KNOWLEDGE ORGANISER

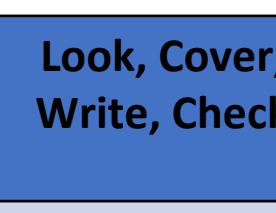
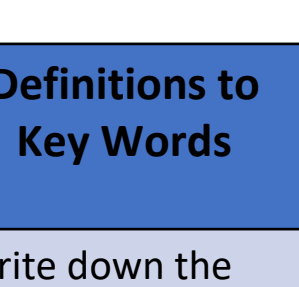
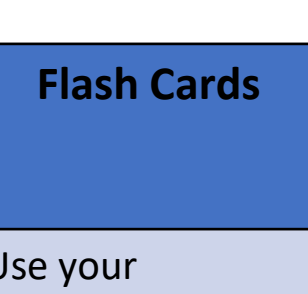
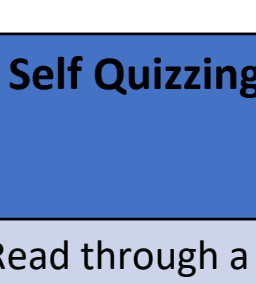
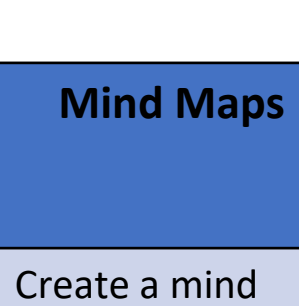
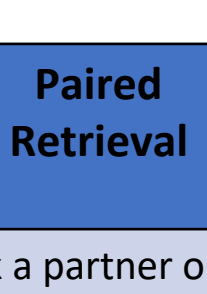
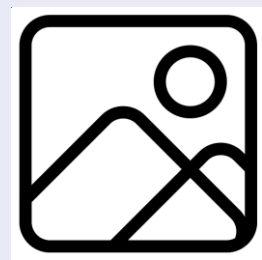
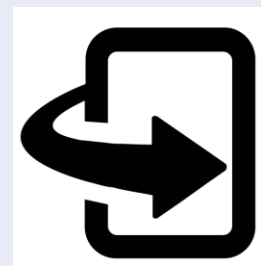
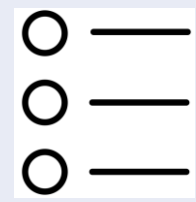
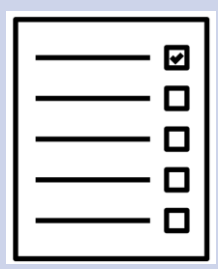
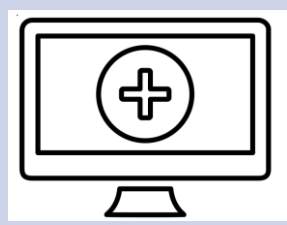
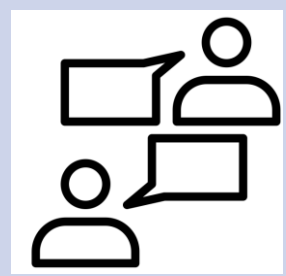
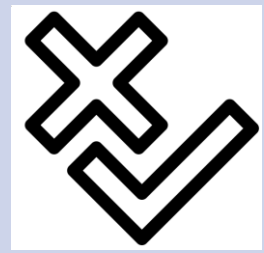
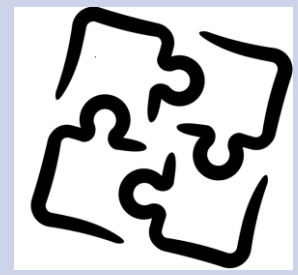
Year 7
Half Term 1

Name:	
Tutor Group:	
Academic Year:	

How to use your Knowledge Organiser

The aim of the knowledge organiser is to ensure that **ESSENTIAL KNOWLEDGE** is stored and retrieved over a long period of time.

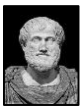
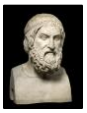
You need to ensure that you keep your knowledge organiser in your bag, ready for revision, quizzing and to refer to at any time in all of your subjects.

	Look, Cover, Write, Check	Definitions to Key Words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your knowledge organiser 	Write down the key words and definitions. 	Use your knowledge organiser condense and write down key facts and/or information on your flash cards. 	Read through a specific area of your knowledge organiser 	Create a mind map with all the information that you can remember from your knowledge organiser. 	Ask a partner or someone at home to have the quiz questions or flash cards in their hands. 
Step 2	Flip the knowledge organiser and write everything you can remember. 	Try not to use the solutions to help you. 	Add diagrams or pictures if appropriate. Write the solutions on the back of the cards. 	Turn over and answer the questions related to that area. 	Check your knowledge organiser to correct or improve your mind map. 	Ask them to test you by asking questions on the section you have chosen from your knowledge organiser. 
Step 3	Check what you have written. Correct mistakes and add extra information. Repeat. 	Check your work. Correct using red pen and add more information if appropriate. 	Self quiz using the cards or ask some to help by quizzing you. 	Turn back over and mark your quiz. Keep quizzing until you get all questions correct. 	Try to make connections that links information together. 	Either say or write down you answers. 


CORE

The Origins of Drama – Year 7- Unit 1- English

Context

Greek Theatre 	The theatre of Ancient Greece flourished between 550 BC and 220 BC. A festival honouring the god Dionysus was held in Athens, out of which three dramatic genres emerged: tragedy, comedy and the satyr play.
Aristotle and the Tragic Structure 	Tragedy depicts the downfall of a noble hero or heroine, usually through some combination of hubris (excessive pride or self-confidence), fate, and the will of the gods. In the *Poetics*, Aristotle's famous study of Greek plays, he compares tragedy to other types of plays. The aim of tragedy, Aristotle writes, is to bring about a "catharsis" of the audience— to make them feel emotions of pity and fear, and to help them get rid of these emotions so that they leave the theatre feeling cleansed and uplifted. Aristotle believes there are 6 main components of tragedy; plot, character, diction, thought, spectacle (scenic effect), and song (music). Tragedy and plot his considers most important.
Antigone- Context 	Considered to be Sophocles' most political play in the Oedipus Trilogy, Antigone was actually written before the other plays, though it takes place last chronologically. First performed around 441 – 442 B.C.E., it still enraptures audiences today with its exploration of pertinent themes like free will and civil disobedience natural law, family law. The play was written during a period that was bookended by turmoil, from wars to revolts. Some consider the character of Creon to be loosely modelled on Pericles, an Athenian statesman involved in the formation of the Athenian empire.

Aristotelian Tragedy	
Hubris	excessive pride or self-confidence 
Hamartia	a fatal flaw leading to the downfall of a tragic hero or heroine. 
Tragic Hero 	A tragic hero is a character in a dramatic tragedy who has virtuous and sympathetic traits but ultimately meets with suffering or defeat.
Catharsis	the process of releasing, and thereby providing relief from, strong or repressed emotions
Dramatic Devices	
Dramatic Irony	A literary technique by which the full significance of a character's words or actions is clear to the audience or reader although unknown to the character.
Soliloquy	An act of speaking one's thoughts aloud when by oneself or regardless of any hearers, especially by
Monologue	An extended speech by one character
Dialogue	**A** conversation between two or more people as a feature of a book, play, or film.
Foreshadowing	A warning or indication of (a future event).
Aside	A remark or passage in a play that is intended to be heard by the audience but unheard by the other characters in the play
Allusion	**A**n implied or indirect reference to a person, event, or thing or to a part of another text. Based on the assumption that there is a body of knowledge that is shared by the author and the reader and that therefore the reader will understand the author's reference. Can be cultural, mythological, historical, or biblical.
Allegory	**Something** that can be interpreted to reveal a hidden meaning, typically a moral or political one.
Character Archetypes	Character archetypes are broad character types that represent aspects of human nature

Aristotle's views plot and character

Character should have an essential quality or nature that is revealed in the plot. The moral purpose of each character must be clear to the audience. The characters should have four main qualities.

A. No matter who they are (hero or slave), the characters must be good in some way.

B. The characters should act appropriately for their gender and station in life.

C. The characters have to have believable personalities.

D. Each character must act consistently throughout the play. In other words, nothing should be done or said that could be seen as "acting out of character."

Plot should have; a beginning, which is not a necessary consequence of any previous action; a middle, which follows logically from the beginning; and an end, which follows logically from the middle and from which no further action necessarily follows.

Be unified, every element of the plot should tie in to the rest of the plot, leaving no loose ends.

Tragedy should express universal themes powerfully, It should contain surprises that, in retrospect, fit logically into the sequence of events. Cover such topics as reversal of fortune, or discovery.

The Origins of Drama – Year 7- Unit 1- English

Context

Greek Theatre 	Watch the following video clips. Produce a page of Cornell notes for each video (these should be watched on separate occasions: https://www.nationaltheatre.org.uk/file/introduction-greek-theatre https://www.nationaltheatre.org.uk/file/modern-interpretations-greek-chorus https://www.youtube.com/watch?v=VeTeK9kvxyo&t=1s
Aristotle and the Tragic Structure 	Answer the following questions: What is a tragedy? What 6 components did Aristotle say made up a tragedy? You may want to use the following for support: https://www.youtube.com/watch?v=BOv2wKZKJEc
Antigone- Context 	Use the following resources and make a dual coded poster summarising context and plot: https://www.sparknotes.com/drama/antigone/summary/#:~:text=Antigone%20is%20the%20girl%20who,to%20the%20duties%20of%20rule. https://www.youtube.com/watch?v=XkTJq7_aXAU

Aristotelian Tragedy

Hubris Hamartia Tragic Hero Catharsis	Define the key terms we have learnt Watch the following video and answer this question in your reflection log: Why are tragedies still alluring? https://www.youtube.com/watch?v=eVRU5MVYNiw Watch this clip and create a key terms page in your reflection log: https://www.youtube.com/watch?v=nGlQkaoIfBI&t=166s Watch the following video: https://www.youtube.com/watch?v=HlvfvygyjgE Create a table in your reflection log outlining the features of a Greek Tragedy and a Greek Comedy. Answer the following question: How are comedies and tragedies different? What makes a tragic hero?

Dramatic Devices

Dramatic Irony Soliloquy Monologue Dialogue Foreshadowing Aside Allusion Allegory Character Archetypes	Define the key terms we have learnt Use the new terms to describe events in Antigone. Watch the revision videos and make your own Cornell notes to revise the terms. Soliloquy revision video https://www.youtube.com/watch?v=4ogkXqh2HaU Dramatic irony revision video https://www.youtube.com/watch?v=RZFYuX84n1U Foreshadowing revision video https://www.youtube.com/watch?v=L0mBq7lK6YA Allusion revision video https://www.youtube.com/watch?v=FLE7-02DX-c Allegory revision video https://www.youtube.com/watch?v=5s062mieLDY

Aristotle's views plot and character

Character – What does Aristotle consider to be most important for characters in tragedy?

Consider the characters in Antigone. How do they fit with the character archetypes that Aristotle considers essential in tragedy?

Plot – What does Aristotle consider most important in a tragic plot?

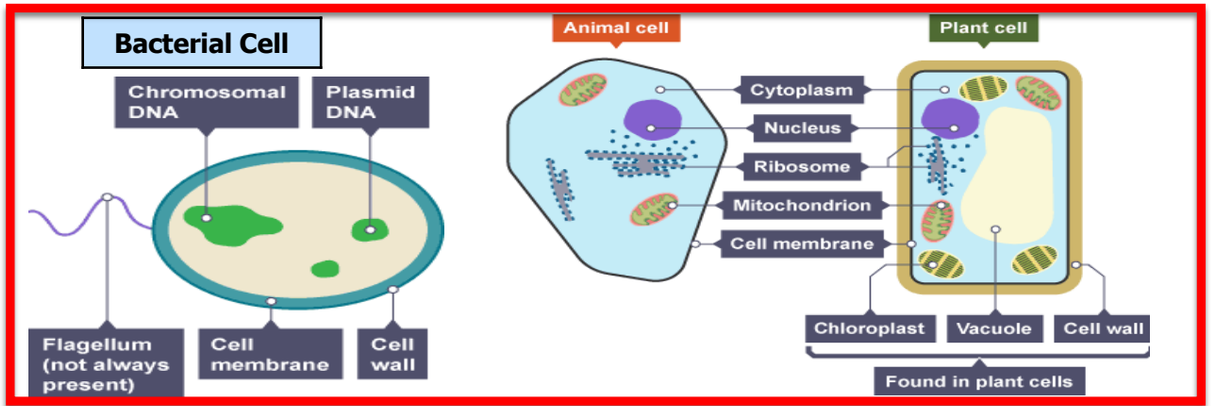
How does the story of Antigone fit this criteria?

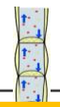
What themes are there in Antigone?

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

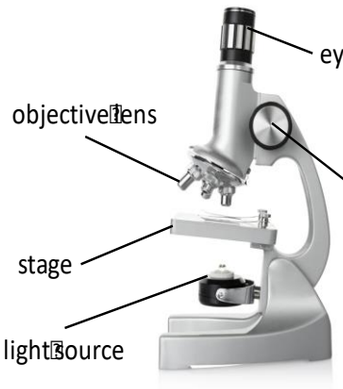
Biology Knowledge Organiser
Year 7: Cell Biology

Section 1- Cell Structure		Eukaryotic Cells		Prokaryotic Cells
Structure	**Function**	**Animal Cells**	**Plant Cells**	**Bacterial Cells**
1. Nucleus	Contains the **genetic information** that controls the functions of the cell.	Y	Y	
2. Cell Membrane	Controls what **enters & leaves** the cell.	Y	Y	Y
3 Cytoplasm	Where many cell activities & **reactions** happen.	Y	Y	Y
4 Mitochondria	Provides energy from **aerobic respiration.**	Y	Y	
5 Ribosomes	Make proteins- site of **protein synthesis**.	Y	Y	Y
6 Chloroplast	Where **photosynthesis** occurs.		Y	
7 Vacuole	Use to store water & other chemicals as **cell sap.**		Y	
8 Cell Wall	**Strengthens & supports** the cell (made of cellulose in plants)		Y	Y
9 DNA Loop	A loop of DNA **NOT** in a nucleus.			Y
10 Plasmid	A **small circle of DNA**, may contain genes associated with antibiotic resistance.			Y



Specialised animal cells	**Nerve**		*Carry electrical signals*	Long branched connections and insulating sheath
	Sperm		*Fertilise an egg*	Streamlined with a long tail Acrosome containing enzymes Large number of mitochondria
	Muscle		*Contract to allow movement*	Contains a large number of mitochondria Long
Specialised plant cells	**Root hair**		*Absorb water and minerals from soil*	Hair like projections to increase the surface area
	Xylem		*Carry water and minerals*	TRANSPIRATION - dead cells Cell walls toughened by lignin Flows in one direction
	Phloem		*Carry glucose*	TRANSLOCATION - living cells cells have end plates with holes Flows in both directions

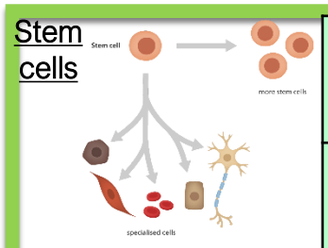
Diffusion *No* energy required	*Movement of particles in a solution or gas from a high to a low concentration*
Osmosis *No* energy required	*Movement of water from a dilute solution to a more concentrated solution across a partially permeable membrane*
Active transport *ENERGY* required	*Movement of particles from a low concentration to a high concentration*



Microscopy

$$\text{Magnification} = \frac{\text{Image size}}{\text{Actual size}}$$

Stem cells



Uses of stem cells:
- Replacing faulty blood cells;
- making insulin producing cells;
- making nerve cells.

Human Embryonic stem cells	*Can be cloned and made to differentiate into most cell types*
Adult bone marrow stem cells	*Can form many types of human cells e.g. blood cells*
Meristems (plants)	*Can differentiate into any plant cell type throughout the life of the plant.*

KEY VOCABULARY

chlorophyll	the green pigment contained in the chloroplasts	**hypotonic (osmosis)**	a solution that is less concentrated than the cell contents
electron microscope	Microscope that uses electrons to observe very small objects and cells in fine detail due to their higher resolution and magnification	**isotonic (osmosis)**	a solution that is the same concentration as the cell contents
eukaryotic cells	cells from eukaryotes that have a cell membrane, cytoplasm, and genetic material enclosed in a nucleus	**partially permeable membrane**	a membrane that allows only certain substances to pass through
hypertonic (osmosis)	a solution that is more concentrated than the cell contents	**resolving power**	a measure of the ability to distinguish between two separate points that are very close together

Year 7: Cell Biology

Self-quizzing questions:

Key vocabulary

1. What is chlorophyll?
2. What is the difference between a hypertonic and a hypotonic solution?
3. Define 'resolving power'
4. What is a partially permeable membrane?

Cell organelles

1. What is the function of cell membrane?
2. Name 3 organelles only found in a plant cell
3. Where is the DNA found in a plant and animal cell?
4. What is a plasmid?

Specialised cells

1. What is the function of sperm?
2. Name three specialised plant cells
3. How is the root hair cells adapted to its function?
4. What is the function of a xylem cell?

Transport in cells

1. Define diffusion
2. Define osmosis
3. Define active transport
4. Which type of transport requires energy?
5. Which type of transport involves a partially permeable membrane?

Microscopy

1. Recall the magnification equation
2. Name the 5 main parts of the microscope

Stem cells

1. Which type of stem cell can be found in plants?
2. Which type of stem cell can be made to differentiate into most other cell types?
3. Where are adult stem cells found?
4. State 3 uses of stem cells

Further opportunities

1. Compare light microscopes with electron microscopes. Use this link to help you:
https://www.youtube.com/watch?v=Lk1Mb1U11EY

2. Describe the process of mitosis
These resources on the Kay Science website will help you:
https://www.kayscience.com/vb2-cell-cycle.html

3. Write a method to outline how you would investigate osmosis.
These two lessons on Oak Academy will help you:

a) https://classroom.thenational.academy/lessons/osmosis-required-practical-part-1-70r6cr
b) https://classroom.thenational.academy/lessons/osmosis-required-practical-part-2-6gtk0d

YEAR 7 – ALGEBRAIC THINKING...

Sequences

@whisto_maths

What do I need to be able to do?

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

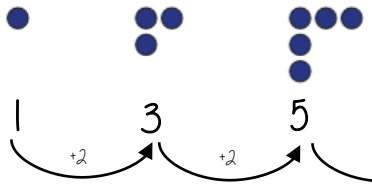
- Describe and continue both linear and non-linear sequences
- Explain term to term rules for linear sequence
- Find missing terms in a linear sequence

Keywords

Sequence: items or numbers put in a pre-decided order
Term: a single number or variable
Position: the place something is located
Rule: instructions that relate two variables
Linear: the difference between terms increases or decreases by the same value each time
Non-linear: the difference between terms increases or decreases in different amounts
Difference: the gap between two terms
Arithmetic: a sequence where the difference between the terms is constant
Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

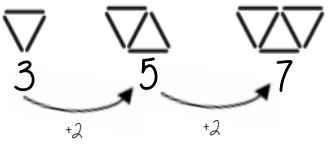
Describe and continue a sequence diagrammatically

Count the number of circles or lines in each image



What will the next number be? Can you draw this?

Predict and check terms



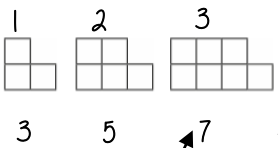
CHECK – draw the next terms

Predictions:
Look at your pattern and consider how it will increase.

e.g. How many lines in pattern 6?
Prediction - 13
If it is increasing by 2 each time - in 3 more patterns there will be 6 more lines

Sequence in a table and graphically

Position: the place in the sequence



"The **term** in **position** 3 has 7 squares"

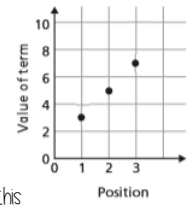
Term: the number or variable
(the number of squares in each image)

In a table

Position	1	2	3
Term	3	5	7

+2 +2

Graphically



Because the terms increase by the same addition each time this is **linear** – as seen in the graph

Linear and Non Linear Sequences

Linear Sequences – increase by addition or subtraction and the same amount each time
Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci

- Do not plot as straight lines when modelled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division.

Fibonacci Sequence – look out for this type of sequence

0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms.

Continue Linear Sequences

7, 11, 15, 19...

How do I know this is a linear sequence?
It increases by adding 4 to each term.
How many terms do I need to make this conclusion?
At least 4 terms – two terms only shows one difference not if this difference is constant (a common difference).
How do I continue the sequence?
You continue to repeat the same difference through the next positions in the sequence.

Continue non-linear Sequences

1, 2, 4, 8, 16 ...

How do I know this is a non-linear sequence?
It increases by multiplying the previous term by 2 – this is a geometric sequence because the constant is multiply by 2
How many terms do I need to make this conclusion?
At least 4 terms – two terms only shows one difference not if this difference is constant (a common difference).
How do I continue the sequence?
You continue to repeat the same difference through the next positions in the sequence

Explain term-to-term rule

How you get from term to term

Try to explain this in full sentences not just with mathematical notation
Use key maths language – doubles, halves, multiply by two, add four to the previous term etc.

To explain a whole sequence you need to include a term to begin at...

The next term is found by tripling the previous term. The sequence begins at 4.

4, 12, 36, 108...
x3 x3 x3
First term

YEAR 7 – ALGEBRAIC THINKING... Sequences

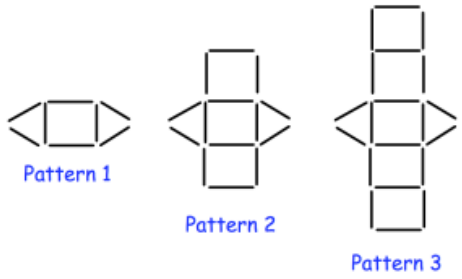
@whisto_maths

Describe and continue a sequence diagrammatically

Can you state how many sticks will be in pattern 4?

Can you draw pattern 4 and 5?

Sequences in a table and graphically



Pattern Number	1	2	3	4
Number of Sticks	8	14	20	

Can you complete the table for how many sticks will be in pattern 4?

Linear and Non-Linear Sequences

State whether the sequences are linear or non-linear:

1, 4, 7, 10, 13

0, 3, 8, 15, 24

11, 14, 19, 26, 35

1, 7, 13, 19, 25

Continue Linear Sequences

Find the next three terms for the following sequences:

5, 8, 11, 14, 17, …, …, …

-5, -2, 1, 4, …, …, …

7, 4, 1, -2, …, …, …

Continue Non-Linear Sequences

Find the next three terms for the following sequences:

1, 4, 9, 16, …, …, …

1, 1, 2, 3, 5, …, …, …

YEAR 7 – ALGEBRAIC THINKING... Sequences

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4, 7, 12, 19, …, …, …

YEAR 7 – ALGEBRAIC THINKING...

Algebraic notation

@whisto_maths

What do I need to be able to do?

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

- Be able to use inverse operations and "operation families".
- Be able to substitute into single and two step function machines.
- Find functions from expressions.
- Form sequences from expressions
- Represent functions graphically.

Keywords

Function: a relationship that instructs how to get from an input to an output.
Input: the number/ symbol put into a function.
Output: the number/ expression that comes out of a function.
Operation: a mathematical process
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Commutative: the order of the operations do not matter.
Substitute: replace one variable with a number or new variable.
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)
Evaluate: work out
Linear: the difference between terms increases or decreases by the same value each time
Sequence: items or numbers put in a pre-decided order

Single function machines

INPUT → [ ] → OUTPUT

The number that goes IN — The number that comes out

This box gives the calculation instruction

To find the input from the output
Use the **INVERSE** operation

Using letters to represent numbers

5 + 5 + 5	y + y + y + y	20 ÷ h
3 x 5	y x 4	$\frac{20}{h}$
5 x 3	4 x y	
	4y	

Addition and multiplication can be done in any order
Commutative calculations

4 lots of 'y'

20 shared into 'h' number of groups

Single function machines (algebra)

INPUT → [x 10] → OUTPUT

a → 10a
3c → 30c

÷ 10

To find the input from the output
Use the **INVERSE** operation

Find functions from expressions

INPUT 7x → [?] → OUTPUT 14x

Find the relationship between the input and the output

Sometimes there can be a number of possible functions e.g. **+7x** or **x 2** could both be solutions to the above function machine

Substitution into expressions

4y ← 4 lots of 'y'

If y = 7 this means the expression is asking for 4 'lots of' 7

4 x 7 **OR** 7 + 7 + 7 + 7 **OR** 7 x 4 = 28

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

Two step function machines

INPUT → [ ] → [ ] → OUTPUT

Calculate the value at the end of each operation

For the input use the **INVERSE** operations

Two step function machines (algebra)

b → [x 5] → 5b → [+ 4] → 5b + 4
[+ 5] [- 4]

IMPORTANT
Calculate the value at the end of each operation

c → [+ 4] → c+4 → [x 5] → 5(c + 4) = 5c + 20
[- 4] [÷ 5]

NOTE:
The whole first output is multiplied by 5

Find functions from expressions

f → [+ 5] → [÷ 3] → $\frac{f + 5}{3}$

f add 5 then divide by 3

f → [÷ 3] → [+ 5] → $\frac{f}{3} + 5$

f divided by then add 5

NOTE: the difference in the two expressions

Sometimes it helps to try to explain the expression in word – and consider what has happened to the input

Substitution into an expression

$2(x + 3)$

Add 3 to the input then times 2

Put the expression into a function machine

INPUT → [+ 3] → [x 2] → OUTPUT

If x = 10
10 + 3 = 13.... 13 x 2 = 26

Forming a sequence

$2(x + 3)$

INPUT	1	2	3
OUTPUT	8	10	12

← The substitution is the 'input' value
The OUTPUT becomes the sequence

Representing functions graphically

Take the function and generate a sequence $2(x + 3)$

INPUT → [+ 3] → [x 2] → OUTPUT

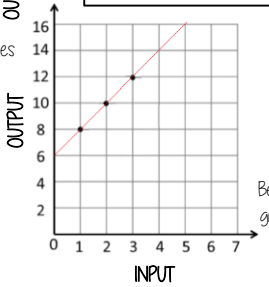
To represent graphically the input becomes x co-ordinates and the output becomes y co-ordinates

$y=2(x + 3)$

INPUT (x)	1	2	3
OUTPUT (y)	8	10	12

This becomes a co-ordinate pair (2, 10) to plot on a graph

Not all graphs will be linear only those with an integer value for x.
Powers and fractions generate differently shaped graphs.



NOTE:
Because this is a linear graph you can predict other values

YEAR 7 – ALGEBRAIC THINKING...

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Algebraic notation

Single function machines

Complete the function machines:

+5 →

Input	Output
4	
x	
$2x$	

×3 →

Input	Output
4	
x	
$2x$	

Using letters to represent numbers

c + c + c

5 x h

p ÷ 6

Two step function machines

Complete the function machines:

×3 → −2 →

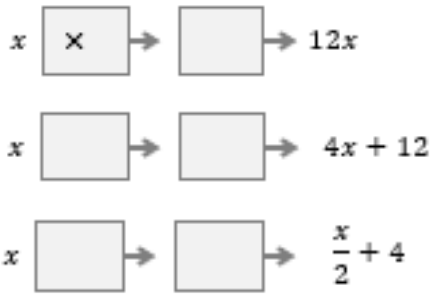
Input	Output
5	
x	
$3x$	

÷2 → +6 →

Input	Output
14	
x	
$4x$	

Find functions from expressions

Complete the functions below:



Substitution into an expression

Use substitution to calculate the value of the expressions:

a	b	c	$2a$	$a+b$	$b-a$	$3(a+c)$
3	4	3				
4	5	3				
7	8	0				

YEAR 7 – ALGEBRAIC THINKING...

Equality and Equivalence

@whisto_maths

What do I need to be able to do?

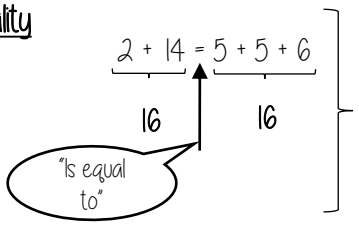
By the end of this unit you should be able to:

- Form and solve linear equations
- Understand like and unlike terms
- Simplify algebraic expressions

Keywords

Equality: two expressions that have the same value
Equation: a mathematical statement that two things are equal
Equals: represented by '=' symbol – means the same
Solution: the set or value that satisfies the equation
Solve: to find the solution
Inverse: the operation that undoes what was done by the previous operation. (The opposite operation)
Term: a single number or variable
Like: variables that are the same are 'like'
Coefficient: a multiplicative factor in front of a variable e.g. 5x (5 is the coefficient, x is the variable)
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

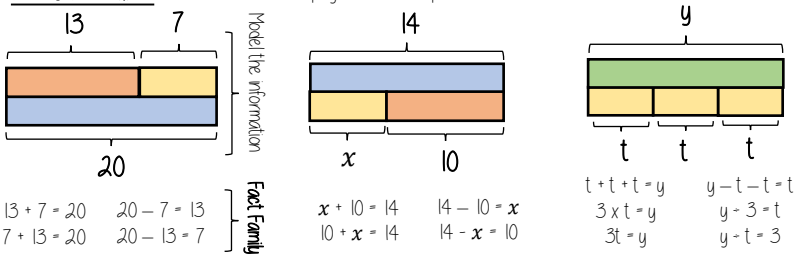
Equality



Saying it out loud sometimes helps you to understand equality

Fact Families

Use a bar model to display the relationships between terms and numbers



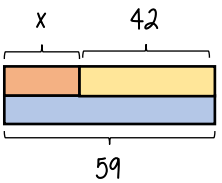
Solve one step equations (+/-)

There is more to this than just spotting the answer

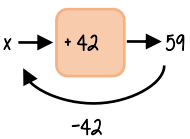
x + 42 = 59

x + 42 = 59
42 + x = 59

59 – x = 42
59 – 42 = x



Don't forget you know how to use function machines

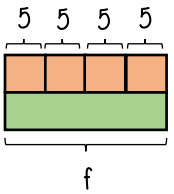


Solve one step equations (x/÷)

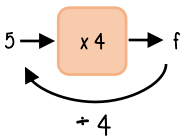
$\frac{f}{4} = 5$

f ÷ 4 = 5
f ÷ 5 = 4

5 x 4 = f
4 x 5 = f

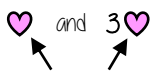


Don't forget you know how to use function machines



Like and unlike terms

Like terms are those whose variables are he same



are **like** terms

are **unlike** terms

Examples and non-examples

Like terms	Un-like terms
y, 7y	y, 7x
$2x^2$, x^2	$2x^2$, $2c^2$
ab, 10ba	ab, 10a
5, -2	5, -2t

Note here ab and ba are commutative operations, so are still like terms

Equivalence

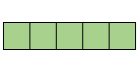
Check equivalence by substitution
e.g. m= 10

5m	2 x 2m	7m – 3m
5 x 10	2 x (2x 10)	(7x 10) – (3x 10)
= 50	= 2 x 20	= 70 – 30
	= 40	= 40

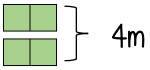
Equivalent expressions

Repeat this with various values for m to check

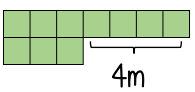
5m



2 x 2m



7m – 3m

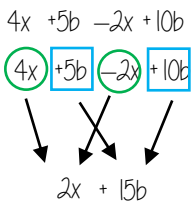


Collecting like terms ≡ symbol

The ≡ symbol means equivalent to.
It is used to identify equivalent expressions

Collecting like terms

Only **like terms** can be combined



Common misconceptions

$2x + 3x^2 + 4x \equiv 6x + 3x^2$

Although they both have the x variable, x2 and x terms are un-like terms so can not be collected

YEAR 7 – ALGEBRAIC THINKING...

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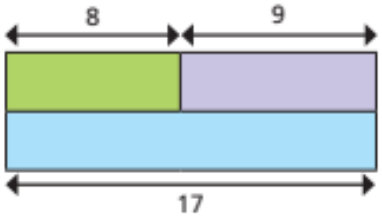
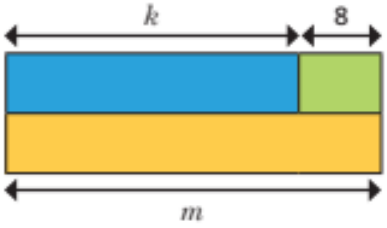
Equality and Equivalence

Fact Families

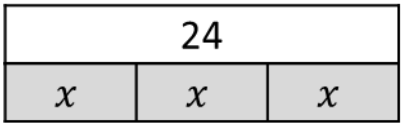
Write down all the fact families for the bar models below:

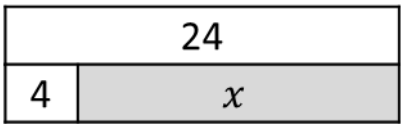




Solve One Step Equations

Solve the equations below:





$w + 5 = 7$

$5y = 30$

$\frac{w}{2} = 6$

Like and Unlike Terms

Tick the like terms below:

a, 5a

b, c

5r, 7r

xy, xz

$4x^2$, 8x

5rs, 8sr

ab, 5a

Collecting Like Terms

Collect the like terms below:

$5a + 2a$

$5a + 2 - 2a - 5$

$1 - 2a + 5 - 4a - 2$

$3a + 2b + 5a + b$

$-h + 6i - 2h - 8i$


EBACC

Geography 7.1.1 – Learning to be a geographer

1 – Branches of geography

There are three branches of geography: human, physical and environmental.

Human
The branch which deals with the actions and interactions of people.
Topics:
Population, migration, rural areas, urban areas, development, economic activities

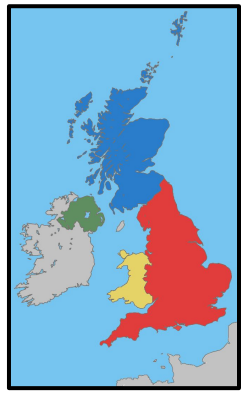
Physical
The branch which deals with Earth's natural features and processes.
Topics:
Plate tectonics, weather, climate, coastal areas, rivers, glaciers, global biomes

Environmental
The branch which deals with the interactions between people and the natural world.
Topics:
Energy, resources, sustainability, pollution, recycling, infrastructure, conservation

2 – The United Kingdom

The United Kingdom (UK) is made up of four countries: England, Northern Ireland, Scotland and Wales.

Key:
England
Northern Ireland
Scotland
Wales



England
Capital: London
Area: 130 279 km²
Population: 55.98 million

Northern Ireland
Capital: Belfast
Area: 14 130 km²
Population: 1.88 million

Scotland
Capital: Edinburgh
Area: 77 925 km²
Population: 5.45 million

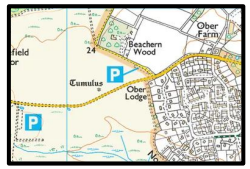
Wales
Capital: Cardiff
Area: 20 735 km²
Population: 3.16 million

The Union Flag of the UK

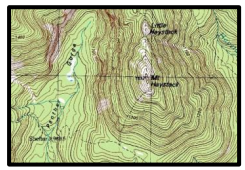
3 – Maps and photographs

Geographers gather information from a variety of sources:

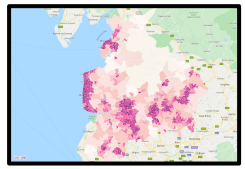
OS maps
Shows all the paths, roads, hills etc of areas of the UK in detail and at various scales.



Topographical map
Uses contour lines and/or colour to show shape of land.

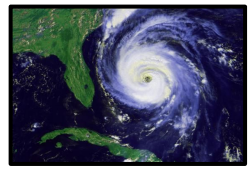


Thematic map
Uses colours or symbols to show a geographic pattern. E.g. population density.



Aerial photograph
Taken from an aircraft or drone either directly above or at an angle.

Satellite image
Taken from an artificial satellite in space. Often seen on weather forecasts.



4 – Key terms

Geography The study of places and the relationships between people and their environments.

Sustainability The practice of using natural resources responsibly, so they can support both present and future generations.

Contour lines Lines on a map which join points of equal height above sea level.

Ordnance Survey National mapping agency for Great Britain.

Questions

1 - Branches of geography

How many branches of geography are there?

Name the branches of geography

What is human geography?

What is physical geography?

What is environmental geography?

Name three topics which are part of human geography.

Name three topics which are part of physical geography.

Name three topics which are part of environmental geography.

Which branch of geography would you be studying f...

a. You were studying waterfalls?
b. You were studying wind energy?
c. You were studying refugees?
d. You were studying deserts?
e. You were studying tourism?
f. You were studying how water is used?

2 - The Uited Kingdom

How many countries are in the United Kingdom?

What countries make up the United Kingdom?

Which countries have land borders with England?

Which country has no land border with any other country in the United Kingdom?

Which is the northernmost country in the United Kingdom?

Which is the southernmost country in the United Kingdom?

What are the capitals of each of the countries?

Rank the countries in order of size by population.

Rank the countries on order of size by area.

Describe the flags of each nation.

WHat is the Union Flag?

3 - Maps and photographs

What is an OS map?

What is a topographical map?

What is a thematic map?

What is an aerial photograph?

What is a satellite image?

Which two maps show the shape of the land (hills)?

Which map can be used to identify geographical patterns?

How are aerial photographs captured?

What two methods can be used to show the shape of the land on topographical maps?

What two methods can be used to show patterns on thematic maps?

The aerial photograph is of Blackpool - is the photo take towards the south east or north west?

What human and physical features can you see in the aerial photograph?

4 - Key terms

What is geography?

What does geography study the relationships between?

What is sustainability?

Have coal and oil resources been used sustainably?

What are contour lines?

What is the Ordnance Survey?

KS3 Computer Science
Modelling Data

Spreadsheets are used for calculations, simple **databases** and **modelling**.

A spreadsheet is made up of rows, columns and cells. Columns are labelled alphabetically, starting at A, and rows are labelled numerically starting at 1. Each cell has a unique cell reference. The first cell in a spreadsheet is A1, A2 is below A1, and B1 is to the right of A1.

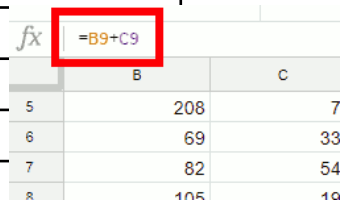
A cell can contain **data**, **labels** and **formulae**.

Google Sheets

MICROSOFT EXCEL

Spreadsheets are perfect for performing calculations with data. To do this you need to write a formula. All formulas start with an equals sign (=). e.g. You could use a **formula** to calculate a total. If one of the values that makes up the total changes, the total updates automatically.

=	used to start formulae/functions
+	addition
-	subtraction
/	division
*	multiplication



More advanced formulas are called **functions**. These are complex formulas created for you. There are many to choose from and also specialist ones designed for particular jobs or areas of expertise.

SUM	adds values in selected cells	=sum()
MIN	finds the smallest value	=min()
MAX	finds the largest value	=max()
AVERAGE	finds the average value	=average()
COUNTA	counts all the cells that are NOT empty	=countA()
COUNTIF	adds up cells that meet a certain rule, e.g. count the number of students that achieved level 6.	=countif()
IF	changes the value of a cell if something is true, e.g. if a customer's total bill is over £100, deduct 10% from their bill.	=if()

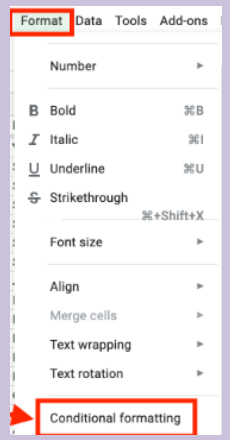
Sort & Filter

Sorting data organises it in a specific way e.g. alphabetically

Sort A → Z

Sort Z → A

Filtering data makes it easy for us to find one specific piece of data without having to look through every piece of data



Data vs. Information

Data = raw facts and figures that make no sense or do not have meaning. Data is words, numbers, dates, images, sounds etc without context.

Information = Data that has been processed by a computer so that it makes sense. Information is a collection of words, numbers, dates, images, sounds etc put into context.

Primary vs Secondary Data Sources

Primary = Data that has been generated by the researcher himself/herself, surveys, interviews, experiments, specially designed for understanding and solving the research problem at hand.

Secondary = Using existing data generated by someone else i.e. from books, the internet, reports etc.

Formatting= Changing the way something looks.

Conditional formatting = where rules are applied to the spreadsheet which change the formatting of cells / data based on conditions. The formatting will change automatically depending on the value of the cell.

SCAN ME

KS3 Computer Science- Modelling Data

What I need to know:

Questions:
What are spreadsheets used for?
What 3 things are spreadsheets made up of?
How are columns and rows labelled?
What does each cell have to identify it?
What can a cell contain?
What do you write in spreadsheets to complete calculations?
What must all formulae begin with?
What are the signs for addition, subtraction, multiplication and division?
What are functions?
What does SUM do?
What do MIN and MAX do?
What does AVERAGE do?
What does COUNTA do?
What does COUNTIF do?
What does IF do?
What is sorting used for?
What is filtering used for?
What is the difference between data and information?
What is the difference between primary and secondary sources of data?
What is formatting? Give an example
What is conditional formatting? Give an example.

Match the keyword to the definition

Formula	
Cell reference	
Autofill	
Data	
Information	
Primary source data	
Secondary source data	

1. Facts and figures
2. A tool that fills the selected cells with repeating values or a pattern
3. Data that you have collected and that you are using yourself
4. Needed to do a calculation, must start with the = symbol
5. Data that somebody else collected and that you are using
6. Facts and figures that have been organised so that they have meaning
7. The location of a cell, made up of a column name and a row number

Identify the formula needed

	A	B	C	D
1	14	x	7	= A1 * C1
2	179	+	56	
3	625	–	341	
4	8	x	77	
5	57	÷	6	

Complete the Bitesize Quiz

SCAN ME

Watch a tutorial on how to use Google Sheets

SCAN ME

Key Words Per Lesson:

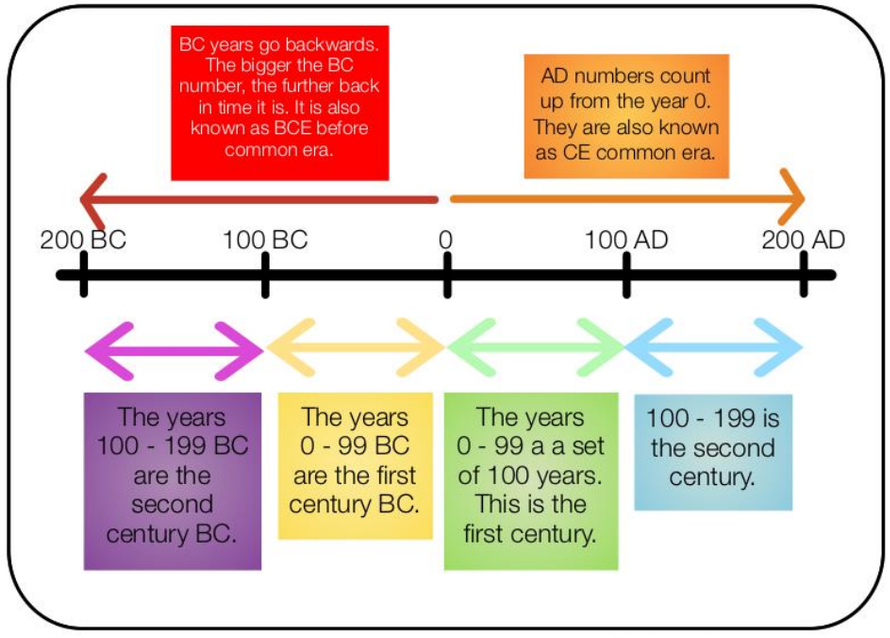
Lesson 1: Data, cell, cell reference, row, column, range, select	**Lesson 2: Drag handle, autofill, formula, cell reference**	**Lesson 3: Formula, cell reference, autofill, data, information, source, primary source, secondary source**
Lesson 4: Chart, pie chart, bar chart, series, axis/axes, labels, headers, function, maximum, minimum	**Lesson 5: Header, filter, average, criterion/criteria, condition**	**Lesson 6: Conditional Formatting**

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

History Knowledge Organiser
Core skills

Timelines

- When we use timelines we always put dates in chronological order. This is the order they happened in history.
- Some events happened before Jesus was born and we call these BC (Before Christ). More recently they have been called BCE, before common era.
- BC dates come before the year 0. For example, the Roman period started in 753 BC. Seven hundred and fifty three years before Jesus.
- Events that happened after the year 0 we call AD (Anno domini, after Jesus died). More recently they have been called CE - Common Era.
- AD dates do not always have AD written after them but BC dates must have the letters BC after them.



KEY VOCABULARY/ TERMS

AD / CE, BC / BCE, bias, chronology, timeline, anachronism,evidence, sources, fact, opinion, interpretation, chronological order, buildings, coins, bones, artefacts, oral, pictures, paintings, photographs, diaries, newspapers, letters, decade, century, millennium.

Centuries - top tip

An east way to remember how to work out centuries is :-
Cover up the last two numbers and add one.
1547 is 15[redacted] +1 = 16th century

To work out what year is in a century subtract one and then add any number between 00 and 99.
20th century is 20 - 1 = 19
1900 - 1999

1602 - the name 'Blackpoole' first appears on a baptismal register.
1767 - the land along the coast was enclosed and plots of land given out.
1819 - Henry Banks the 'Father of Blackpool' built the first holiday cottages.
29th April 1846 - Talbot Road station brought the railway straight to Blackpool.
1860's - Uncle Tom's Cabin was offering refreshments, music and dancing.
1863 - North Pier was built. Blackpool Central Railway Station opened.
30th May 1868 - Central Pier opened.
11th July 1878 - The Winter Gardens opened.
1879 - Blackpool illuminations first switched on.
29th September 1885 - The first permanent electric street tramway opened.
1893 - Victoria Pier (now South Pier) opened.
1894 - Blackpool Tower opened. The Grand Theatre opened.
1896 - Blackpool Pleasure Beach opened.
1932 - Warbreck Water Tower was built.

Source Skills - Types of sources

Artefact - objects e.g. bones, buildings and coins.	
Oral - spoken history e.g. interviews, TV.	
Pictures - can include photographs and paintings.	
Written - including diaries, letters and newspapers.	

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

History Knowledge Organiser
Core skills

Quiz questions

1	Put these dates in order 2000, 1969, 1974, 250 AD, 505 AD, 1986, 1920, 40 BCE, 2018.	
2	Put these dates in order 1BC, 2011, 2011 BCE, 3, 2BC, 2018 AD, 2018 BCE	
3	Put these dates in order 25BC, 1160, 1520 960 BCE, 1348 AD, 2020 BCF, 1066, 1642	
4	What century is 99 in?	
5	What century is 1973 in?	
6	What century is 2023 in?	
7	What century is 50 in?	
8	What century is 250 BCE in?	
9	What century is 1665 in?	
10	Give a date in the 1st century	
11	Give a date in the 20th century	
12	Give a date in the 43rd century	
13	Give a date in the 2nd century BCE	
14	Give a date in the 10th century BCE	
15	Which came first 1 BCE or 1AD?	
16	Which came first 2015 BCE or 2014 BCE?	
17	Which came first 1666 AD or 1849?	
18	Which came first 0 or 3 BCE?	

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RE Knowledge Organiser
Judaism

Key figures

Judaism traces its origins to one man named Abraham, who lived approximately 2000 BC. Jewish people refer to him as Avraham Avinu, meaning 'Our Father', because they think of him as the earliest ancestor of the Jewish people and the founder of the Jewish religion.

The Torah says that God appeared to Abraham and told him he should leave his home and travel to the land of Canaan, which God would give him and his descendants. Abraham was 75 at the time and travelled with his with Sarai, his nephew Lot and a large group of people who also followed. When he arrived, Abraham honoured God, and God promised Abraham he would have a son to be his heir. Abraham eventually had his heir Isaac, but when he was a teenager God tested Abraham's faith and asked him to sacrifice him. Just as he was about to do this God stopped Abraham, as he had shown unquestioning loyalty.

Around 500 years after Abraham died, his descendants - who called themselves Israelites - had settled in Egypt to escape a drought in Canaan. However, the Pharaoh of Egypt began to feel threatened by them and forced them into slavery. To reduce the population, the Pharaoh ordered that male babies should be killed. In an effort to save her infant son, one Israelite mother hid him among the reeds in a river where he was found by an Egyptian princess. She rescued him and brought him up as her own child, and named him Moses.

Moses is a significant figure in Judaism due to the Exodus of Egypt and also for the events in the aftermath of the Exodus. Moses was the prophet that received the Ten Commandments from God that are still so significant to the Jewish people to this day. When Moses finally led the Israelites to the land God had promised them it was 40 years after they had left Egypt. This was supposedly Canaan, on the bank of the river Jordan. Moses then climbed to a point he could see over the Promised Land and there he died. He was supposedly 120 years old.

The Ten Commandments

The Ten Commandments, of Ten Sayings, are part of the mitzvot. However, these commandments have special significance to the Jewish people. The Ten Commandments were given to the prophet Moses on Mount Saini. They include:

1. You shall have no other Gods before Me.
2. You shall not make idols.
3. You shall not take the Lord's name in vain.
4. Remember the Sabbath day and keep it holy.
5. Honour your Father and your Mother.
6. You shall not murder.
7. You shall not commit adultery.
8. You shall not steal.
9. You shall not witness bear false witness against your neighbor.
10. You shall not covet.

Holy scripture

The Jewish Bible is a collection of 24 separate books. It is called the Tenakh. The Tenakh is divided into the Torah, Nevi'im and Ketuvim.

The Torah means 'law' and consists of five books. It is the most important part of the Tenakh because it contains God's laws and commandments. There are 613 commandments, known as mitzvot. The Torah is so important that Jewish people sometimes refer to the whole of the Tenakh as Torah.

Nevi'im means 'prophet'. This section contains the writings of those people who believed that God had given them messages for the Jewish people.

Ketuvim means 'writings'. The Ketuvim are books of poetry, wise sayings and stories.

Places of worship

The building in which Jewish people worship is called a Synagogue. Some Jewish people may call it a Shul. The word synagogue literally means 'assembly' or 'meeting together' and shul means 'school'. This gives a clue about the function of the synagogue. It is more than just a place of worship. Temples were the original place of worship for Jewish people, however, after the Jewish Temple in Jerusalem was destroyed in 70CE, the religious functions of the Temple were moved to the Synagogue.
Some features of a Synagogue include the Bimah, Ner tamid and The Ark. The Bimah is a raised platform containing a table from which the Torah scroll is read. In Orthodox synagogues, it is in the middle of the sanctuary. The Ark is a cupboard where the Torah scrolls are kept and the Ner tamid is a light that burns constantly above the Ark.

The Exodus

The Exodus describes the journey the Israelites took out of Egypt and into Canaan, and literally means ' a journey out'. This is in reference to Moses and the story of him freeing the Israelites from slavery. The Pharaoh of Egypt refused to free the slaves. God, through Moses, punished the Egyptians by sending Ten Plagues, one after the other, until the Pharaoh finally released the Israelites. This was only after the final plague; death to the eldest offspring of every animal, including humans. God told Moses to let the Israelites know to smear lambs blood on their door as a sign for Death to pass over them. At midnight, God killed the firstborn Egyptians, including the Pharaoh's own son.
The story has been turned into many films, including the famous animated version *The Prince of Egypt*.

KEY VOCABULARY/ TERMS

Abraham, Moses, Tenakh, Torah, Commandment, Mitzvot, Mount Saini, Prophet, Scripture, Exodus, Pharaoh, Canaan, Israelites, Plague, Ark, Synagogue, Shul, Temple, Sarai, Lot, Descendant, Bimah, Ner Tamid, Orthodox, Idols, Nevi'im, Ketuvim, Jerusalem, River Jordan, Avraham Avinu

RE Knowledge Organiser
Comparative Religion

Quiz questions

Where do Jewish people worship?	
Who is often referred to as Avraham Avinu by the Jewish people?	
What does Torah mean?	
Which prophet let the Israelites in The Exodus?	
What was the name of Abraham's wife and nephew?	
What was the final plague God sent down on the Egyptians?	
Where did God give Moses the Ten Commandments?	
What are the three parts of the Tenakh?	
Who rescued Moses when he was a baby?	
What is another name a Synagogue might be called?	
How many commandments are there in total?	
Name a film that is based on the story of the Exodus	
How many separate books are there in the Jewish Bible?	
Where did God tell Abraham to travel to?	
What is the Mitzvot?	
How many plagues did God send down on the Egyptians?	
Name three features of a Synagogue	
Supposedly, how old was Moses when he died?	

French Knowledge Organiser core information

Year 7/Term 1

Prior Knowledge

Les numéros	Numbers
un	one
deux	two
trois	three
quatre	four
cinq	five
six	six
sept	seven
huit	eight
neuf	nine
dix	ten

Les introductions	introductions
Bonjour	Hello
Salut	Hi
Au revoir	Goodbye
ça va?	How are you?
Ça va bien merci	Well, thank you
Ça va mal	Not well
Comme ci, comme ça	So, so/Alright
Comment t'appelles-tu?	What is your name?
Je m'appelle….	My name is…
Quel âge as-tu?	How old are you?
J'ai……ans	I am……years old.

Les verbes clés

Les pronoms	
Je/J'	I
Tu	you (singular)
Il	He
Elle	She
On	We
Nous	We
Vous	You (plural)
Ils	They (m)
Elles	They (f)

Avoir	To have
J'ai	I have
Tu as	You have
Il a	He has
Elle a	She has
On a	We have
Nous avons	We have
Vous avez	You have
Ils ont	They have
Elles ont	They have

Être	to be
Je suis	I am
Tu es	You are
Il est	He is
Elle est	She is
On est	We are
Nous sommes	We are
Vous êtes	You have
Ils sont	They are
Elles sont	They are
C'est	It is
Il y a	There is

La conjugaison

Conjugating 'er' verbs

In the infinitive (how you would find it in a dictionary), these verbs end with 'er' e.g. aim**er** (to like). When using them in the present tense the end of the verb will change depending on who is doing the action.

e.g. J'aim**e**	I like
Tu aim**es**	You like
Il aim**e**	He likes

Other examples of 'er' verbs are; adorer, danser, écouter, visiter

Les opinions

J'adore	I love
J'aime	I like
Je n'aime pas	I don't like
Je déteste	I hate
Je préfère	I prefer
parce que	because
car	because
c'est	it is

Ils sont They are

French Knowledge Organiser core information

Year 7/Term 1

Write the correct translation for the following subject pronouns.

1 We _____ 6. You (plural) _____
2. They (female)_____ 7. You (singular)_____
3. You (sing/polite) _____ 8. They (masculine)_____
4. He _____ 9. They (feminine)_____
5. I _____ 10. She _____

Write out the sentences using the correct form of the present tense.

1. Je (jouer) de la guitare.
2. Je (chanter) dans une groupe.
3. Tu (aimer) les jeux vidéos?
4. Il (habiter) en France.
5. Elle (adorer) les animaux.

Fill in the gaps in these sentences, then translate them into English

1. J'_____ un portable.
2. Tu _____un animal?
3. Il _____ un frère
4. Elle _____un soeur.
5. Ils _____ beaucoup de talent.
6. Nous_____ une guitare.

Write a sentence, giving your opinion (with reason) of the items below.


la pizza


la danse


les araignées


le foot


les chiens

délicieuse amusant fantastique horrible nul super

Use the vocabulary box, to translate the sentences into French.

1. I am big.
2. He is small.
3. She is intelligent.
4. He is funny.
5. We are curious.
6. You are modest
7. They are trendy.

modeste	drôle	branchés
curieux		petit
grand	intelligente	

Write an answer to the questions below in French. Practise your questions and answers with a friend or family member.

1. Comment t'appelles-tu?
2. Qu'est-ce que tu as dans ton sac?
3. Qu'est-ce que tu aimes?
4. Qu'est-ce que tu n'aimes pas?
5. Tu es comment?

INNOVATION

KS3 | NETBALL BASIC RULES AND SKILLS

Big picture: To develop knowledge and understanding of the basic rules and skills in Netball

Basic Skills

Objective of Netball
To score more points that the other team by shooting into a netball hoop.

The Court
The court is divided into 3 sections, attacking third, centre third and defending third. All positions have specific areas they can move around in.

Passing
There are various passes you can use in netball depending on the situation.

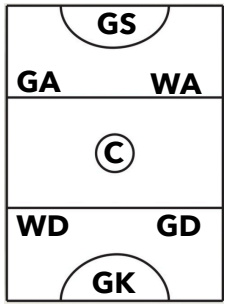
Chest Pass
1. Hands in W shape behind the ball.
2. Hold in front of the chest.
3. Step in the direction of the pass.
4. Flick wrists and extend your arms until they are fully extended.

Bounce Pass
1. Hands in W shape behind the ball.
2. Hold in front of the chest.
3. Perform chest pass and aim the ball to bounce ¾ towards your teammate.

Overhead Pass
1. Hold the ball above the forehead.
2. Balanced stance, feet shoulder width apart.
3. extend arms towards the target and release the ball.

Positions

There are 7 players on a netball team with each player having a starting position, somewhere they need to stand on a centre pass. Each player can then move into different areas depending on their position.



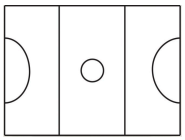
Defending Positions

- Goal Keeper- Allowed in the defensive goal third and shooting circle
- Goal Defence - allowed in the centre third, defensive third and defending shooting circle.
- Wing Defence - allowed in the centre third, defending third but not the shooting circle.

Attacking Positions

- Goal Shooter - Allowed in the attacking third and the goal circle only.
- Goal Attack - Allowed in the centre third, attacking third and goal circle.
- Wing Attack - Allowed in the centre third and attacking third.
- Centre - is both attacking and defending depending on the direction of the ball, however this player can go everywhere except the goal circles.

The three areas on the court



- Attacking third
- Centre Third
- Defending third

Footwork

Footwork is when a player is breaking the rules of no movement with the ball.

Landing foot

- Both feet or one foot must be grounded when landing.
- If you landed on a single foot that must not move
- If you land 2 feet you can decide which foot to move.

Pivoting

Non landing foot (pivot foot).

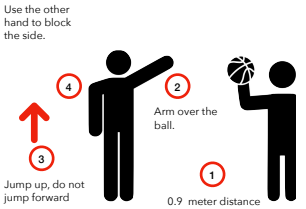
- The landing foot must remain where is first landed
- You can move the second foot which you did not land on
- This is called a pivot foot, you can rotate around in a circle using this foot to push off from.

What happens if you break the footwork rule?

A free pass is awarded to the opposition. The umpire will blow the whistle when the foot is fully on the ground.

Obstruction/Contact

Obstruction is a offence in Netball. You can cause this offence by contacting an opponent, accidentally or deliberately to interfere with the play of the opponent.



You must be no closer than 0.9 meters, if you jump forwards into the player you will cause obstruction. However you can jump up to block the ball.

Rules

Repossession/Replaying

Repossession is when you accidentally or deliberately drop/bounce the ball and pick it up again. The umpire will blow the whistle when this fault occurs and award the other team with the ball.

3 second Rule

3 second rule. Players can not hold the ball for more than 3 seconds. The umpire will award a free pass to the other team for a held ball.

HOMEWORK | SUPPORT | UNDERSTANDING

These questions, key terms and links can all be used for homework/home learning on this topic

Key Questions

1. What are the different type of contacts in netball?
2. What does construction mean?
3. Explain the rules of marking a player.
4. Can you name the positions in Netball?
5. Can you label the three areas of the court?
6. Can you label the starting positions?
7. Which thirds/semi circles can the positions move into?
8. How do you start the game?
9. Can you describe what footwork means in netball?
10. What happens if you break the footwork rule?
11. If you land 2 feet on the ground which foot can you move?
12. What is pivoting?
13. What are the benefits of pivoting in a game?
14. What is the distance you must stand away when marking a player?
15. What happens when you cause obstruction or contact?
16. What is the difference between contact and obstruction?
17.. How is the game restarted if the footwork rule is broken?

Key Terms

Footwork - *noun*
an act of moving with the ball, for which a penalty pass is awarded.

Third- *noun*
An area divided into three is known as a third.

Pivot *noun*
he central point, pin, or shaft on which a mechanism turns or oscillates.

Defending - *noun*
to take a reactive approach rather than a proactive one. This is to eventually prevent the other team from scoring.

Attacking - *noun*
Engaging an opposing team with the objective of scoring points or goals.

Obstruction - *noun*
Impedes or prevents passage or progress; an obstacle or blockage.

Contact - *noun*
The state of physical touching.

Youtube Links

Defending LINK

Attacking LINK

Pivot LINK

Over a third LINK

Obstruction LINK

Contact LINK

Passing LINK

The Court LINK

Rules Overview LINK

KS3 | RUGBY BASIC RULES & SKILLS

Big picture: To develop knowledge and understanding of the basic rules and skills in rugby

Basic Rules

Objective of rugby
The object of the game is score more points than your opponents in the 80 minute time frame allotted for each rugby match.

Knock ons
If the ball is dropped or deflected forward by a player from their hands, this is classed as a knock on.

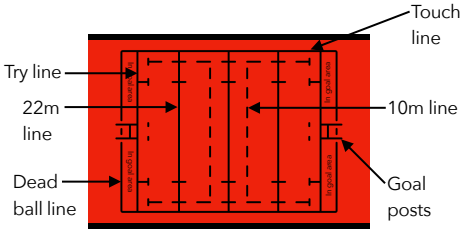
Offside
Attacking players must be behind the ball to stay remain onside in rugby.

Lineout
A lineout is called if the ball travels past the sideline ('in touch).

Rucking
After a tackle, the players can form a ruck to gain possession of the ball. This is where the tackled player presents after a tackle, while the players from both teams contests the ball on their feet.

A try
Teams can score a try by grounding the ball in the defending 'in goal area'. The player who grounds the ball must have it under control.

The pitch

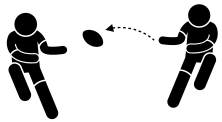


Passing in Rugby

Passing
A player must pass the ball backwards or inline/straight.

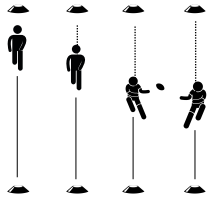
Basic/Lateral Pass
The basic/lateral pass allows players to pass the ball over a range of distance.

Players must be accurate with a pass for it to be successful. The must aim for their teammates chest, who should have their hands in the ready position. The weight and height of the pass is also important. Here are some teaching points to a pass.



- Ball in both hands
- Swing the arms
- Flick fingers and wrists
- Point towards the target.

Improve passing
To improve any skills you will need to practice. A good drill to improve your passing as a group is the 4 man line drill ('Passing along the line').



- Ball backwards or to the side
- Swing the arms
- Hands up to receive
- Last person pops to next 4.
- Players win fro depth
- This rill replicates a back line.

Other passes in rugby

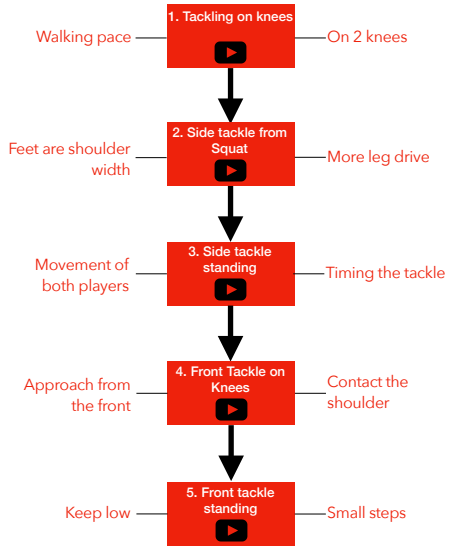
- Pop pass
- Switch pass
- Loop pass
- Miss pass
- Miss pass behind
- Miss pass infront
- Miss pass with loop
- Switch pass with dummy

Tackling in Rugby

The Tackle
A tackle cannot be made above shoulder height or by tripping a player with your feet. Once a tackle is made the player must let go of the ball. Below are the key teaching points.

- Stay low
- Eyes on thighs
- Head behind
- Squeeze the knees
- Land on top.

There are many steps to tackling safely improve your tackling technique both in isolation and in a game. Here's a sequence of drills to improve:



Rucks and Scrums

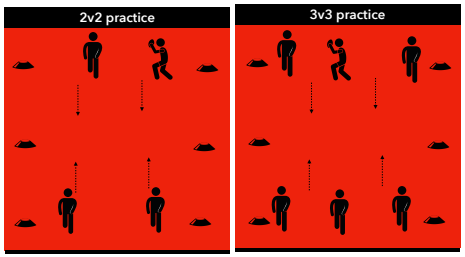
Rucking
A ruck occurs after a tackle when the ball is on the ground and players from either side make contact. It is a technique used to get or keep possession of the ball after a player has been tackled. Here are some points when performing a ruck:

- Place the ball on the
- floorDrive over the ball player
- Leave the ball on the ground
- Keep driving to obtain ball.

The scrum (scrummaging)
The scrum is used to restart play after a number of rule breaks, including; knock ons, accidental offside or the ball being passed forwards.

- Keep the spine straight
- Elbows in
- Hips inline with shoulders.

Linking skills



These mini games/practices will help players improve and link skills in rugby. There are many skills that can be demonstrated in these drills including, **running with the ball, tackling, passing, receiving, communication, rucking, scrummaging** and more.

HOMEWORK | SUPPORT | UNDERSTANDING

These questions, key terms and links can all be used for homework/ home learning on this topic

Key Questions

1. What is the object of the game of rugby?
2. When does a knock on occur?
3. When does a lineout occur?
4. What is the objective of a ruck?
5. How can a try be scored by a player?
6. Draw a rugby pitch with the markings.
7. What are the rules with passing the ball?
8. Can you name all the different passing techniques?
9. Why is a lateral/basic pass important?
10. What are the teaching points of a basic/lateral pass?
11. What drill can improve your passing?
12. What are the rules with tackling?
13. What are the teaching points of the tackle?
14. What are the progressions to improve tackling technique?
15. What the key points to consider when tackling front on?
16. When does a ruck occur?
17. What are the key points when rucking?
18. When does a scrum occur?
19. What are the key points during a scrum?
20. What skills can be linked in rugby?

Key Terms

Objective - *noun*
a thing aimed at or sought; a goal.

Knock on - *noun*
an act of knocking on, for which a penalty or scrum is awarded to the opposition.

Offside - *noun*
An act of gaining an advantage from being too far forward.

Line-out - *noun*
a formation of parallel lines of opposing forwards at right angles to the touchline when the ball is thrown in.

Ruck - *noun*
a loose scrum formed around a player with the ball on the ground.

A try - *noun*
an act of touching the ball down behind the opposing goal line, scoring points and entitling the scoring side to a kick at goal.

Goal line - *noun*
a line across a rugby field at or near its end, on which the goal is placed or which acts as the boundary beyond which a try or touchdown is scored.

Dead-ball line– *noun*
a line behind the goal line, beyond which the ball is out of play.

Lateral - *noun*
a pass thrown either sideways or back.

Depth - *noun*
the distance from the front to the back of something

A scrum - *noun*
an ordered formation of players, used to restart play, in which the forwards of a team form up with arms interlocked and heads down, and push forward against a similar group from the opposing side. The ball is thrown into the scrum and the players try to gain possession of it by kicking it backwards towards their own side.

Drive - *verb*
propel or carry along by force in a specified direction.

Spine - *noun*
a series of vertebrae extending from the skull to the small of the back, enclosing the spinal cord and providing support for the thorax and abdomen; the backbone.

Communication - *noun*
the imparting or exchanging of information by speaking, writing, or using some other medium.

Youtube Links

The Rules of Rugby Union - EXPLAINED! - Ninh Ly
https://youtu.be/smnuRhNtT2E

Improve your passing - Rugby Drills - Teach PE
https://youtu.be/rjiR9tjs8Oo

Basic Rugby Drills - Line drill - Teach PE
https://youtu.be/UJ6qGlE-bUc

Rugby Drills - Pass & Pop - Teach PE
https://youtu.be/bai9GBSPia8

Basic Rugby Drills - The Switch - Teach PE
https://youtu.be/K7YbeVJebA4

Basic Rugby Drills - The Single Loop Switch - Teach PE
https://youtu.be/wP0a_NrnDsM

Rugby Drill - Passing - Miss Pass - Teach PE
https://youtu.be/aIhIIfoZfCo

Basic Rugby Drills - Miss pass - Behind - Teach PE
https://youtu.be/ltRohl8dE8A

Basic Rugby Drills - Basic Miss Pass - Infront - Teach PE
https://youtu.be/8H37iaJVJps

Rugby Drills - Switch - Miss Loop - Teach PE
https://youtu.be/O8z2C3BrXss

Basic Rugby Drills - The Switch - Dummy - Teach PE
https://youtu.be/8H37iaJVJps

Side on tackle - 2 knee tackle - Teach PE
https://youtu.be/xbxl38vyhb8

Side tackle progression - From the Squat position - Teach PE
https://youtu.be/uqVRonBXiVE

Side on Tackle - Teach PE
https://youtu.be/KEBMnJA62SA

Rugby Drill - Tackling from 1 knee - Teach PE
https://youtu.be/PUNOEb0sg4I

Basic Rugby Skills - The Front on Tackle - Teach PE
https://youtu.be/HU_rglxiFQo

Rugby Drills - Rucking Drill 1 - Teach PE
https://youtu.be/afJM6pd_ESw

Rugby Drills - Scrum - Front Row - Teach PE
https://youtu.be/b5B5jJzMGGk

KS3 | BADMINTON BASIC RULES & SKILLS

Big picture: To develop knowledge and understanding of the basic rules in badminton

Basic Rules

Objective of badminton
Badminton is a recreational and competitive game played in singles (two opposing players) and doubles (two opposing pairs) formats. The aim of the game is to win points by hitting a shuttlecock across the net and into your opponent's court forcing your opponent to make an error and be unable to return the shuttlecock back.

Scoring
In badminton, points are scored regardless of who is serving. Players must serve the shuttlecock over the net so that it lands on the correct side of the opponent's court. Once the serve has crossed the net (without hitting the net), the opposition must select the most appropriate shot to return the shuttlecock. To win a point, an individual must play a shot that allows the shuttlecock to either hit the floor of their opponent's court or force their opposition to either not return the shuttlecock or land it out of bounds.

Serving
At the start of the rally, the server and receiver stand in diagonally opposite service courts. A legal serve must be hit diagonally over the net and across the court. The rules do not allow second serves.

Open play
During a point a player can return the shuttlecock from inside and outside of the court. A player is not able to touch the net with any part of their body or racket. A player must not deliberately distract their opponent. A player is not able to hit the shuttlecock twice. A 'let' may be called by the referee if an unforeseen or accidental issue arises.

Lets
No one is sure whether the shuttle landed *in* or *out*. During the rally, a shuttle from another court was hit onto your court. The receiver wasn't ready for the serve, and asks for it to be played again.

Singles/Doubles

Singles vs Doubles play
There are many similarities and differences between singles and doubles.

Differences

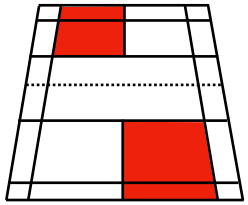
Singles
- 2 players on the court
- Service (back lines)
- Open play (no side lines)

Doubles
- 4 players on the court
- Service (back lines)
- Open play (all in)

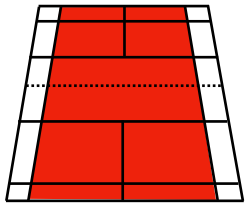
Similarities
- Played to 21 points
- Equipment
- Behind the service line
- Hitting the shuttle once

Singles

During serve

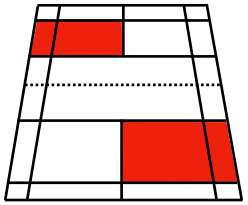


After serve

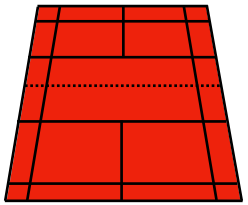


Doubles

During serve

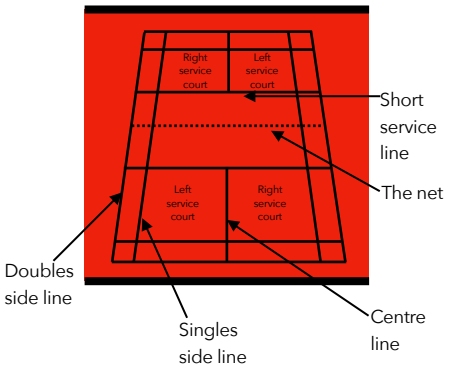


After serve



The court

The court markings
Here is a labelled image of the court markings:



Basic Skills

Basic grip and stance
The correct way of holding a racquet is as simple as a friendly handshake. Imagine the grip of the racquet as a hand approaching to shake your hand. Go ahead and hold the racquet as if you're shaking someone's hand. Use ONLY your thumb, index, and middle finger to control the racket.

The stance in badminton
- Stay on the balls of your feet
- Knees slightly flexed
- Racket up

Eyes on the shuttle

The serve
The badminton serve is the shot selected to begin the point. The serve must be hit from behind the service line and travel diagonally from one side of the court into the opposite service box.

How to perform the basic serve
- Feet in a comfortable L shape position
- Pinch the shuttle with fingers
- Racket back
- Keep your eyes on the shuttle and release
- Contact the shuttle below your waistline
- Follow through, pointing the racket to the target.

The overhead clear
The forehand clear shot enables players to move their opponent to the back of the court. This will create space in the mid and front court to exploit and provide time for the player to return to their base position.

The forehand clear
- Feet in a comfortable L shape position
- Pinch the shuttle with fingers
- Racket back
- Keep your eyes on the shuttle and release
- Contact the shuttle below your waistline
- Follow through, pointing the racket to the target.

HOMEWORK | SUPPORT | UNDERSTANDING

These questions, key terms and links can all be used for homework/ home learning on this topic

Key Questions

1. What is the objective of the game of badminton?
2. Describe how the scoring system works in badminton.
3. What is a serve?
4. Explain the deference between singles serve and doubles serve.
5. Describe what is a rally?
6. Describe what a let is.
7. How do you hold the racket correctly?
8. What is the correct stance in badminton?
9. Describe the process for the serve.
10. What is the overhead clear?
11. Where should the overhead clear land?
12. Describe the similarities between singles and doubles.
13. Describe the differences between singles and doubles.
14. Describe the steps of how do you set up the court?
15. Why are umpires important in badminton?

Key Terms

Objective - *noun*
a thing aimed at or sought; a goal.

Scoring - *verb*
to make or cause to make a point or points in a game.

Rally - *noun*
A series of shots between opposing players, starting with a serve and ending when the point is won.

Let - *noun*
when a point has been interrupted in some way.

Stance - *noun*
the way in which someone stands, especially when deliberately adopted (as in cricket, golf, and other sports)

Overhead clear - *noun*
A defensive shot that allows a player time to recover by forcing their opponent to move and increasing the amount of time the birdie is in the air.

Youtube Links

The Rules of Badminton - EXPLAINED! - Ninh Ly
https://youtu.be/UyLli-TbcFc

The Low Forehand Serve- Sikana
https://www.youtube.com/watch?v=oQuVFhnYHtI

The Grip -
https://www.youtube.com/watch?v=toQ7tOx7Tvs

The Forehand Overhead Clear
https://www.youtube.com/watch?v=S2brZPqx288

Badminton Court Set Up
https://www.youtube.com/watch?v=kyCCTpWXF4g

Singles and Doubles Rules
https://www.youtube.com/watch?v=yaeFQ8lxR9M

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Music Knowledge Organiser
Year 7: Tempo and Dynamics

A. Tempo

Lento	Largo	Adagio	Andante	Moderato	Allegretto	Allegro	Vivace	Presto
Slow	Slow and broad	Leisurely and quite slow	At a walking pace	Moderately	Fairly Fast (not as fast as Allegro)	Fast	Lively and Brisk	Very Fast
								

Accelerando *(accel.)* Gradually getting Faster

Rallentando *(rall.)* or **Ritardando *(rit.)*** Gradually getting Slower

B. Dynamics

Pianissimo	Piano	Mezzo Piano	Mezzo Forte	Forte	Fortissimo
Very Soft	Soft	Moderately Soft	Moderately Loud	Loud	Very Loud
pp	***p***	***mp***	***mf***	***f***	***ff***

Crescendo *(cresc.)* Gradually getting Louder

Diminuendo *(dim.)* or **Decrescendo *(decresc.)*** Gradually getting Softer

Music Knowledge Organiser
Year 7 : Tempo and Dynamics

LISTENING TASKS

Listen to the following pieces of music and write a short paragraph to describe the tempo and dynamics. How does the tempo start? How do the dynamics start? Do these change?
'Night on Bare Mountain' by Mussorgsky, 'The Sorcerer's Apprentice' by Paul Dukas and 'In the Hall of the Mountain King' by Edvard Greig.
Sentence structures:
At the beginning the tempo is…..
There is an accelerando/there is a rallentando.
At the beginning the dynamics are….
The dynamics crescendo/the dynamics diminuendo.

TEMPO

In your reflection log, draw a row of nine boxes and write down the correct order of tempo, from slowest to faster.

								

DYNAMICS

In your reflection log, draw a row of six boxes and write down the correct order of dynamics, from quietest to loudest.

VOCABULARY

Learn the spelling of key words by using the look, cover, write, check method.

TEMPO LENTO LARGO ADAGIO ANDANTE MODERATO ALLEGRETTO ALLEGRO VIVACE PRESTO

DYNAMICS PIANISSIMO PIANO MEZZO FORTE FORTE FORTISSIMO CRESCENDO DIMINUENDO DECRESCENDO

Year 7 Textiles Knowledge Organiser
Term 1.1 Equipment and safety.

Equipment

Shears	These are used for cutting out fabric. The blades are smooth and very sharp.
Tape measure	This is used to measure fabric and the body accurately.
Pins	These are made from steel, are pointed and may have a plastic or steel head. They are used for holding fabric together before it is stitched.
Stitch unpicker	These undo stitches and are sometimes also called a quick unpick or seam ripper.
Needle	They have an eye, a stem and a point and are made of nickel plated steel and are used with thread to sew fabrics together.
Thimble	They are made from steel, brass or plastic and are used to protect the sewer's finger or thumb. They make sewing easier and quicker.
Pinking shears	These have a zigzag edge. They produce a decorative and attractive edge to fabrics which can stop fabrics from fraying.
Pin cushion	These are used for storing pins or needles.
Tailors chalk	This is used for marking out fabric. It can be easily rubbed off.

Safety in the textiles room.

- Tie back long hair
- Keep bags out of the way
- Carry scissors correctly
- One person on a sewing machine
- Keep room and workspace tidy
- Tuck in ties

KEY VOCABULARY/ TERMS

Equipment, design task/brief, mood board, felt, embroidery thread, stitch, fibre, fabric, task analysis, design ideas, design solution, annotate, evaluate.

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Year 7 Term 1:1 Textiles Knowledge Organiser

FCAT
The best we can be

Copy and complete the chart below to show off your knowledge of textiles equipment

Equipment	Drawing	Used for
Needle		
Pins		
Embroidery scissors		
Thimble		
Stitch unpicker		
Thread		
Pinking shears		
Tape measure		

Safety in the textiles room.

Using some of the rules listed over the page, design a safety poster which could be displayed in the textiles area.

KEY VOCABULARY/ TERMS
Learn the spelling of each word and look up any you do not know.

Equipment	Design task/brief	Mood board	Felt
Embroidery	Thread	Stitch	Fibre
Fabric	Task analysis	Design ideas	Design solution
Annotate	Evaluate	Scissors	Research

Year 7 Food Knowledge Organiser
Term 1.1

Cleaning

Cleaning the kitchen is important to keep food safe
and prevent bacteria from spreading.

'Clean as you go' means people make sure that they clean the area and utensils they have been working in or with, as they prepare food.

This avoids build up of mess and leads to better hygienic conditions.

Cooking

Food should be cooked to a core temperature of 75ºC to destroy bacteria

Hot food must be served piping hot, above 63ºC.

Some foods change colour when they are cooked.

Food Hygiene

Food hygiene is necessary in order to prepare and cook food which is safe to eat. This involves more than just being clean. A simple way to remember is the 4 C's:

- Cleaning;
- Cooking;
- Chilling;
- Cross contamination.

Chilling

The bacteria that cause food to deteriorate and food poisoning rapidly reproduce around the temperature of 37ºC (body temperature).

The temperature between 5ºC– 63ºC is sometimes called the 'danger-zone'.

Reducing the temperature below 5ºC slows the reproduction of micro – organisms

Cross contamination

The process by which bacteria are transferred from one area to another.

The main carriers of bacteria and causes of cross contamination are:

- humans;
- rubbish;
- pets and other animals;
- food, e.g. raw meat or poultry.

KEY VOCABULARY/ TERMS

Cross contamination, bacteria, hygiene, hygienic, chilling, danger zone, micro organism, cleanliness.

Clean hands. Hair tied back. Wear an apron. Wear blue plasters. Don't cough/sneeze over food. Use the bridge and claw methods for cutting/chopping.

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Year 7 Food Knowledge Organiser

Use the information to answer the questions in your reflection log. Use full sentences.

1. Why is food hygiene important when preparing food?
2. What does 'Clean as you go' mean?
3. What temperature should food be cooked too?
4. What aspect of the food can change when it is cooked?
5. What temperature allows food poisoning bacteria to multiply rapidly?
6. What is the 'danger zone'?
7. What are the main carriers of bacteria?

Design task: Produce a poster to show safety and / or hygiene rules for the food classroom

KEY VOCABULARY/ TERMS
Learn the spelling of each word and look up any you do not know.

Cross contamination	Bacteria	Hygiene	Hygienic
Chilling	Danger zone	Micro organism	Cleanliness

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ART Knowledge Organiser
Year 7 : Term 1:1

FCAT
The best we can be

ARTIST – RUTH PIPER

Relevant dates

Born 1967

Artist information

A visual artist who studied a BA Fashion & Textiles degree at Kingston Polytechnic and an MA in Painting at Wimbledon School of Art, London. She works with water based paints such as acrylic and watercolour, incorporating both realistic and abstract images. She is influenced by the real world, such as landscapes.

Description of work

Ruth Piper's bright geometric paintings show a strong use of form and colour – she uses bold, flat, over-layered colours, and geometric hard edged shapes. Her works give the impression of looking at a map.

WORK EXAMPLE

KEY VOCABULARY

Pattern – A repeated decorative design.
Collage – A picture made by sticking cloth, pieces of paper, photographs and other items onto a surface.
Shading – A darkened area in a picture.

ASSESSMENT CRITERIA

Competence - How you complete and improve your work using the project activities.

Critical Understanding - How you have used the ideas of artists to develop your own work.

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ART Knowledge Organiser
Year 7 : Term 1:1

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Write 3 relevant facts about the artist
1.
2.
3.

Write the definitions for these words
Pattern –
Collage –
Shading -

Write about your likes/dislikes of the artist's work
Likes: Dislikes:

Copy part of the picture in your book

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