
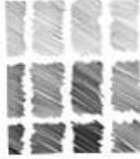






ART Knowledge Organiser. Year 8 Project 2: All the Small Things

LINE 	TONE 	PATTERN 	TEXTURE 	FORM 	COLOUR 
---	---	--	--	--	---

<p>What will they learn? (overview of knowledge) Students will continue to build on observational skills covered in project one. The topic of Close-up will be a vehicle for learning further drawing skills and analysis of current and past artists.</p>	<p>What skills will they learn/develop?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Drawing skills – shape, tone and detail <input type="checkbox"/> Depicting objects and form using drawing skills and paper <input type="checkbox"/> Critical analysis of art and artists <input type="checkbox"/> Use of paint, oil pastels and felt pen <input type="checkbox"/> Making their own final piece using taught techniques.
---	---

Support/Challenge:
<https://sarahgraham.info>
<https://byardart.co.uk/artists/sarah-graham/>



COLOUR	TONE	LINE	FORM
DRAWING	PHOTOGRAPHY	ZOOM-IN	MACRO
HARMONIOUS	COMPLEMENTARY	PRIMARY	DARK
CONSTRUCT	HYPER-REALISM	BRIGHT	PAINT
DESIGN	OBSERVE	OBJECTS	ANALYSE



Year 8 Business Knowledge Organiser

Aim of the unit



The aim of this unit is to provide a foundational knowledge of business. You will learn the basic concepts in business, which will help you in making informed decision when choosing as one of the optional subjects in Year 9.

In this unit, you will be finding out about the concept of business plan and its importance. Also, you will study market research, design a questionnaire that is fit for purpose, and compare questionnaires and interview. You will learn how to promote a product. They will also learn functional areas of a business and their roles, as well as how to apply product differentiation strategies. these topics will be covered in 6 weeks

Team working – work in teams, share ideas, and boost interpersonal skill.

Analytical skill – compare ideas from both sides and use personal opinions to provide constructive criticism.

IT skill – using MS Office to report on findings from research, note-taking

Research skill - making research and provide research findings

Assessment

Assessment is based on class work, and homework, which is set every 2 weeks, as well as end of year test.



Key Vocabulary

Advertisement - process of creating an awareness of a product in order to attract and retain customers.

Business plan – a document that define objective and how the business is run and managed.

Functional Areas – it is various departments that make up a business

Market research – process of obtaining information about market, customers, product or competitors.

Product Differentiation – process of providing unique features of product in order to stand out from competitors.

Product Differentiation	
The process of distinguishing a product or service from others to make it more appealing to a specific target market.	
Product Differentiation	Features, warranty, durability, performance
Service Differentiation	Ordering ease, customer training
Channel Differentiation	Coverage, expertise, performance
Relationship Differentiation	Competence, courtesy, credibility
Reputation Differentiation	Perception, advertising, communication
Price Differentiation	By customer, by quantity, by segment

Support/Challenges

Differentiated work, homework



look



say



cover



write



check



Year 8 More Python

Summary

You will learn how to write computer programs in Python to print text and numbers to the screen. You will learn how to ask the user for input using the keyboard. You will be able to do arithmetic in Python using operators and BIDMAS. Throughout the unit you will correct basic syntax errors and logical errors.

Example code

<code>print("hello!")</code>	Prints a value on screen (in this case, hello!)
<code>input("")</code>	Inputs a value into the computer
<code>x = input("")</code>	Inputs a value and stores it into the variable x.
<code>x = int(input(""))</code>	Inputs a value into x, whilst also making it into an integer.
<code>age = 12</code> <code>print("Age: " + str(age))</code>	The + joins together two variables when printing. Str has to be used to cast age to be a string. This code will output "Age: 12".

The code above takes two number inputs and stores them as variables called number1 and number2. It then adds these together and saves them in a variable called answer. The final line prints the answer out in a sentence.

```
number1 = int(input("Input the first number :"))
number2 = int(input("Input the second number :"))
answer = number1 + number2
print("The answer is " + str(answer))
```

Websites

Learn Python using these websites:

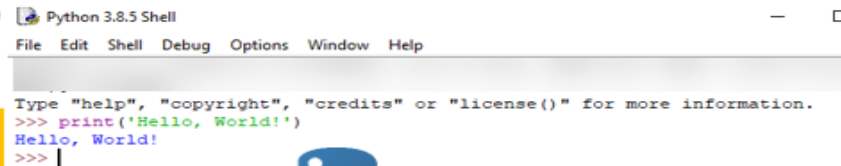
- www.w3schools.com/python/
- www.codecademy.com/learn/learn-python

Keywords

Algorithm	Set of instructions or rules that need to be followed in order to perform calculations or to solve a problem.
Python	A programming language used to write programs.
Shell	The place where code is run.
IDLE	Integrated development environment for Python
Flowchart	A visual method of planning an algorithm using symbols.
Integer	A whole number. (eg. 1, 189)
String	A combination of letters, numbers or characters. (eg, Hello, WR10 1XA)

Python Arithmetic operators

Operation	Symbol	Example	Output
Addition	+	1+10	11
Subtraction	-	9-8	1
Multiplication	*	5*4	20
Division	/	5/2	2.5
Floor division	//	7//2	3
Remainder	%	7%3	1





Year 8 Game making

Summary

Scratch is a visual programming language, designed for people who have never done any programming before. Its a very good tool to learn the basics of coding. With Scratch, you can program your own interactive games and animations. Scratch helps you to learn coding in a visual colour coded way and see how the blocks of coloured code fit together to make a working program. It also lets you learn about more complicated coding concepts such as iteration and selection in an accessible way.

Scratch is a free online coding program—www.scratch.mit.edu

Scratch User Interface

The Scratch interface has three main sections: a stage area, block palette, and a coding area to place and arrange the blocks into runnable scripts. Users may also create their own code blocks and they will appear in "My Blocks".

Blocks

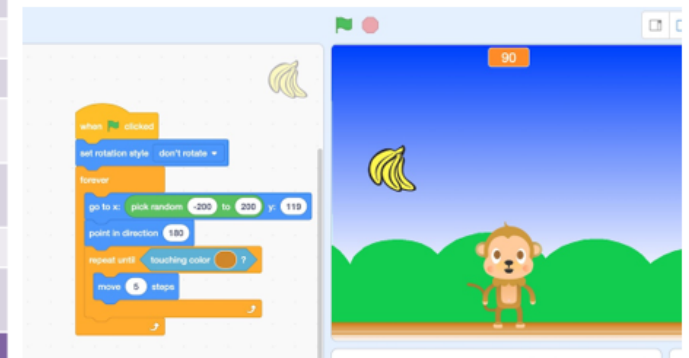
Motion	Moves sprite, changes angles and position
Looks	Controls the visuals of the sprite
Sound	Plays audio files and effects
Control	Code blocks that trigger script execution based on predefined events
Sensing	Used to determine the location of the mouse-pointer, its distance from other sprites, and whether a sprite is touching another sprite.
Variables	Used to store data used by applications when they execute.
Operators	Perform logical comparisons, rounding, and other arithmetic operations

Websites

- Learn Scratch using these websites:
- <https://scratch.mit.edu/>
 - <https://learnlearn.uk/scratch/>
 - www.youtube.com (search "Scratch tutorials")

Keywords

Costumes	Images that are used to represent a sprite on the stage
Coordinates	Coordinates are used to identify a specific point on the stage area. Using X, (left to right) and Y (up and down). The centre point is written as (0,0).
Loops	Repeats a specific sequence of programmed instructions
Script	A collection of code blocks that outlines the programming logic that influences the operation of a sprite
Stage	The background of a project, performs functions through scripting
Sprite	An object in Scratch which performs functions controlled by scripts
Variable	Named location in memory. It is a changeable value recorded in Scratch's memory





Year 8 Drama



Spring Term Greek Theatre and Trestle Masks



Key areas of research for Greek Theatre:

- Use of masks
- Costumes and set
- Greek Chorus
- Amphitheatres
- Genres of Greek Theatre
- Famous Greek Playwrights
- Famous Greek Plays

Greek Chorus

The purpose of the Greek chorus was to provide background and summary information to the audience to help them understand what was going on in the performance. They commented on themes, expressed what the main characters couldn't say (like secrets, thoughts, and fears) and provided other characters with information and insights.

Useful Dramatic Terminology:

Amphitheatre-a giant outdoor stage, often built into the hillside. Some could accommodate 15000 people.

Comedy-a genre of Greek Theatre that was humorous and entertaining.

Tragedy-a genre of Greek Theatre that usually ended in devastation.

Satyr-genre of ancient Greek drama that preserves the structure and characters of tragedy while adopting a happy atmosphere and a rural background.

Greek Chorus-A group of actors that would assist with telling the story of a play.

Playwright-the creator of a play text.

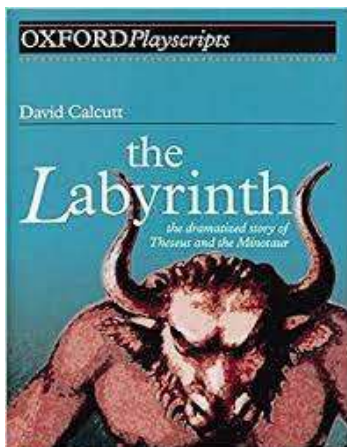
Spotlighting-placing focus on one character onstage.

Clocking the audience-making eye contact with the audience and acknowledging them.

Body language-using your body and movement to communicate how you are feeling.

Rules for mask-work

- Always put on and take off your mask offstage or out of sight of the audience.
- Never touch your mask.
- Don't talk in a full-face mask.
- Clock the audience.
- If you are able to, pull your hair over the sides of your mask.
- Create your mask's character through exaggerated body language and physicality.



The Labyrinth

Theseus and the Minotaur

This is a play that we will be studying. The Minotaur is a creature that is half man, half bull. Athenian people were sent as sacrifices to keep the peace. Theseus decided to enter the labyrinth and slay the creature, with the aid of Ariadne the daughter of King Minos. The play ends in tragedy as Theseus' father believes that he has died and therefore jumps into the sea, stricken with grief.



Types of masks:

Neutral masks-masks that have a neutral expression.

Trestle masks-character based masks made famous by the Trestle theatre company.

Half masks-These types of masks only cover the eyes and nose, allowing your characters to speak.





Year 8 Power of Words

Key Vocabulary

Idiolect
Sociolect
Youth talk
Accent
Dialect
Pronunciation
Received
Jargon
Profession
Occupation
Stereotypes
Estuary
Americanism



Key Writing skills

Proper and Common Nouns
Coordinating and Subordinating conjunctions
Adjectives
Adverbs
Connectives
Determiners
Prepositions
Synonyms

What you can do?

- Learn the spellings using: Look Say Cover Write Say
- Be observant and listen to how people talk
- Research and practise the writing skills: <https://www.bbc.co.uk/bitesize/topics/zr6bxye>

Determiners – quantifiers modify a noun

Any
All
Many
Much
Most
One, two, three, four..
A few
Some

Prepositions

<https://www.bbc.co.uk/bitesize/topics/zw8mn/articles/zw38srd>

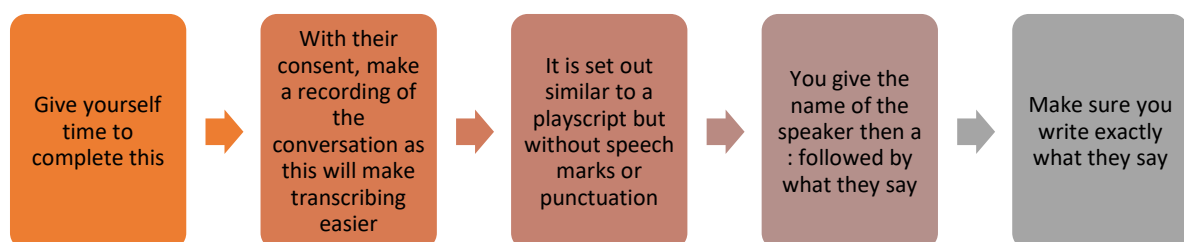
Tells you where or when something is in relation to something else.

Above	Against	Along
Across	Among	Around
At	Before	Below
From	Into	Near

Some symbols for transcript

Length of any pauses: (1), (2)
Interruption: //
Stressed words: bold
New speaker = new line
If a word is difficult to understand = inaudible
Give any non-verbal acts = (laughing), (claps hands)

How to write a transcript





Year 8 Power of Poetry

Key Vocabulary

Discrimination
 Prejudice
 Slavery
 Unconscious bias
 Satire
 Equality
 Racism
 Refugee
 Stereotype



Key Writing skills

Connectives
 Active and Passive Voice
 Sentences: Declarative, Interrogative, Imperative, Exclamatory (DIIE), Simple, Compound, Complex (SCC)
 Tenses – past, present, future

What you can do?

- Learn the spellings using: Look Say Cover Write Say
- Keep up with the news – there is usually something happening linked to this topic
- Research the poets and the poems
- Research and practise the writing skills: <https://www.bbc.co.uk/bitesize/topics/zr6bxyc>

Forms of Poetry

Ballad
 Narrative
 Monologue
 Blank Verse
 Free Verse
 Epic
 Sonnet
 Elegy
 Ode
 Villanelle

Poems you will study

Ballad of Birmingham by Randall
Refugee Blues by Auden
Whatever you say, say nothing by Heaney
You will hearing from us shortly by Fanthorpe
Telephone Conversation by Soyinka

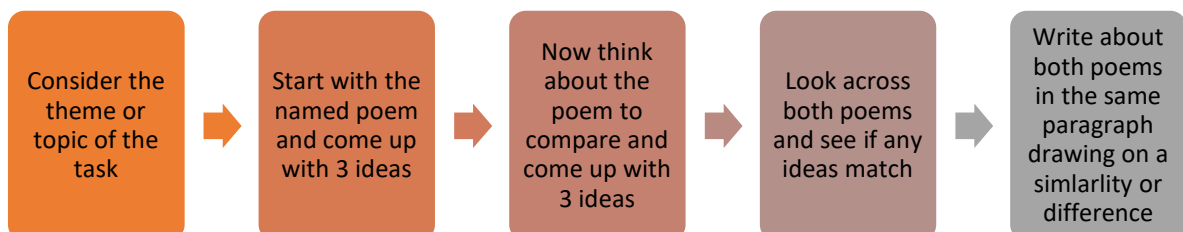
Poetry terms

Enjambment
 Rhyming Scheme
 Assonance
 Caesura
 Iambic Pentameter
 Rhythm
 Stanza
 Alliteration
 Anaphora

Connective for comparison

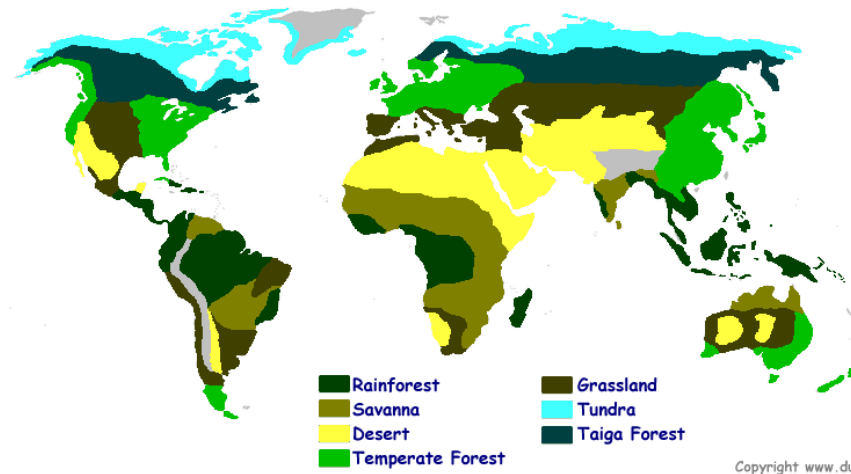
Whereas, Also, Similarly, Contrastingly, Both, Likewise, However, Additionally, Alternatively

How to write a comparative essay



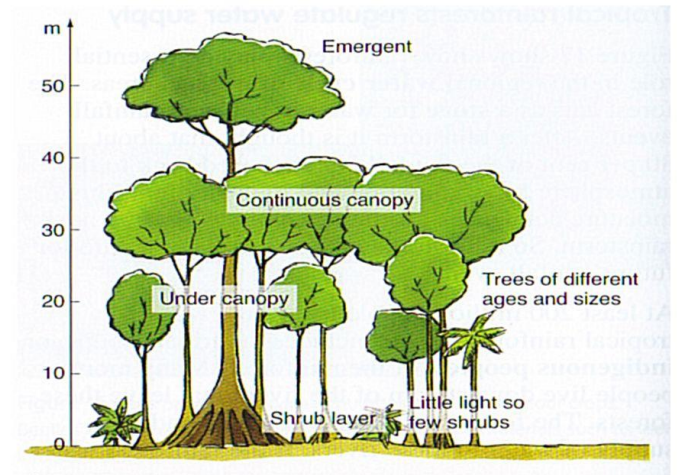
Geography - Year 8 Term 2 – Ecosystems and Brazil

Key Terms	
Adaptation	The process of change by which a species becomes more suited to its environment.
Equatorial Climate	Places near to the Equator that are very hot and wet throughout the year.
Canopy	An almost unbroken top layer of trees that acts like a roof over the tropical rainforest.
Conservation	The protection of resources and the environment.
Development	Involves changes that usually bring improvement and growth – often a measure of how rich or poor a country is.
Ecosystem	A community of plants, animals and their non-living environment that exist together as a community.
Exports	Goods produced in one country but sold in another.
Interdependence	When countries work together and rely on each other for help.
Slash and Burn	A type of farming in the tropical rainforest where farmers cut down and burn just enough trees to farm.
Favela	A area of low quality shanty town type housing found on the outskirts of Brazilian cities.
Sustainable Development	A way of improving people's standard of living and quality of life without harming the environment or wasting resources.



Copyright www.ducksters.com

Structure of the rainforest



Elephants have a thick layer of skin, about 1 inch, which helps protect them from the heat of the sun, predators, and their environment.

Big ears to keep cool, because it is very hot, and there is little shade.



The tail is used for swatting away bugs, and the elephants babies hold on to the tail.

These tusks are used for digging and for protection against predators.

The elephants trunk is great for picking up things, smelling, and touching things.

Elephants drink about 50 gallons of water a day, to help them stay hydrated.

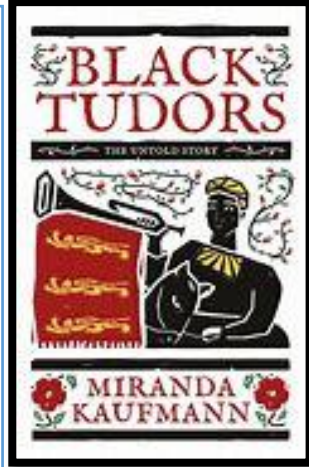
The African Bush Elephant has such big feet, because it needs a big foundation.

Year 8 history knowledge organiser half term 2: Black Tudors: their untold story

Keywords and definitions

Monarchy	A form of government where the monarch rules
Freeman	Citizen of London or other town who has served an apprenticeship and joined a livery company. After a time they were granted the freedom of their company. This allowed them to live, work and trade inside the city walls and participate in town life.
Diaspora	People of that leave their place of birth voluntarily and involuntary. Usually to a different continent.
Parish records	A parish register is a record that is usually kept in a church. It is a handwritten volume, in which certain details of religious ceremonies marking major events such as baptisms, marriages, children, and burials are recorded.
Renaissance	A period of time in European history when a lot of new ideas in science, technology, art, and philosophy were explored or discovered
Slavery	Slavery is an economic (involves money) system. In it, some people must work for no pay. It is also a system of ownership of people.

Black Tudors came to England from Africa, from Europe and from the Spanish Caribbean. They came with privateers, pirates, merchants, aristocrats, even kings and queens, and were accepted into Tudor society. They were baptised, married and buried by the Church of England and paid wages like other Tudors. Yet their experience was extraordinary because, unlike the majority of Africans across the rest of the Atlantic world, in England they were free.



YEAR 8 - REPRESENTATIONS...

Representing Data

@whisto_maths

What do I need to be able to do?

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

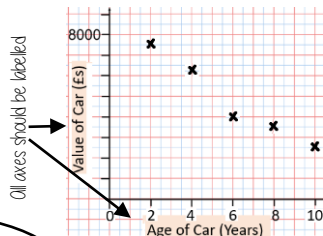
- Draw and interpret scatter graphs
- Describe correlation and relationships
- Identify different types of non-linear relationships
- Design and complete an ungrouped frequency table
- Read and interpret grouped tables (discrete and continuous data)
- Represent data in two way tables

Keywords

- Variable:** a quantity that may change within the context of the problem
- Relationship:** the link between two variables (items) Eg Between sunny days and ice cream sales
- Correlation:** the mathematical definition for the type of relationship.
- Origin:** where two axes meet on a graph
- Line of best fit:** a straight line on a graph that represents the data on a scatter graph
- Outlier:** a point that lies outside the trend of graph
- Quantitative:** numerical data
- Qualitative:** descriptive information, colours, genders, names, emotions etc
- Continuous:** quantitative data that has an infinite number of possible values within its range
- Discrete:** quantitative or qualitative data that only takes certain values
- Frequency:** the number of times a particular data value occurs

Draw and interpret a scatter graph

Age of Car (Years)	2	4	6	8	10
Value of Car (Es)	7500	6250	4000	3500	2500



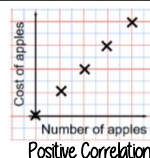
- This data may not be given in size order
- The data forms information pairs for the scatter graph
- Not all data has a relationship

"This scatter graph show as the age of a car increases the value decreases"

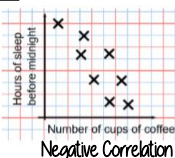
The link between the data can be explained verbally

The axis should fit all the values on and be equally spread out

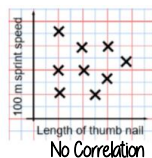
Linear Correlation



As one variable increases so does the other variable



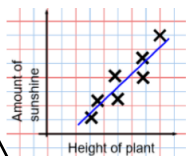
As one variable increases the other variable decreases



There is no relationship between the two variables

The line of best fit

The Line of best fit is used to make estimates about the information in your scatter graph



It is only an estimate because the line is designed to be an average representation of the data

It is always a straight line.

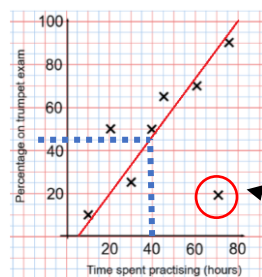
Things to know:

- The line of best fit **DOES NOT** need to go through the origin (The point the axes cross)
- There should be approximately the same number of points above and below the line (It may not go through any points)
- The line extends across the whole graph

Using a line of best fit

Interpolation is using the line of best fit to estimate values inside our data point

e.g 40 hours revising predicts a percentage of 45



Extrapolation is where we use our line of best fit to predict information outside of our data

This is not always useful – in this example you cannot score more than 100%. So revising for longer can not be estimated

This point is an "outlier" it is an outlier because it doesn't fit this model and stands apart from the data

Ungrouped Data

The number of times an event happened

The table shows the number of siblings students have. The answers were

3, 1, 2, 2, 0, 3, 4, 1, 1, 2, 0, 2

2 people had 0 siblings. This means there are 0 siblings to be counted here

Number of siblings	Frequency
0	2
1	3
2	4
3	2
4	1

0

3

$2 + 2 + 2 + 2$ OR $2 \times 4 = 8$

$3 + 3$ OR $3 \times 2 = 6$

4

Best represented by discrete data (Not always a number)

2 people have 3 siblings so there are 6 siblings in total

OVERALL there are
 $0 + 3 + 8 + 6 + 4$
Siblings = 21 siblings

Grouped Data

If we have a large spread of data it is better to group it. This is so it is easier to look for a trend. Form groups of equal size to make comparison more valid and spread the groups out from the smallest to the largest value.

Cost of TV (Es)	Tally	Frequency
101 - 150	THH	7
151 - 200	THH THH	11
201 - 250	THH	5
251 - 300		3

Discrete Data
The groups do not overlap

We do not know the exact value of each item in a group – so an estimate would be used to calculate the overall total (Midpoint)

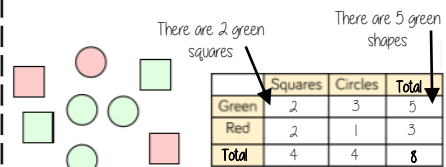
x	Frequency
Weight(g)	
$40 < x \leq 50$	1
$50 < x \leq 60$	3
$60 < x \leq 70$	5

Continuous Data
To make sure all values are included inequalities represent the subgroups

e.g this group includes every weight bigger than 60kg, up to and including 70kg

Representing data in two-way tables

Two-way tables represent discrete information in a visual way that allows you to make conclusions, find probability or find totals of sub groups



Using your two-way table

To find a fraction
 e.g What fraction of the items are red? $\frac{3}{8}$ red items
 but 8 items in total = $\frac{3}{8}$

Interleaving: Use your fraction, decimal percentage, equivalence knowledge

YEAR 9 — REPRESENTATIONS...

Algebraic Representation

@whisto_maths

What do I need to be able to do?

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

- Draw quadratic graphs
- Interpret quadratic graphs
- Interpret other graphs including reciprocals
- Represent inequalities

Keywords

Quadratic: a curved graph with the highest power being 2. Square power.

Inequality: makes a non equal comparison between two numbers

Reciprocal: a reciprocal is 1 divided by the number

Cubic: a curved graph with the highest power being 3. Cubic power.

Origin: the coordinate (0, 0)

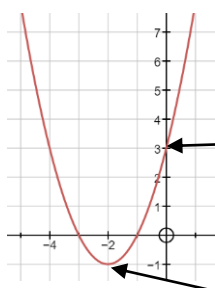
Parabola: a 'u' shaped curve that has mirror symmetry

Quadratic Graphs

$$y = x^2 + 4x + 3$$

If x^2 is the highest power in your equation then you have a quadratic graph

It will have a parabola shape



Substitute the x values into the equation of your line to find the y coordinates

x	-4	-3	-2	-1	0	1
y	3	0	-1	0	3	8

Coordinate pairs for plotting (-3, 0)

Plot all of the coordinate pairs and join the points with a curve (freehand)

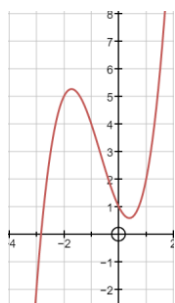
Quadratic graphs are always symmetrical with the turning point in the middle

Interpret other graphs

Cubic Graphs

$$y = x^3 + 2x^2 - 2x + 1$$

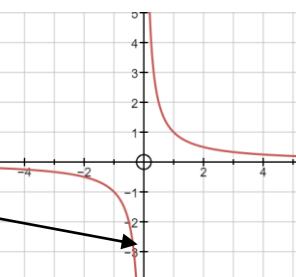
If x^3 is the highest power in your equation then you have a cubic graph



Reciprocal graphs never touch the y axis
This is because x cannot be 0
This is an asymptote

Reciprocal Graphs

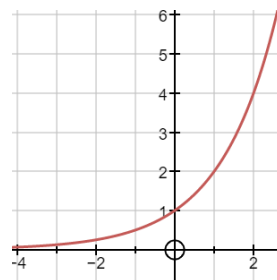
$$y = \frac{1}{x}$$



Exponential Graphs

$$y = 2^x$$

Exponential graphs have a power of x

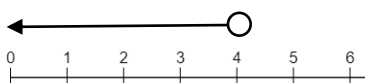


Represent Inequalities

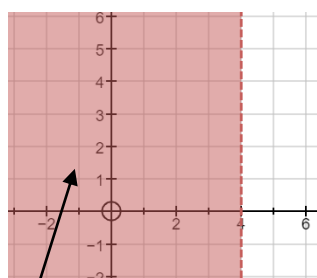
Multiple methods of representing inequalities

$$x < 4$$

All values are less than 4



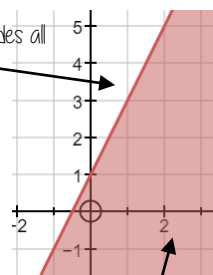
The shaded area indicates all possible values of x



The dotted line shows that the inequality does not include these points

The solid line shows that the inequality includes all the points on this line

$$y \geq 2x + 1$$



The shaded area indicates all possible solutions to this inequality

YEAR 8 - DEVELOPING NUMBER...

Standard Form

@whisto_maths

What do I need to be able to do?

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

- Write numbers in standard form and as ordinary numbers
- Order numbers in standard form
- Add/ Subtract with standard form
- Multiply/ Divide with standard form
- Use a calculator with standard form

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 gets multiplied by a power

Power: The exponent — or the number that tells you how many times to use the number in multiplication

Exponent: The power — or the number that tells you how many times to use the number in multiplication

Indices: The power or the exponent

Negative: A value below zero.

Positive powers of 10

1 billion = 1 000 000 000

$$10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 = 10^9$$

Addition rule for indices $10^a \times 10^b = 10^{a+b}$

Subtraction rule for indices $10^a \div 10^b = 10^{a-b}$

Standard form with numbers > 1

Any number between 1 and less than 10 $\rightarrow A \times 10^n$ ← Any integer

Example

$$3.2 \times 10^4$$

$$= 3.2 \times 10 \times 10 \times 10 \times 10$$

$$= 32000$$

Non-example

0.8×10^4

5.3×10^{07}

Negative powers of 10

0.001	10	1	•	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
$1 \times \frac{1}{1000}$	10^1	10^0	•	10^{-1}	10^{-2}	10^{-3}
1×10^{-3}	0	0	•	0	0	1

Any value to the power 0 always = 1

Negative powers do not indicate negative solutions

Numbers between 0 and 1

0.054 = 5.4×10^{-2}

1	•	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
10^0	•	10^{-1}	10^{-2}	10^{-3}
0	•	0	5	4

A negative power does not mean a negative answer — it means a number closer to 0

Order numbers in standard form

10^2	10^1	10^0	•	10^{-1}	10^{-2}	10^{-3}	10^{-4}
6.4×10^{-2}	2.4×10^2	3.3×10^0		1.3×10^{-1}			
0.064	240	1		0.13			

Look at the power first will the number be = > or < than 1

Use a place value grid to compare the numbers for ordering

Mental calculations

$6.4 \times 10^2 \times 1000$ Not in Standard Form

= $6.4 \times 10^2 \times 10^3$

Use addition for indices rule

= 6.4×10^5

$(2 \times 10^3) \div 4$

Divide the values

= $(2 \div 4) \times 10^3$

= 0.5×10^3

$8 \times 10^5 \times 3$

= 24×10^5 Not in Standard Form

Use addition for indices rule

= $2.4 \times 10^1 \times 10^5$

= 2.4×10^6

Remember the layout for standard form

Any number between 1 and less than 10 $\rightarrow A \times 10^n$ ← Any integer

Addition and Subtraction

Tip: Convert into ordinary numbers first and back to standard form at the end

Method 1

= $600000 + 800000$

= 1400000

= 1.4×10^6

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

Method 2

= $(6 + 8) \times 10^5$

= 14×10^5

= $1.4 \times 10^1 \times 10^5$

= 1.4×10^6

This is not the final answer

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

Only works if the powers are the same

Multiplication and division

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

Division questions can look like this

$\frac{1.5 \times 10^5}{0.3 \times 10^3}$

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

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

= 5×10^2

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

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

Revisit addition and subtraction laws for indices — they are needed for the calculations

Using a calculator

$14 \times 10^5 \times 3.9 \times 10^3$

Use a calculator to work out this question to a suitable degree of accuracy

Input 14 and press $\times 10^1$ Then press 5 (for the power)

Press \times

Input 3.9 and press $\times 10^3$ Then press 3 (for the power)

Press $=$

This gives you the solution



Click calculator for video tutorial

To put into standard form and a suitable degree of accuracy

Press **SHIFT** **SETUP** and then press 7 for sci mode

Choose a degree of accuracy so in most cases press 2

Answer: 5.5×10^8

HEAD

PUPILS TO EVALUATE THE USE OF BODY PARTS TO GAIN AN IMPROVEMENT IN REPLICATED TECHNIQUE

UNDERSTAND THE CHANGES IN HEART RATE BEFORE, DURING AND AFTER EXERCISE

PUPILS SHOULD UNDERSTAND THAT DIFFERENT EVENTS DEMAND DIFFERENT COMPONENTS OF FITNESS

ABLE TO COMPARE OWN AND OTHERS WORK AND CAN STATE THE DIFFERENCES. USE THIS INFORMATION TO ATTEMPT TO IMPROVE OWN PERFORMANCE.

HEART (RESILIENCE)

I HAVE WORKED INDIVIDUALLY AND AS PART OF A GROUP THIS TERM.

I HAVE SHOWED GOOD RESILIENCE IN A RANGE OF ATHLETIC ACTIVITIES, INCLUDING BOTH TRACK AND FIELD EVENTS.

I HAVE SHOWN GOOD RESILIENCE WHEN WORKING INDIVIDUALLY AND AS A PART OF A TEAM ACROSS A RANGE OF FIELD AND TRACK EVENTS THIS TERM.

I HAVE PUSHED MY BODY AND CHALLENGED MYSELF TO IMPROVE ACROSS A RANGE OF ATHLETIC EVENTS.

HANDS

PUSH BODY TO CHALLENGE PHYSICAL CAPACITY IN LESSONS

SHOW A GOOD REPLICATION OF SKILLS ACROSS MOST FITNESS DISCIPLINES

APPLY BASIC PRINCIPLES OF WARM UP AND COOL DOWN, USING EXERCISES APPROPRIATE FOR THE EVENT

PERFORMS WELL IN ALL FITNESS TEST IN DIFFERENT COMPONENTS



Year 8 Fitness



St John Fisher
Catholic High School



ORIGYM



Health-related Components of Fitness:

- 1 Cardiovascular Endurance
- 2 Muscular Endurance
- 3 Strength
- 4 Flexibility
- 5 Body Composition



Skill-related Fitness Components:

- 6 Power
- 7 Speed
- 8 Agility
- 9 Coordination
- 10 Balance
- 11 Reaction Time

HEAD

UNDERSTAND THE BASIC AND SOME MORE ADVANCED RULES SURROUNDING THE GAME

TO USE THIS INFORMATION TO ATTEMPT TO IMPROVE OWN PERFORMANCE.

DEMONSTRATE A STRONG ABILITY TO REFLECT ON OWN LEARNING

CAN USE AN IMPROVING RANGE OF SKILLS AND TECHNIQUES TOGETHER WITH CONTROL AND ACCURACY TO OUTWIT AN OPPOSITION.

HEART (RESILIENCE)

I HAVE WORKED INDIVIDUALLY AND AS A PAIR IN SINGLES AND DOUBLES MATCHES THIS TERM

I HAVE SHOWED GOOD RESILIENCE WHEN I HAVE BEEN LOSING IN A MATCH

I HAVE SHOWN RESILIENCE WHEN WORKING WITH MY PARTNER IN DOUBLES THIS TERM

I HAVE SHOWN GOOD RESILIENCE WHEN I HAVE PLAYED SINGLES MATCHES THIS TERM

HANDS

REPLICATION OF CORE SKILLS (FOREHAND, BACKHAND, SERVE, SLICE, DROP SHOT)

FOREHAND AND BACKHAND SHOTS ARE PERFORMED LOWER OVER THE NET AND WITH PURPOSEFUL DIRECTION

DEMONSTRATE MORE ADVANCED VARIATIONS OF THE CORE SKILLS

USES MAINLY THE FOREHAND SHOTS BUT CAN VARYING THE ANGLE AND DEPTH OF THE BALL.



Year 8 Table Tennis



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RULES OF TABLE TENNIS

- ▶ If the ball touches the table top then is deemed as in.
- ▶ If the ball touches the side of the table then is deemed as out.
- ▶ A player is not allowed to strike the ball in volley, unless the opponent's ball leaves the table and I strike the ball in a volley behind the table, in which case the point would be awarded to me.
- ▶ The ball rests freely on the open palm of your hand when serving.
- ▶ The hand holding the ball must be above the level of the table in the serve.
- ▶ The ball should be projected upwards in the serve.
- ▶ When serving the ball should be struck when it is falling and from behind the table.
- ▶ When serving, the ball must bounce on your side of the court and then again on your opponent's side of the court.



TABLE TENNIS Four key techniques to success in Olympic table tennis matches.

TECHNIQUE

Backhand sidespin serve - increases chance of weak return

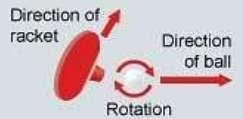


Forehand flick return - used to attack short balls

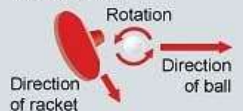


HOW TO ADD SPIN

Topspin
Start your stroke below and behind the ball in an upward and forward motion.



Backspin
Start your stroke above and behind the ball, brush the ball in a downward and forward motion



HEAD

TO DEVELOP AN UNDERSTANDING ABOUT ATTACKING PRINCIPLES RELATED TO HANDBALL

TO UNDERSTAND HOW TO PASS THE BALL AROUND OPPONENTS WHILE UNDER PRESSURE IN A GAME SITUATION

TO DEVELOP KNOWLEDGE & UNDERSTANDING OF BASIC STRATEGIES TO OUTWIT DEFENDERS

TO REFINE TACTICS BASED ON OPPONENTS WEAKNESSES.

HEART (TEAM WORK)

I HAVE SUCCESSFULLY WORKED HARD IN MY LESSONS WORKING WITH PEOPLE WHO I DON'T USUALLY WORK WITH

I HAVE LED A PART OF A WARM UP AT THE START OF THE LESSON WHICH MY TEAM HAS TAKEN PART IN

I HAVE SUCCESSFULLY SET UP A DRILL WITH MY TEAM WHICH WE HAVE USED WITHIN THE LESSON

I HAVE TAKEN PART IN VARIOUS ROLES WITHIN A GAME SITUATION TO BENEFIT MY TEAM

HANDS

SHOW A VARIETY OF PASSES WITH GOOD SPEED AND TIMING.

CAN RECEIVE A VARIETY OF PASSES WITH 1 HAND CONSISTENTLY.

IS ABLE TO DRIBBLE WELL WITH CONTROL IN A GAME SITUATION

ABLE TO SHOOT WHILE BEING MARKED CLOSELY, ATTEMPT A VARIETY OF SHOTS.



Year 8 Handball



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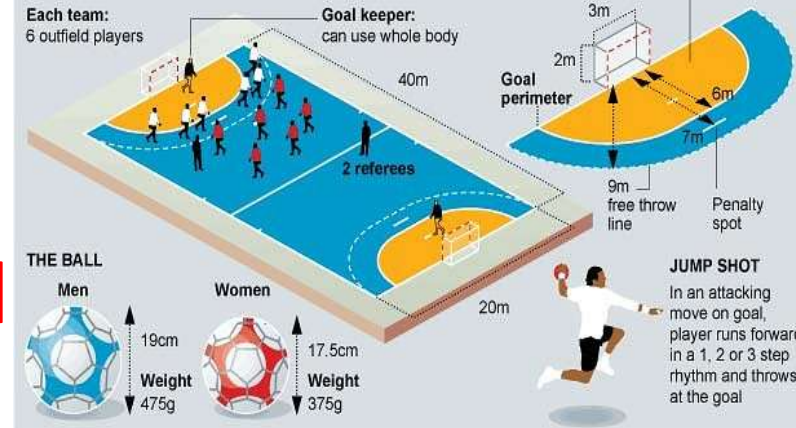


HANDBALL Play advances towards the goal, with the red side on the attack, during an Olympic handball match.

THE PITCH

Each team:
6 outfield players

Goal keeper:
can use whole body



THE BALL



Men

19cm

Weight

475g

Women

17.5cm

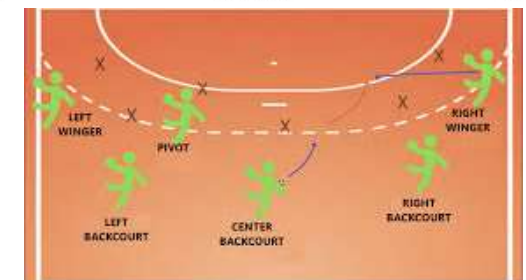
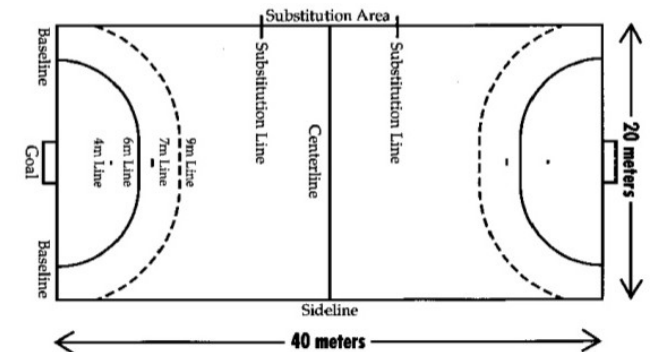
Weight

375g



JUMP SHOT

In an attacking move on goal, player runs forward in a 1, 2 or 3 step rhythm and throws at the goal



HEAD

I CAN DEMONSTRATE KNOWLEDGE OF THE RULES AND TACTICS.

I CAN ANALYSE MY OWN AND OTHERS PERFORMANCE' GIVING STRENGTHS AND AREAS FOR IMPROVEMENT.

I AM INDEPENDENTLY EXPLORING AND EXPERIMENTING WITH DIFFERENT WAYS OF IMPROVING

I CAN PLAN, ORGANISE AND LEAD A PRACTICE WHICH DEMONSTRATES COMPETENT KNOWLEDGE IN BADMINTON

HEART (COMMITMENT)

TO COME TO LESSON WITH CORRECT EQUIPMENT AND PE KIT

TO BE PREPARED TO TRY MY BEST IN EVERY LESSON THIS TERM

TO BE COMMITTED TO TAKING ON BOARD VERBAL FEEDBACK FROM BOTH STUDENTS AND TEACHER

TO BE COMMITTED TO UPHOLDING THE VALUES OF SPORT IN LESSONS AND PLAY WITH SPORTSMANSHIP

HANDS

I CAN MAINTAIN A RALLY USING FOREHAND AND BACKHAND STROKES

I OFTEN VARY THE ANGLE AND DISTANCE OF MY SHOTS

I CAN SUCCESSFULLY PERFORM SMASH AND DROP SHOTS AT THE CORRECT TIME

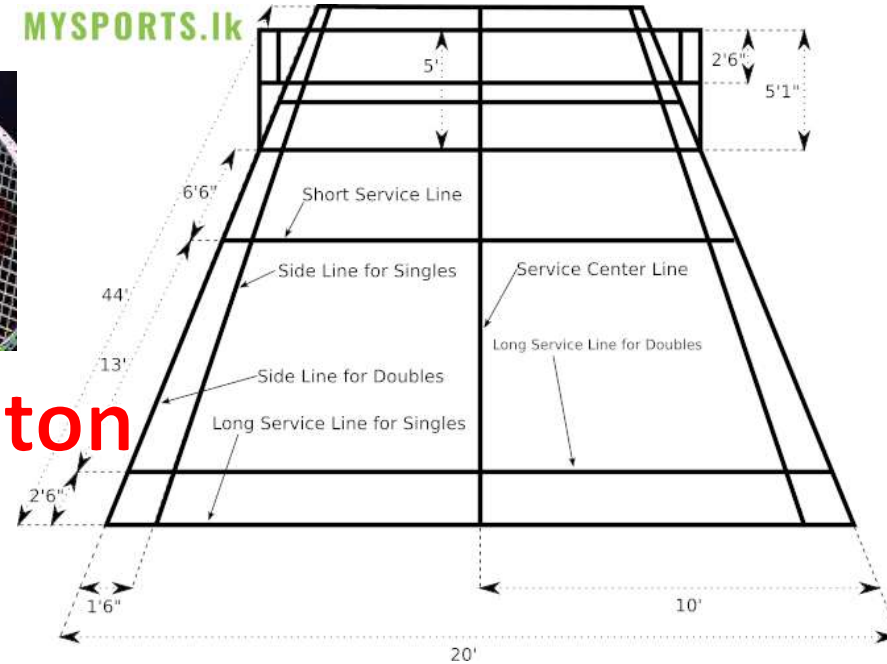
I CAN PERFORM HIGH AND LOW SERVES AND HAVE STARTED TO SELECT SHOTS WHICH PUT MY OPPONENT UNDER PRESSURE.



Year 8 Badminton

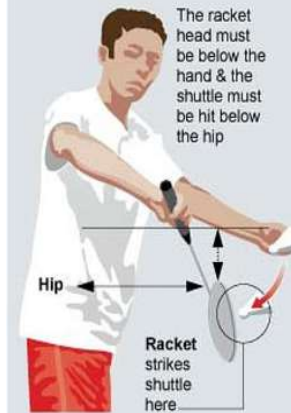


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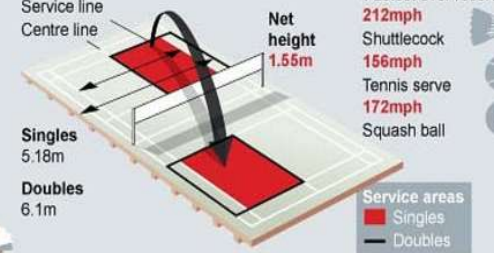


BADMINTON A male athlete prepares to use his racket to serve the shuttlecock in an Olympic badminton match.

THE SERVE



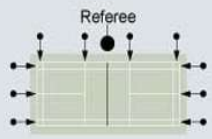
THE COURT



SPEEDS
Fastest ever recorded
212mph
Shuttlecock
156mph
Tennis serve
172mph
Squash ball

RACKET
Length 68cm
Width 23cm
Head length 29cm
Lightweight,
one-piece graphite
frame construction

JUDGES
Each game
has 10 line
judges &
a referee
positioned
as shown



HEAD

BEGIN TO UNDERSTAND IMPORTANCE OF STRATEGY AND TACTICS

DEMONSTRATE A BASIC KNOWLEDGE OF GAME RULES AND RECOGNISES ERRORS DURING A GAME.

SHOW A DEVELOPING ABILITY TO READ THE GAME AND MOVE INTO THE NECESSARY SPACE TO REPLICATE A CHOSEN SKILL

CAN RESPOND TO CHANGING SITUATIONS BY CHANGING AND REFINING SHOT SELECTION

HEART (COMMITMENT)

I SHOW DEDICATION AND COMMITMENT EVERY LESSON TO IMPROVE MY SKILLS IN VOLLEYBALL.

I STAY COMMITTED TO SEE THINGS THROUGH TO THE END OF GAMES WITHOUT GIVING UP.

I SHOW GOOD COMMITMENT TO HAVE HIGH STANDARDS IN EVERY PE LESSON.

I HAVE SHOWN GOOD COMMITMENT WHEN PLAYING IN MATCHES WHEN WINNING OR LOSING.

HANDS

DEMONSTRATE ABILITY TO PLAY THE SET (VOLLEY) IN A GAME SITUATION TO OUTWIT THE OPPOSITION.

I CAN USE A VARIETY OF SERVES (OVERARM AND UNDERARM) TO OUTWIT AN OPPONENT IN A GAME SITUATION.

DEMONSTRATE ACCURACY AND POWER WHEN PERFORMING THE SPIKE TO WIN A POINT.

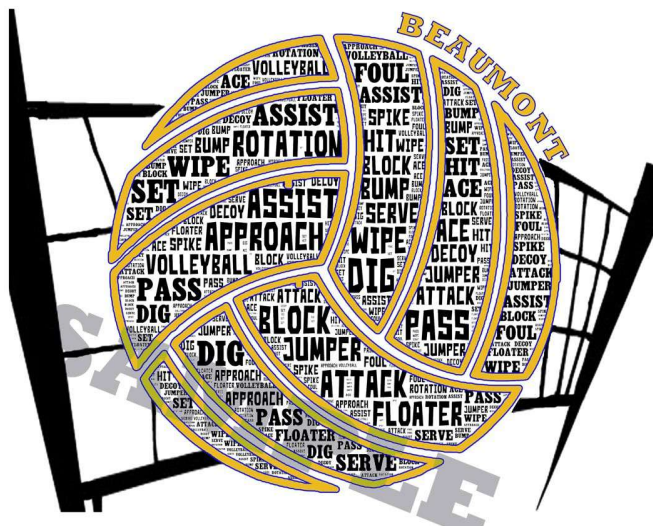
I CAN PERFORM THE DIG WITH CONTROL AND ACCURACY IN A COMPETITIVE SITUATIONS.



Year 8 Volleyball



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POSITIONS

There are 6 players on the court in the game of volleyball. (2 lines of 3 players)

1. Outside hitters: spike the ball
2. Middle blockers: best at blocking the net.
3. Setters: pass it off to the middle or outside for a spike



Opposite	Net Middle Blocker	Outside Hitter
4	3	2
Outside Hitter	MB/Libero	Setter
5	6	1

Skills

There are 5 main skills in volleyball:
Digging, Setting, Spiking, Serving and Blocking.

THE DIG

- Face incoming ball
- Knees bent with the weight on the balls of your feet
- Keep your arms/elbows straight
- Wrist together to create a flat platform for the ball to bounce off
- Angle your arms towards the target
- Keep the ball in front of you
- The ball should bounce off your forearms

*Sarah Chooth has a flat platform for the ball to bounce off and angles her arms toward the target

THE SET

- Have your hands up early with fingers spread in the shape of a ball
- Keep your hands symmetrical
- Track the ball until you are underneath it
- Ensure the ball lands in your hands above your forehead (you should be able to see the ball through the diamond shaped window made by your thumbs and forefingers)
- Push the ball out in the direction you wish keeping your hands symmetrical

*Harrison Peacock is always under the ball with his hands above his head

THE SPIKE & THE SERVE

- Always keep the ball in front of you
- Have both hands up in the air
- Draw your hitting hand back like a bow and arrow
- Swing at the ball with an extended arm
- Have spread fingers hitting the ball with the palm of your hand
- Follow through the ball with a firm wrist

*Beccara Palmer sets her arms up in a bow and arrow

THE BLOCK

- Watch the spiker and resist the urge to look at the ball
- Line up in front of the spiker as they run in
- Jump straight up with two feet
- Spread your fingers and hands to make them as big as possible
- Reach over the net as far as possible
- Don't touch the ball until after the spiker

*Isaac Kapa keeps his hands over the net and covers the ball

HEAD

TO UNDERSTAND AND APPRECIATE THE NEED TO MAKE DECISIONS ABOUT CHOICE OF MOVEMENTS AND REFINING IDEAS WHEN UNSUCCESSFUL.

UNDERSTAND THE PRINCIPLE OF UNISON AND CANNON DURING GROUP PERFORMANCES.

TO DEVELOP HOW TO RECOGNIZE GOOD PERFORMANCE IN SIMPLE DANCE ROUTINES ROUTINES

NAME THE KEY FEATURES OF URBAN DANCE WITH REFERENCE TO THE KEY TERMS E.G. UNISON, CANNON, BATTLE, REPETITION.

HEART (RESILIENCE)

I HAVE WORKED INDIVIDUALLY AND AS PART OF A GROUP THIS TERM.

I HAVE SHOWED GOOD RESILIENCE IN DEVELOPING MY UNDERSTANDING OF DIFFERENT CULTURES WITHIN DANCE.

I HAVE SHOWN GOOD RESILIENCE WHEN WORKING INDIVIDUALLY AND AS A PART OF A GROUP TO DEVISE IDEAS AND ROUTINES FOR DANCE PERFORMANCES.

I HAVE PUSHED MY BODY AND CHALLENGED MYSELF TO IMPROVE ACROSS A RANGE OF DANCE ACTIVITIES.

HANDS

TO BE ABLE TO PERFORM THE CORRECT MOVEMENTS AND TECHNIQUES IN TIMING WITH THE MUSIC. (MUSICALITY)

TO BE ABLE TO USE LEVELS, UNISON, CANNON AND FORMATIONS IN MY DANCE ROUTINES.

TO COMPOSE A DANCE ROUTINE AS PART OF AN URBAN DANCE PERFORMANCE.

MY DANCE PERFORMANCES DEMONSTRATE A VARIETY OF LEVELS, TRAVEL, DIRECTIONS AND DYNAMIC QUALITIES.



Year 8 Dance



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DYNAMICS

A quality of movement with reference to time, weight, flow and space (eg space & tension)

MUSICALITY

Sensitive awareness to musical phrasing, timing, style and mood. Being able to accent beats in the music with your movement

BATTLE

An informal competition where two or more people oppose each other.

REPETITION

Repetition means to repeat. A combination of movement and steps are performed the same exact way

CANNON

Repetition of movements between dancers, one after another or with each repeat overlapping with the previous one.



PSHE- Knowledge organiser- Y8 Term 2

Skills: Decision making

Living in the wider world	CEIAG	<ul style="list-style-type: none"> • Motivating factors to choose a career are varied: salary, location, possibility of promotion, wanting to help others or not etc. • GCSE qualifications give students a broad, general knowledge across a range of subjects. • Post-GCSE, students can become increasingly specialised through level 3 qualifications (like A-levels or BTECs), then specialise again through higher level qualifications (like higher diplomas or degrees). • All students have to study English, Maths and Science until they're 16. • If you are unsure of which career path to take, choose a selection of GCSEs that will provide as many skills as possible. • <u>Contract</u>: A written agreement between the employer and employee. Both must follow the law. • <u>Qualification</u>: A document proving that someone has passed exams or completed a course. • <u>Benefits</u>: Extra things given to you by an employer, aside from your salary. E.g. healthcare plan, money towards qualifications. • <u>Job specification</u>: A list of tasks that are part of the job. • <u>Salary</u>: The amount an employee gets paid per year. • <u>Person specification</u>: A list of skills/qualifications needed to get the job. They are often split into essential and desirable. • <u>Graduate position</u>: A job available to someone who has recently earned a degree. • <u>Applicant</u>: The person applying for the job. • <u>Assessment day</u>: A way for an employer to assess if you're right for the job. It may involve group and individual tasks, as well as an interview. • <u>Cover letter</u>: A letter sent to an employer with your CV, explaining why you want the job and why you are suited to it. • <u>Reference</u>: From a previous employer, confirming the applicant worked at one (or more) of their previous jobs.
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Remember!

- We will be open and honest, but not discuss directly our own and others personal/ private life.
- Your teacher will not repeat what is said in the room except if she/he is concerned we are at risk.
- It is ok to disagree but we will not judge.
- Taking part is important but we have the right to pass.
- We will not make assumptions and we will listen to others' point of view.
- We know that there are no stupid questions but we will use appropriate language.
- If we need further help or advice, you know you can talk to your teachers, form tutor and SSOs.

Prophecy

Key Objectives:

What it means to be a Prophet.

Who were the Old Testament Prophets?

Exploration of modern day prophets.

Keywords:

Prophet: Messenger of God

Proclamation: To declare something

Evangelise: Spread the word of God

Gospel: Good News

Year 8 Term 2

Knowledge Organiser



Church in Britain

Key Objectives:

To explore the origins of the Church in Britain

To explain the work of key Apostles.

To evaluate the impact of the Reformation on the Church today

Keywords:

Church: Place of

Worship/Community of Christians

Reformation: The process of change to the Church

Emancipation: process of being set free from legal, social, or political restrictions; liberation

Science – Year 8 – Term 2 part 1 – Genes and Competition

The cell membrane changes after fertilisation so no more sperm cells can enter the egg.

The cytoplasm contains nutrients to support the developing embryo after fertilisation.

The head is covered with an acrosome, which releases enzymes to digest the egg cell membrane.

The midpiece contains many mitochondria to release energy for movement.

The average length of gestation in humans is 40 weeks.

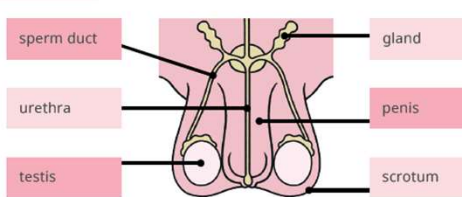
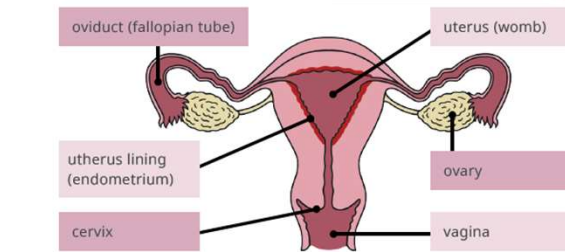
Week	Description
4-6	The embryo is about 6mm long. The heart and other organs start to form, and the heart begins to beat.
8-9	Arms begin to grow and toes and eyelids begin to form. The embryo is now called a foetus.
12	The foetus is now fully formed and all the organs, muscles and bones are in place. It is now around 60mm long and starts to move around.
20-24	The foetus is around 250mm long. It has begun to kick and can hear sounds outside the uterus. It swallows amniotic fluid and produces urine. Fingerprints have now formed.
28	The baby has hair and can open its eyes. There is a high chance that the baby would survive if it was born now.
37-40	The baby is fully developed and ready to be born. It is now around 520mm long. It rotates so its head is pointing downwards.

The nucleus contains genetic information from the mother. The egg cell carries half the genetic information that will be received by the offspring.

The large size of the egg cell increases the chance of it being fertilised and allows more space for nutrients to be stored.

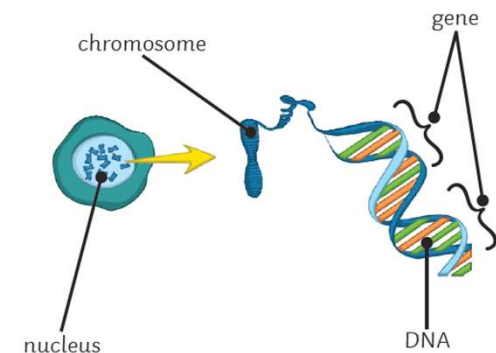
The nucleus contains genetic information from the father. The sperm cell carries half the genetic information that will be received by the offspring.

The sperm cell has a tail (flagellum) to allow it to move towards the egg cell to fertilise it.



Part	Function
penis	Allows urine and semen to pass out of the male's body.
testis	Produces sperm cells and releases the male sex hormone testosterone.
urethra	A tube that carries urine and semen. It has a ring of muscle to keep these fluids separate.
scrotum	A bag of skin that contains the testes.
gland	Produces fluids that mix with sperm cells to make semen.
sperm duct	Carries sperm cells from the testes to the urethra.

Part	Function
vagina	A muscular tube that leads from the cervix to the outside of the body.
cervix	A ring of muscle at the lower end of the uterus. This keeps the baby in place during pregnancy.
ovary	Contains hundreds of undeveloped egg cells. Every month, an egg cell matures and is released.
uterus	Where the baby develops during pregnancy.
oviduct	Carries egg cells from the ovaries to the uterus.
uterus lining	A blood-rich layer of tissue in which an embryo implants. This tissue is lost each month during menstruation.



Evolution

All species of living things have evolved from simple life forms by natural selection.

- If a variant/characteristic is advantageous in an environment then the individual will be better able to compete.
- This means they are more likely to survive and reproduce.
- Their offspring will inherit the advantageous allele.

Keywords

embryo screening – Genetic tests carried out on an embryo to see whether it carries a faulty allele.

evolution – A change in the inherited characteristics of a population, over time, through a process of natural selection.

evolutionary tree – A method used to show how scientists believe organisms are related.

extinction – The permanent loss of all members of a species.

fossils – The remains of organisms from millions of years ago which are found in rocks.

genetic engineering – The process by which scientists manipulate and change the genotype of an organism.

natural selection – The process by which organisms that are better suited to an environment are more likely to survive and reproduce.

selective breeding – Humans selecting animals or plants, that have a required characteristic, for breeding.

speciation – The process by which two species evolve from a single original species by natural selection. The two populations have become so different that they can no longer interbreed to produce fertile offspring.

variation – Differences in characteristics of individuals in a population.

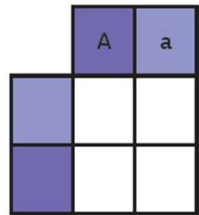
Evolution by Natural Selection

Darwin's theory was only gradually accepted because...

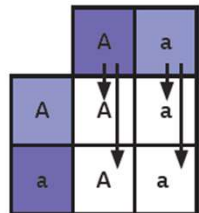
- the theory challenged the idea that God made all the animals and plants that live on earth.
- there was insufficient evidence at the time the theory was published to convince many scientists.
- the mechanism of inheritance and variation was not known until 50 years after the theory was published.

How to Complete a Punnet Square

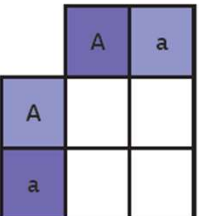
Step 1: Put the two alleles from one parent into the boxes at the top. This parent is a heterozygote. This means they have one dominant and one recessive allele.



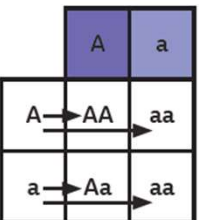
Step 3: Put the alleles from the first parent into the two boxes beneath them.



Step 2: Put the two alleles from the second parent into the boxes on the left. This parent is also a heterozygote.

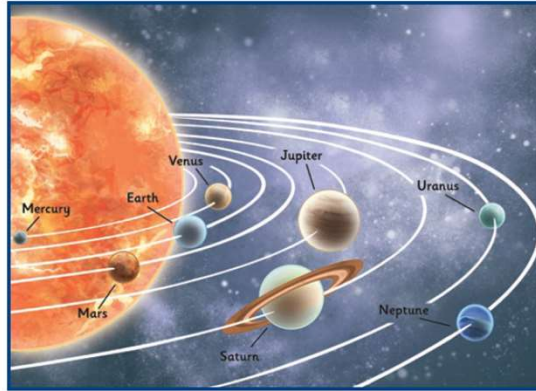
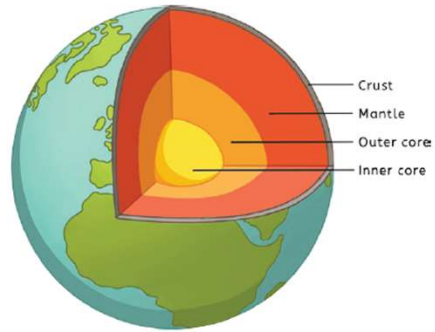


Step 4: Put the alleles from the second parent into the two boxes to the right of them.



Science – Year 8 – Term 2 part 2 – Earth, Sky and Space

The structure of the earth is shown below

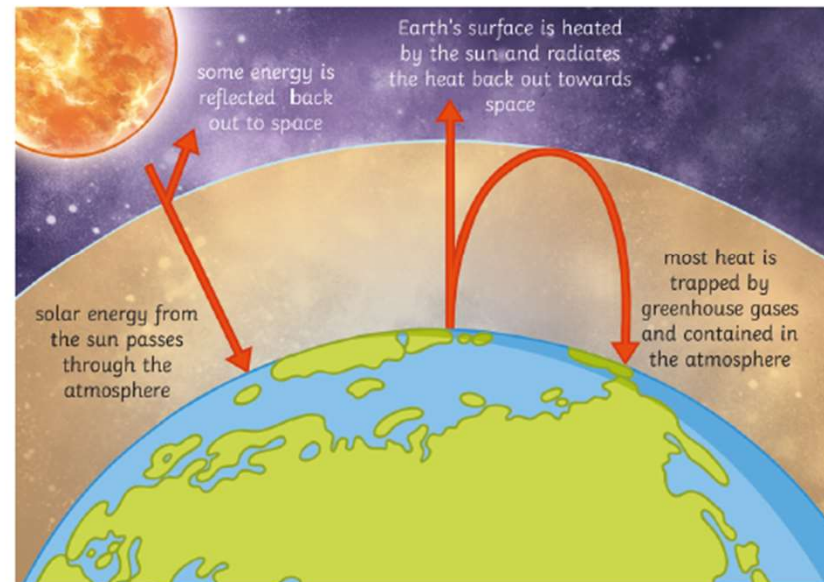


The solar system is part of the Milky Way galaxy and is made up of the Sun and anything that goes round it (orbit). There are 8 planets and some dwarf planets, including Pluto.

Planets are objects that orbit a star (the Sun). A dwarf planet will orbit a star but will be too small to be a planet, or not quite fit the pattern of a normal planet. Pluto is an example of a dwarf planet. Moons orbit planets and are also known as natural satellites. Planets are natural satellites of the Sun. Artificial satellites are satellites that humans have built and they mostly orbit the Earth.

Type of Rock	Examples
sedimentary	limestone , sandstone
metamorphic	marble, slate
igneous	granite, basalt

- Sedimentary rocks – are formed in layers, porous and may contain fossils.
- Igneous rocks are formed when a liquid rock cools, they contain crystals. If the rock is cooled quickly they contain small crystals, if they cool slowly they contain large crystals.
- Metamorphic rocks are formed from rocks that have undergone immense heat and pressure.



- The crust is the outer layer of the earth.
- The mantle is mainly solid rock.
- The core is divided into two parts, outer and inner core. The outer core is solid the inner core is liquid.

Gas	% in atmosphere
nitrogen	79
oxygen	21
carbon dioxide	0.004
argon	1

A greenhouse is a house made of glass and is commonly used by gardeners to help grow plants and keep them warm. As the sun shines through the greenhouse, the air is heated up and becomes trapped by the glass and is prevented from escaping. During daylight, a greenhouse stays quite warm and this lasts into the night.

The earth and its atmosphere are very similar to that of a greenhouse. The greenhouse gases in the atmosphere trap the heat and keep the earth warm. The main greenhouse gases are carbon dioxide, water vapour and methane. During the daylight, the sun warms up the earth's surface. During the night, as the earth begins to cool and release the heat back into the atmosphere, some of the heat is trapped by the greenhouse gases in the atmosphere.

If the greenhouse effect becomes too strong, the earth will get too warm and melt the Arctic ice. As we burn more fossil fuels, the levels of carbon dioxide and the other greenhouse gases increase in our atmosphere which makes the greenhouse effect stronger.