	Limitless or endless in space, extent, or size.
Religious Experience	An event that people feel gives them direct contact with God.
Prayer	An attempt to contact God, usually through words
Miracle	Something which seems to break a law of science and makes you think only God could have done it.
Numinous	The feeling of the presence of something greater than you.
Agnostic	Someone who is unsure whether there is or isn't a God.

Crucial Commands:

Describe:Say in detail what something or someone is like, and the impact it has. E.g. Describe some consequences of going to war.

Explain: Say why something or someone is important, and the impact it has. E.g. Explain religious attitudes to the Just war theory..

Discuss: Write about at least two points of view and explain why these points of view are valuable or not. E.g. "Is religion a power for peace or cause of conflict in the world today?"

Why do Muslims believe in God?

The appearance of causation in the world is often called the first cause argument and goes like this:

1. we look at things in the world we see that they have a cause,
2. Anything caused to exist must be caused to exist by something else.
3.You cannot keep going back with causes because in any casual chain you have to have a beginning.
4.The only possible first cause of the universe is God therefore God must exist.

This argument makes Muslims think the universe the world and humans must have come from somewhere they must have had a cause as God is the only logical cause of the universe it make them think that God must exist for it supports their belief in God if they already believe.

What is the design argument?

Some Christians believe that it is possible to prove the existence of God by observing the nature of the world we live in. The world shows signs of ORDER and things working to achieve a PURPOSE. This is evidence of DESIGN. (God is the DESIGNER).

- William Paley supported this argument by way of ANALOGY. He drew a similarity between the world and an old-fashioned pocket watch. He argued that if you went for a walk and stumbled across a pocket watch in a field you would know that a skilful watchmaker must have designed it

Problem: If the world is designed by an omnipotent God, then why is there so much evil and suffering in the world?

Why did the Buddha think belief in God was unimportant?

1. **Annica** – everything in the universe depends on other things for its existence. If conditions are right, they come into existence; if conditions change, they cease to exist.
2. **Anatta** – there is no permanent soul because nobody stays the same from birth to death. Your body grows older and your mind develops.
3. **Dukkha** – Because everything changes and dies, the Buddha taught that life can never completely satisfy us, and that makes us suffer.

Can we experience God in our world?

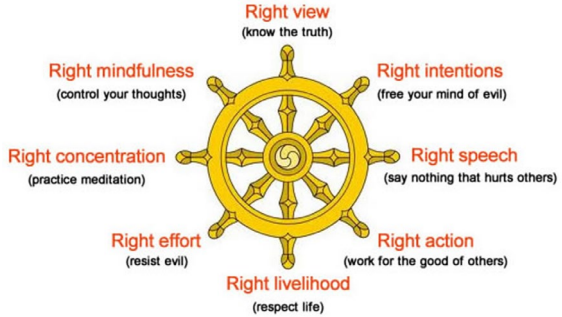
- Type of Experience: **Numinous**
- **Neil Armstrong, Astronaut.**

In Brief: He was one of the first men to step foot on the moon in 1969. After his adventure, he explained that an incredible feeling had passed over him while looking back at Earth from the Moon.

- When Neil Armstrong first stepped foot on the moon, he looked at the Earth and the universe around him and felt as if he was in the presence of God. He no longer questioned whether God existed, he just 'knew' it.
- This feeling of being overwhelmed by the sense of the presence of something greater than you is a spiritual emotion.

In Buddhist thinking, what can save us from pain and suffering?

Buddhist Eightfold Path:



Do we need to prove God's existence? (Atheism)

Richard Dawkins:

- Argues the system of natural selection creates an 'illusion' of design.
- Dawkins explains that genes alone are responsible for what we now know as intelligent life.
- We inherit some cultural values of those who came before us.
- Dawkins argues, humans appear to have an appreciation of beauty but it is actually no more than part of the survival mechanism.

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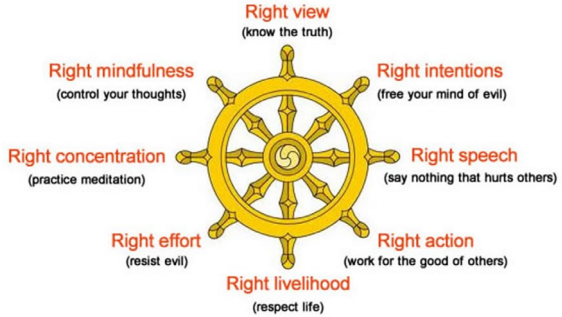

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