KING'S LYNN ACADEMY

KNOWLEDGE ORGANISER

Year 8 Term 2 2025-26

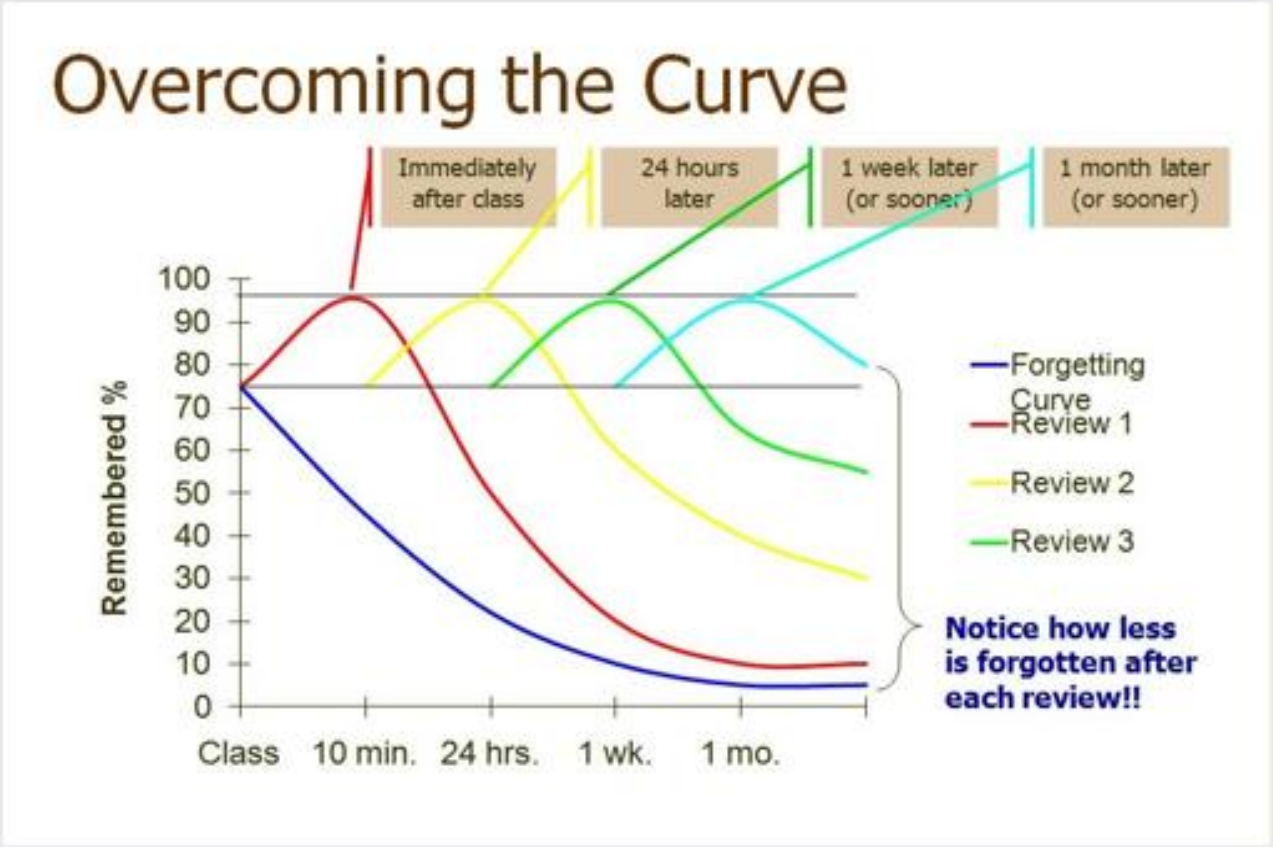
Name:

Home Learning

At KLA, we deem it is important to set about making excellent progress in your child's learning by reinforcing crucial knowledge beyond the classroom. To help structure this important aspect of their learning pupils have access to Knowledge Organisers for all subject areas. The Knowledge Organisers will help your son/daughter to learn a wide range of knowledge to prepare them for lessons, low/high stake assessments and GCSE public examinations, and the world of work when used appropriately, consistently and in structured time. Knowledge Organisers encourage pupils to be independent when developing knowledge. Each half term pupils will receive a booklet, which comprises of Knowledge Organisers and the Journey for all subjects in the curriculum. Moreover, this booklet is available on the school website and emailed to parents.

Why Knowledge Organisers?

The GCSE specifications have a greater focus on application, reasoning and evaluation skills. This leaves less time in class to focus on 'the bits they just have to know'. If knowledge retention is improved, this will have a positive impact on levels of attainment and achievement.



Decay theory states that if learning is not used, revisited or rehearsed it simply fades away.

How to use your Knowledge Organiser

To get the most out of the Knowledge Organisers, your son/daughter should be learning sections and then testing themselves.

Self - Help Apps

Mind Shift

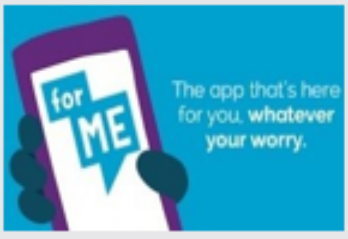
The **Mind Shift** app helps you learn how to relax, to develop more helpful ways of thinking, and identify active steps that will help you take charge of your anxiety. This app includes strategies to deal with everyday anxiety, as well as specific tools to tackle:
Test Anxiety, Perfectionism, Social Anxiety, Performance Anxiety, Worry, Panic and Conflict

Headspace

Headspace teaches you the basics of meditation and mindfulness. As well as guid- ed meditation courses and guides exercises. As well as animations, articles and vid- eos, all in the distinct Headspace style.

You can try Headspace for yourself and learn the essentials of meditation and mindfulness with their free Basics course

For Me



For Me is an app/website designed by ChildLine to support young people up to the age of 19. The app covers many issues, including self-harm, anxiety, bullying and body image.

Calmharm

CALM HARM

Calmharm provides tasks that help you resist or manage the urge to self-harm.

Learn to ride the wave with the free Calm Harm app using these activities:
Comfort, **Distract**, **Express Yourself**, **Release**, **Random** and **Breathe**.

Distract: helps to combat the urge by learning self control
Comfort: helps to care rather than harm
Express Yourself: helps get feelings out in a different way

MyLife

kooth

KOOTH is a free, anonymous, confidential, safe, online wellbeing service offering counselling, information and forums for young people.

KOOTH offers access to counsellors 365 days per year 12.00 – 22.00 Monday – Friday 18.00 – 22.00 Saturday and Sunday.

www.kooth.com

Subject Contents

KING'S LYNN ACADEMY

Are you concerned about yourself or someone else?

Report your concerns to the Safeguarding Team

Mrs Goldup, Ms Griffiths-Pugh, Mrs Roberts, Mrs Germaney & Mrs Webber

kla.safeguarding@kla.eastern-mat.co.uk

Your future starts here...

Year 8 English

KING'S LYNN ACADEMY

End of Year 8 exam

Creative writing: **poetry**

Analytical writing: **building an essay**

Study of poetry: **relationships**

Class reading: **reading for pleasure**

Analytical writing: **personification & alliteration**

Context: **Shakespeare's tragedies**

Analytical writing: **tentative language**

Study of the play: **Romeo and Juliet**

Term 3

Analytical writing: **sequencing ideas**

Context: **Orwell's intentions**

Class reading: **reading for pleasure**

Analytical writing: **embedding quotations**

Creative writing: **persuasive speech**

Analytical writing: **symbolism**

Context: **the Russian Revolution**

Analytical writing: **introductions**

Term 2

Study of the novel: **Animal Farm**

Class reading: **reading for pleasure**

Analytical writing: **alternative interpretations**

Creative writing: **descriptive & narrative**

Analytical writing: **writer's methods**

Context: **the detective genre**

Analytical writing: **detailed topic sentences**

Study of short stories: **Sherlock Holmes**

Term 1

Welcome to KLA, your journey starts here!

Year 8 – Term 1: Sherlock Holmes, by Arthur Conan Doyle

Key Vocabulary

Word:	Definition:
Periodical	A magazine published at regular intervals (such as weekly) containing articles, cartoons and advertisements.
Sidekick	Someone who works as someone's assistant, with a lower status than them.
Consultant	A professional who provides expert advice or services in a specific field to individuals or organisations.
Observe	Not just to notice but to consciously register something you have seen.
Deduction	1. A calculation: to take away. 2. Learning something or working it out by considering the facts.
Scandal	An action that causes public outrage because it is morally or legally wrong.
Compromising	To be caught in a difficult or awkward situation which may result in a scandal.
Irony	An expression of opinion or a situation which is contrary (opposite) to that which is expected.
Patriarchy	Society organised around male leadership; men are in charge and make all laws, whilst women are subservient.
Dual-natured	A two-sided personality. For example: sometimes Sherlock Holmes is introspective, whilst at others, he is dynamic.
Introspective	Being in a thoughtful, calm and reflective state of mind.
Meticulous	Showing great attention to detail; very careful and precise.
Aristocracy	The highest class in certain societies, typically made up of people of noble birth who hold hereditary titles.
Genre	A style or category of art, music or literature.
Convention	A feature that is common in texts belonging to a specific genre.
Pathetic Fallacy	A literary device where human characteristics are applied to inanimate objects, nature or animals.
Red-herring	A clue or piece of information that is intended to be misleading or distracting.
Scrutiny	Critical observation or examination.
Denouement	The final part of a narrative in which the strands of the plot are drawn together and matters are explained or resolved.
Resolution	The part of the plot where the main conflict is resolved and the story concludes.

Year 8 – Term 1: Sherlock Holmes, by Arthur Conan Doyle

Key Knowledge

Context:	
Writer's Background	Born in Scotland and educated in England and Austria, Doyle trained to become a doctor at the University of Edinburgh. Whilst studying, he began to write short stories. He is most famous for his novels and short stories about Sherlock Holmes. His first work featuring Sherlock Holmes, A Study in Scarlet, was written when he was 27. It was published in1886. Later stories were published in the Strand magazine.
The Victorian Era	The Victorian Era was a period of great change in Britain. Many people flocked to big cities during this time of mass production, known as the Industrial Revolution. As well as many great inventions and achievements from this time-period, there was also a rise in overcrowding, leading to disease and increased crime rates.
The Detective Genre	The detective genre, or detective fiction, is a category of stories that focuses on the investigation and solution of mysteries, often crimes. It typically features a detective, who may be professional, amateur, or retired, solving crimes like murder. The core of the genre involves detectives using logical reasoning, observation, and deduction to unravel mysteries.

Analytical Writing: TEAL Paragraphs	
Topic Sentence	A statement of your view, written in response to the question.
Evidence	A quotation from the text which supports your topic sentence.
Analysis	Identifying the words and methods used by the writer & explaining their effects.
Link to Context	Making connections between your point to the writer, social context or genre.

Descriptive/Story Writing: Our Process	
Vocab	Acquiring the best, most precise & suitable words to express your ideas.
Planning	Unfiltered thinking of ideas, which you can then select and sequence.
Writing	Expressing your planned ideas in full sentences and paragraphs.
Editing	Inspecting and improving your work.

Characters:	
Sherlock Holmes	A fictional consulting detective created by Arthur Conan Doyle. He is known for his intelligence, introspection and dual nature. He is described as an 'observing machine' because of his ability to capture the essence of people with seemingly very little evidence.
Dr Watson	Holmes' former flatmate, a doctor and his closest companion. The stories are told from his perspective, working as Holmes' assistant.
Irene Adler	A famous American opera singer who had a relationship with the future King of Bohemia. To Holmes, she is '*the* woman' who outsmarted him.
King of Bohemia	Bohemia was an area of central Europe; today it is a region of the Czech Republic. The King is engaged to a Scandinavian princess but shares a romantic history with Irene Adler.
Dr Grimesby Roylott	A medical doctor who worked for many years in the British colony of India. He can be violent and is rumoured to have killed his butler. He collects exotic Indian animals, including cheetahs and baboons.
Helen Stoner	Helen's sister was mysteriously killed two years prior to the start of the story. Helen suspects that her stepfather, Dr. Grimesby Roylott, was involved and she employs Holmes to investigate.

Year 8 – Term 2: Animal Farm, by George Orwell

Key Vocabulary

Word:	Definition:
Allegory	A story with two meanings: a literal one (what actually happens) and a deep meaning (moral).
Corruption	Illegal, bad or dishonest behaviour, especially by people in positions of power.
Cult of personality	A situation where a public figure is presented to the people of a country as a great person who should be loved.
Democracy	A form of government in which the people choose representatives to make decisions, policies and laws.
Efficient	1. Working in a well-organised way. 2. Able to produce results with little/no waste.
Harvest	1. The act or process of gathering in a crop. 2. The season for gathering crops.
Inferior	1. Of little or less importance/value/merit. 2. Of low or lower degree or rank.
Moral	A message about how people should or should not behave. Stories with a moral teach the reader a lesson.
Opposition	A strong disagreement, often by speaking or fighting against it, or (in politics) the people who are not in power.
Propaganda	Information, ideas, opinions or images that only show one part of an argument, used to influence people's opinions.
Rebellion	Violent action organised by a group of people who are trying to change the political system in their country.
Revolution	A change in the way a country is governed, usually to a different political system and often using violence or war.
Rhetoric	Speech or writing intended to be effective and influence people.
Rival	A person or group competing with others for the same thing or in the same area.
Satire	A way of criticising people or ideas in a humorous way, especially to make a political point.
Superior	Better than average or better than other people/things.
Totalitarian	A person in power who has complete control and does not allow people freedom to oppose them.
Treacherous	1. Extremely dangerous. 2. A person who deceives someone who trusts them, or has no loyalty.
Tyrant	Someone who has total power and uses it in a cruel or unfair way.
Unequal	1. Different in size, level or amount. 2. Not treating everyone the same; unfair.

Year 8 – Term 2: Animal Farm, by George Orwell

Key Knowledge

Context:	
Writer's Background	Eric Blair was born in India in 1903, moving back to England when he was one year old and attending boarding schools through his childhood. He was passionate about how unfair life was for poor and ordinary working people, so he used the pen name George Orwell to challenge authority and campaign for equal opportunities, regardless of background.
The Russian Revolution	The people of Russia wanted to rebel against their leaders because they were treated like slaves. Instead, many wanted a communist society where everyone was equal. The Russian Revolution was led by Lenin in 1917. After he died, Russia was led by Stalin and Trotsky. Most Russians were no better off after the Revolution: they still had no freedom nor were they allowed to speak their minds, so nothing changed for them.
Allegory	'Animal Farm' is an allegory with two meanings: it is a literal story about a farm where animals take control, but there is a deeper, moral meaning. Orwell wanted to criticise the cruel leaders in Europe at the time of World War II. In the story, he warns against a totalitarian regime and the corruption of power.

Analytical Writing: TEAL Paragraphs	
Topic Sentence	A statement of your view, written in response to the question.
Evidence	A quotation from the text which supports your topic sentence.
Analysis	Identifying the words and methods used by the writer & explaining their effects.
Link to Context	Making connections between your point to the writer, social context or genre.

Argument Writing: Our Process	
Vocab	Acquiring the best, most precise & suitable words to express your ideas.
Planning	Unfiltered thinking of ideas, which you can then select and sequence.
Writing	Expressing your planned ideas in full sentences and paragraphs.
Editing	Inspecting and improving your work.

Characters:	
Old Major	Old Major is the prize-winning boar who inspired the Rebellion, describing an ideal world to the other animals. He dies, leaving Snowball and Napoleon in charge.
Napoleon	Napoleon is a large, fierce boar. He becomes the leader after the Rebellion. He uses force (the dogs) to intimidate others and stay in control.
Snowball	Snowball is an intelligent pig who challenges Napoleon for control of Animal Farm. He seems to win the loyalty of other animals and organises the Animal Committees.
Squealer	Squealer is a well-known pig. He is a brilliant talker. He is very persuasive – he can convince the animals of anything. He spreads Napoleon's propaganda.
Mr Jones	Mr Jones is the farmer who is often drunk and unkind to the animals, neglecting them while looking after himself. He is thrown off the farm by the animals.
Boxer	Boxer is the cart-horse who is incredibly strong and loyal. He isn't as intelligent as the other animals but is devoted to the farm and the pigs.
Benjamin	Benjamin is an old donkey who refuses to be inspired by the Rebellion. He believes life will always be unpleasant, no matter who is in charge. He sees the problems the pigs create.

Year 8 – Term 3: Romeo and Juliet & Poetry

Key Vocabulary

Word:	Definition:

Year 8 – Term 3: Romeo and Juliet & Poetry

Key Knowledge

Context:	
Writer's Background	
The Elizabethan Era	
Tragedy Genre	

Analytical Writing: TEAL Paragraphs	
Topic Sentence	A statement of your view, written in response to the question.
Evidence	A quotation from the text which supports your topic sentence.
Analysis	Identifying the words and methods used by the writer & explaining their effects.
Link to Context	Making connections between your point to the writer, social context or genre.

Poetry Writing: Our Process	
Vocab	Acquiring the best, most precise & suitable words to express your ideas.
Planning	Unfiltered thinking of ideas, which you can then select and sequence.
Writing	Expressing your planned ideas in full sentences and paragraphs.
Editing	Inspecting and improving your work.

Characters:	

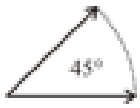
Your Future starts here

Year 8

KING'S LYNN ACADEMY

End of Year Exam

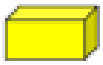
The data handling cycle



Measures of location

Line symmetry & reflection

Angles in parallel lines & polygons



Area of trapezia & circles

Term 3

Number sense

Fractions & percentages

Standard index form

Indices

Sequences

Mid Term Exam

Term 2

Brackets, equations & Inequalities

Tables & probability

Representing data

Working in the Cartesian plane

Multiplicative change

Multiplying & dividing fractions

Welcome to KLA your Journey starts here

Ratio & Scale

Term 1

YEAR 8 - ALGEBRAIC TECHNIQUES...

@whisto_maths

Brackets, Equations & Inequalities

What do I need to be able to do?

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

- Form Expressions
- Expand and factorise single brackets
- Form and solve equations
- Solve equations with brackets
- Represent inequalities
- Form and solve inequalities

Keywords

Simplify: grouping and combining similar terms
Substitute: replace a variable with a numerical value
Equivalent: something of equal value
Coefficient: a number used to multiply a variable
Product: multiply terms
Highest Common Factor (HCF): the biggest factor (or number that multiples to give a term)
Inequality: an inequality compares who values showing if one is greater than, less than or equal to another

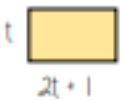
Form expressions

For unknown variables, a letter is normally used in its place

More than – **ADD**
Less than/ difference – **SUBTRACT**

e.g. 4 more than t → **t + 4**
8 less than k → **k - 8**

Only similar terms can be grouped together



e.g. Find the perimeter of this shape
(Perimeter = length around outside of shape)

t + 2t + 1 + t + 2t + 1 → 6t + 2

Directed numbers

+ + → +

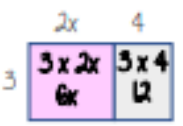
- - → +

+ - → -

- + → -

e.g. a = -5 and b = 2
a^2 = a x a = -5 x -5 = **25**
b + a = 2 + -5 = **-3**

Multiply single brackets 3 (2x + 4)

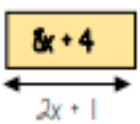


6x + 12

6x + 12

Different representations of 3(2x+4) = 6x + 12

Factorise into a single bracket 8x + 4



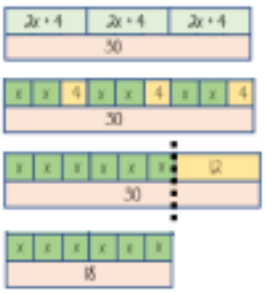
Try and make this the **highest common factor**

The two values **multiply** together (also the area) of the rectangle

8x + 4 ≡ 4 (2x + 1)

Note
8x + 4 ≡ 2(4x + 2)
This is factorised but the HCF has not been used

Solve equations with brackets 3 (2x + 4) = 30



3 (2x + 4) = 30

Expand the brackets

6x + 12 = 30
- 12 - 12

6x = 18
÷ 6 ÷ 6

Substitute to check your answer
This could be negative or a fraction or decimal

x
3

x = 3

Simple Inequalities

< less than
≤ Less than or equal to
> More than
≥ More than or equal to

x < 10
Say this out loud
"x is a value less than 10"

10 > x
Say this out loud
"10 is more than the value"

Note
x< 10 and 10>x
represent the same values

x + 2 ≤ 20
"my value + 2 is less than or equal to 20"
x ≤ 18
The biggest the value can be is 18

Form and solve inequalities

Two more than treble my number is greater than 11

Find the possible range of values

Form

x → x3 → +2 → 11

3x + 2 > 11

Solve

x ← -3 ← -2 ← 11

x > 3

Check

This would suggest any value bigger than 3 satisfies the statement
3 x 3 + 2 = 11 ✓ 10 x 3 + 2 = 32 ✓

Algebraic constructs

Expression
A sentence with a minimum of two numbers and one maths operation

Equation
A statement that two things are equal

Term
A single number or variable

Identity
An equation where both sides have variables that cause the same answer includes ≡

Formula
A rule written with all mathematical symbols
e.g. area of a rectangle A = b x h

YEAR 8 - ALGEBRAIC TECHNIQUES...

Sequences

@whisto_maths

What do I need to be able to do?

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

- Generate a sequence from term to term or position to term rules
- Recognise arithmetic sequences and find the nth term
- Recognise geometric sequences and other sequences that arise

Keywords

Sequence: items or numbers put in a pre-decided order
Term: a single number or variable
Position: the place something is located
Linear: the difference between terms increases or decreases (+ or -) by a constant value each time
Non-linear: the difference between terms increases or decreases in different amounts, or by x or ÷
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

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

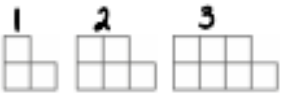
Fibonacci Sequence – look out for this type of sequence

0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms

Sequence in a table and graphically

Position: the place in the sequence



3 5 7

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

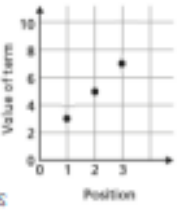
Term: the number or variable
(the number of squares in each image)

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

Sequences from algebraic rules

This is substitution!

$3n + 7$ — This will be linear - note the single power of n. The values increase at a constant rate

$3n^2 + 7$ — This is not linear as there is a power for n

$2n - 5$ → Substitute the number of the term you are looking for in place of 'n'

eg
1st term = 2 (1) – 5 = -3
2nd term = 2 (2) – 5 = -1
100th term = 2 (100) – 5 = 195

Checking for a term in a sequence

Form an equation

Is 201 in the sequence 3n – 4?

$3n - 4 = 201$ ← Term to check

Algebraic rule

Solving this will find the position of the term in the sequence. ONLY an integer solution can be in the sequence.

Complex algebraic rules

Misconceptions and comparisons

$2n^2$ — 2 times whatever n squared is

eg
1st term = 2 x 1^2 = 2
2nd term = 2 x 2^2 = 8
100th term = 2 x 100^2 = 2000

$(2n)^2$ — 2 times n then square the answer

eg
1st term = $(2 \times 1)^2$ = 4
2nd term = $(2 \times 2)^2$ = 16
100th term = $(2 \times 100)^2$ = 40000

$n(n + 5)$

eg
1st term = 1 (1 + 5) = 6
2nd term = 2 (2 + 5) = 14
100th term = 100 (100 + 5) = 10500

You don't need to expand the expression

H Finding the algebraic rule

This is the 4 times table → 4, 8, 12, 16, 20....

4n

7, 11, 15, 19, 22 ← This has the same constant difference – but is 3 more than the original sequence

4n + 3

4n + 3

This is the constant difference between the terms in the sequence

This is the comparison (difference) between the original and new sequence

YEAR 8 - ALGEBRAIC TECHNIQUES...

Indices

@whisto_maths

What do I need to be able to do?

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

- Add/ Subtract expressions with indices
- Multiply expressions with indices
- Divide expressions with indices
- Know the addition law for indices
- Know the subtraction law for indices

Keywords

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
Coefficient: The number used to multiply a variable
Simplify: To reduce a power to its lowest term
Product: Multiply

Addition/ Subtraction with indices

Coefficient, Power

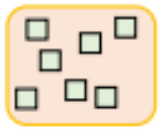
$5x^2 + 4x^4$

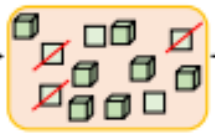
Term, Term

Expression

Each square represents x^2 and each cube represents x^4

Only similar terms can be simplified
If they have different powers, they are unlike terms

$5x^2 + 2x^2$ →  → $7x^2$

$5x^2 + 6x^4 - 3x^2 + x^4$ →  → $2x^2 + 7x^4$

Multiply expressions with indices

$4b \times 3a$
$\equiv 4 \times b \times 3 \times a$
$\equiv 4 \times 3 \times b \times a$
$\equiv 12ab$

$5t \times 9t$
$\equiv 5 \times t \times 9 \times t$
$\equiv 5 \times 9 \times t \times t$
$\equiv 45t^2$

$2b^4 \times 3b^2$
$\equiv 2 \times b \times b \times b \times b \times 3 \times b \times b$
$\equiv 2 \times 3 \times b \times b \times b \times b \times b \times b$
$\equiv 6b^6$

There are often misconceptions with this calculation but break down the powers

Addition/ Subtraction laws for indices

$3^5 \times 3^2 \rightarrow 3^7$

$= (3 \times 3 \times 3 \times 3 \times 3) \times (3 \times 3)$

The base number is all the same so the terms can be simplified

Addition law for indices

$$a^m \times a^n = a^{m+n}$$

$3^5 \div 3^2 \rightarrow 3^3$

$\frac{3 \times 3 \times 3 \times \cancel{3} \times \cancel{3}}{\cancel{3} \times \cancel{3}} \rightarrow \frac{3^3}{3^0} \rightarrow \frac{3^3}{1}$

Subtraction law for indices

$$a^m \div a^n = a^{m-n}$$

Divide expressions with indices

$\frac{24}{36} \rightarrow \frac{\cancel{2} \times \cancel{2} \times 2 \times \cancel{3}}{\cancel{2} \times \cancel{3} \times 2 \times \cancel{3}} \rightarrow \frac{2}{3}$

$\frac{5a^3b^2}{15ab^6} \rightarrow \frac{\cancel{5} \times \cancel{a} \times a \times a \times \cancel{b} \times \cancel{b}}{3 \times \cancel{5} \times \cancel{a} \times \cancel{b} \times \cancel{b} \times b \times b \times b \times b} \rightarrow \frac{a^2}{3b^4}$

Cross cancelling factors shows cancels the expression

$\frac{23a^7y^2}{5dib^6}$

This expression cannot be divided (cancelled down) because there are no common factors or similar terms

YEAR 8 - DEVELOPING NUMBER...

Fractions & Percentages

@whisto_maths

What do I need to be able to do?

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

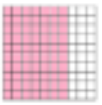
- Convert between FDP less than and more than 100
- Increase or decrease using multipliers
- Express an amount as a percentage
- Find percentage change

Keywords

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

Convert FDP

R

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

Using a **calculator**

■/□ → S⇔D → Convert to a decimal

This will give you the answer in the simplest form

× 100 converts to a percentage

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

Fraction/ Percentage of amount

R

Find $\frac{3}{5}$ of £60

Remember $\frac{3}{5} = 60/$

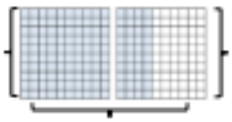
10/ of £60 = £6
50/ of £60 = £30
60/ of £60 = £36

Remember
$\frac{3}{5} = 60/ = 0.6$

60/ of £60
= 0.6 × 60
= £36

Convert FDP < and > 100/

100 hundredths
10 tenths
100/

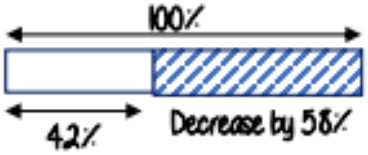


40 hundredths
4 tenths
40/

140 hundredths
14 tenths
140/

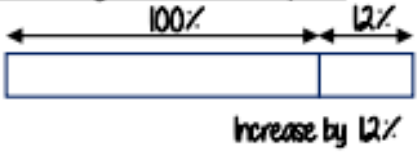
100/ + 40/
1 + 0.40
= 140

Percentage decrease: Multipliers



100/ - 58/ = 42/
100 – 0.58 = 0.42 ← **Multiplier** Less than 1

Percentage increase: Multipliers



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

Express as a / - Non-calculator

Percent – per hundred

7 per every 10 are orange → $\frac{7}{10}$ → This means that 70 per every 100 are orange → $\frac{70}{100}$ → 70/

27 per every 50 shaded → $\frac{27}{50}$ → 54 per every 100 shaded → $\frac{54}{100}$ → 54/

Denominator 100 | Equivalent fractions

Express as a / - Calculator

$\frac{13}{30}$ → ■/□ → $\frac{13}{30}$ → × 100 → 43.3333…/ = 43/

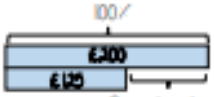
Can't use equivalence easily to find 'per hundred'

This the same as 13 ÷ 30

Decimal percentages are still a percentage

Percentage change

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

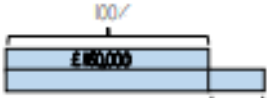


All values of change compare to the ORIGINAL value

Percentage loss
$\frac{75}{200} \times 100 = 37.5/$

$\frac{\text{Difference in value}}{\text{Original value}} \times 100$

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



Percentage profit

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

Choose appropriate method

The language and wording of the question is the key

Have you represented the question in a bar model?
Can you use a calculator?

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 from
- 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 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 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 → $A \times 10^n$ ← Any integer

Example
5.2 x 10^4
= 5.2 x 10 x 10 x 10 x 10
= 52000

Non-example
(0.8) x 10^4
5.5 x $10^{(0)}$

Negative powers of 10

0.001	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
1 x $\frac{1}{1000}$	10^1	10^0	10^{-1}	10^{-2}	10^{-3}
1 x 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 x 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 x 10^{-2} | 2.4 x 10^2 | 3.3 x 10^0 | 1.3 x 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 x 10^2 x 1000 **Not in Standard Form**
= 6.4 x 10^2 x 10^3 **Use addition for indices rule**
= 6.4 x 10^5

(2 x 10^3) ÷ 4 **Divide the values**
= (2 ÷ 4) x 10^3
= 0.5 x 10^3

(8 x 10^5 x 3)
= 24 x 10^5 **Not in Standard Form**
= 2.4 x 10^1 x 10^5 **Use addition for indices rule**
= 2.4 x 10^6

Remember the layout for standard form
Any number between 1 and less than 10 → $A \times 10^n$ ← Any integer

Addition and Subtraction

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

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

Method 1
= 600000 + 800000
= 1400000
= **1.4 x 10^6**

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

Method 2
= (6 + 8) x 10^5
= 14 x 10^5 ← This is not the final answer
= 1.4 x 10^1 x 10^5
= **1.4 x 10^6**

Only works if the powers are the same

Multiplication and division

$\frac{1.5 \times 10^5}{0.3 \times 10^5}$ ← Division questions can look like this

(1.5 x 10^5) ÷ (0.3 x 10^5)
(1.5 ÷ 0.3) x $10^5 \div 10^5$
= 5 x 10^2

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

Revise addition and subtraction laws for indices – they are needed for the calculations

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

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

Using a calculator

1.4 x 10^5 x 3.9 x 10^3

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

Input 1.4 and press [x10^x] Then press 5 (for the power)
Press [×]
Input 3.9 and press [x10^x] 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 x 10^8

YEAR 8 - DEVELOPING NUMBER...

Number Sense

@whisto_maths

What do I need to be able to do?

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

- Round numbers to powers of 10 and 1 sf
- Round numbers to any dp
- Estimate solutions
- Calculate using order of operations
- Calculate with money, units of measurement and time

Keywords

Significant: Place value of importance
Round: Making a number simpler but keeping its value close to what it was
Decimal: Place holders after the decimal point
Overestimate: Rounding up – gives a solution higher than the actual value
Underestimate: Rounding down – gives a solution lower than the actual value
Metric: A system of measurement
Balance: The amount of money in a bank account
Deposit: Putting money into a bank account

Round to powers of 10 and 1 sig figure

R If the number is halfway between we "round up"

5495 to the nearest 1000

5475 to the nearest 100

5475 to the nearest 10

370 to 1 significant figure is 400
37 to 1 significant figure is 40
3.7 to 1 significant figure is 4
0.37 to 1 significant figure is 0.4
0.00037 to 1 significant figure is 0.0004

Round to the first non-zero number

Round to decimal places

2.46192 ← Focus on the numbers **after** the decimal point

"To 1dp" – to one number after the decimal
"To 2dp" – to two numbers after the decimal

2.46192 (to 1dp) - Is this closer to 2.4 or 2.5

2.4 6192 This shows the number is closer to 2.5

2.46192 (to 2dp) - Is this closer to 2.46 or 2.47

2.46 192 This shows the number is closer to 2.46

Estimate the calculation

Round to 1 significant figure to estimate

$4.2 \times 6.7 \approx 4 \times 7 \approx 11$ This is an **overestimate** because the 6.7 was rounded up more

The equal sign changes to show it is an estimation

$21.4 \times 3.1 \approx 20 \times 3 \approx 60$ This is an **underestimate** because both values were rounded down

It is good to check all calculations with an estimate in all aspects of maths – it helps you identify calculation errors

Order of operations

R

Brackets Operations in brackets are calculated first
Other operations e.g. powers, roots,
Multiplication/ Division
They are carried out in the order from left to right in the question
Addition/ Subtraction
They are carried out in the order from left to right in the question

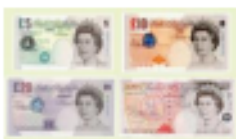
Calculations with money

Debit - You have £0 or more in an account
Credit - You have less than £0 in an account

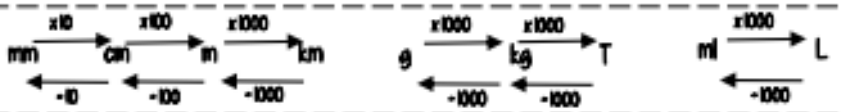
Money calculations are to 2dp

Using a calculator – ensure you are working in the correct units
£1.30 + 50p = 130 + 50 (in pence)
= 1.30 + 0.50 (in pounds)

£1 = 100p



Units are important: Useful Conversions



Metric measures of length

Kilo - 1000 x meter
Centi - $\frac{1}{100}$ x meter
Milli - $\frac{1}{1000}$ x meter

Units of weight/ capacity

Weight - g, kg, t
Capacity (volume of liquid) - ml, L

Time and the calendar

1 Year – the amount of time it takes Earth to go around the sun **365** (and a quarter) **days**
Leap Year – **366 days** (every 4 years)

12 Months = one year = 52 weeks
31 days – **Jan, March, May, July, Aug, Oct, Dec**
30 days – **Apr, June, Sept, Nov**
28 days – **Feb** (29 leap year)

1 week – 7 days
Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

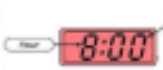
1 day – 24 hours
1 hour – 60 minutes
1 minute – 60 seconds

Use a number line for time calculations!

Analogue Clock

12-hour clock
- Use am (morning) and pm (afternoon)
- Only use hour times up to 12

Digital Clock (24-hour times)



24-hour clock
- 0-11 (morning hours)
- 12-23 (afternoon hours)

Year 9

KING'S LYNN ACADEMY

Science

Year 8

Term 6

- **Physics** Light
- **Biology** Respiration

Term 5

- **Experimental Science** Standard Procedures
- **Physics** Electrical Energy
- **Chemistry** Earth Systems

Term 4

- **Chemistry** Reactants and Products
- **Biology** Tissues and Organs

Term 3

- **Experimental Science** Standard Procedures
- **Physics** Movement Gravity

Term 2

- **Chemistry** Pure Substances
- **Biology** Life Diversity

Term 1

Welcome back to KLA your Journey continues

Forces

Gravity: Big ideas

What expert understanding do we want after 5 years?

Fields produce forces
Big idea

Gravitational, electric, and magnetic forces act at a distance. These can be explained by force fields that extend through space and can move other objects. Objects with mass cause attractive gravitational fields
Electric and magnetic forces are different aspects of one interaction. Magnets cause magnetic fields and changing magnetic fields cause electric fields. Many devices use this interaction to generate motion and electricity.

How does the unit develop this?

Gravitational force
Key Concept

Every object exerts a gravitational force. Gravity holds planets and moons in orbit around larger bodies but depends on distance and mass

Facts

- Gravity decreases with distance

Weight
Key Concept

Weight is the force an object exerts on its support and which causes it to fall. It is mass x gravitational field strength

Sub-concepts

Gravitational field strength

Facts

- Weight = mass x g (field strength)
- Weight is in N, mass in kg

Solar system
Key Concept

The solar system is modelled as planets rotating on tilted axes, orbiting the Sun. It explains day and year length, seasons and how planets and moons appear

Sub-concepts

Planet, orbit, satellite

Facts

- Axis, day and year length
- Planets revolve at different distances from the Sun, which explains different year lengths and temperatures

Practical skills:

Purpose of the practical:

1. To develop your understanding of the scientific approach to enquiry.
2. To develop your knowledge and understanding of the natural world.
3. To learn how to use a piece of equipment or follow a scientific procedure.

Variables:

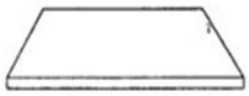
Independent variable- The one that you change.

Dependent variable- The ones that you measure.

Control variables- The ones that you keep the same.

Equipment:


Filter funnel


Heat proof mat


Thermometer

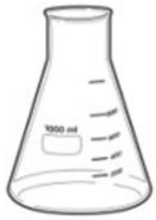

Bunsen burner


Tripod


Boiling tube

Beaker


Evaporating basin


Conical flask

Conducting an investigation:

- You should be able to identify the independent, dependent and control variables and their importance in conducting a fair test.
- You should be able to identify the equipment and describe its use.
- You should be able to record the set of data in a suitable table, identify anomalies and calculate the average across repeated investigations.
- You should be able to plot the results on a graph and label the axis with correct units. A suitable line/curve of best fit should be drawn.
- You should be able to draw conclusions from your collected data and graphs.
- You should be able to suggest improvements to the experiment to improve the reliability.

Know the facts		Key words	
1	Forces are pushes or pulls Force is measured in Newtons(N)	1	**Equilibrium**: State of an object when opposing forces are balanced.
2.	Forces exist when objects interact- this produces and interaction pair	2	**Deformation**: Changing shape due to a force.
3	Friction, air resistance and water resistance are contact forces.	3	**Newton**: Unit for measuring forces (N).
4.	Friction can be reduced by lubrication. Air resistance and water resistance can be reduced by streamlining.	4	**Resultant force**: Single force which can replace all the forces acting on an object and have the same effect.
5.	When the resultant force on an object is zero, it is in equilibrium and does not move, or remains at constant speed in a straight line.	5	**Friction:** Force opposing motion which is caused by the interaction of surfaces moving over one another. It is called 'drag' if one is a fluid.
6.	You can draw a force diagram to show the forces acting on an object and label their size (length or thickness of the arrow) and direction with Newtons.	6	**Tension**: Force extending or pulling apart.
7	If forces are not balanced the object will speed up, slow down or change direction	7	**Compression**: Force squashing or pushing together.
8	Drag/frictional forces slow down falling or accelerating objects.	8	**Contact force**: One that acts by direct contact.
9	When the resultant force on an object is zero, it is in equilibrium and does not move, or remains at constant speed in a straight line.	9	**Streamlined**: Shaped to reduce resistance to motion from air or water.
10		10	**Equilibrium** : when forces cancel each other out
		11	**Density:** How much matter there is in a particular volume, or how close the particles are.

Know the facts		Key words	
1	The Earth is one of eight planets in our Solar System.	1	**Galaxy:** Collection of stars held together by gravity. Our galaxy is called the Milky Way.
2.	Planets large objects that are (almost) spherical in shape and orbit the Sun.	2	**Light year:** Distance light travels in a year (over 9 million, million kilometres).
3	The Earth spins on its axis 1 times a day. That is why we have day and night.	3	**Stars:** Bodies which give out light, and which may have a solar system of planets.
4.	The Earth has seasons as the Earth is moving around the Sun and some parts are tilted towards the Sun and other parts are tilted away from the Sun	4	**Orbit:** Path taken by a satellite, planet or star moving around a larger body. Earth completes one orbit of the Sun every year.
5.	Pluto is no longer classed as a planet as it is too small and is quite spherical enough. It hasn't been a planet since 2006.	5	**Exoplanet:** Planet that orbits a star outside our solar system.
6.	A year is the time taken to make one complete orbit around the Sun.	6	**Asteroid:** A rock in space.
7	We see the Moon due to reflection of the Sun's light	7	**Comet:** Made of dust and ice.
8	Planets further from the sun are colder		**Natural satellite :** an object in space which formed from dust rocks
9	The universe consists of millions of galaxies. Each galaxy contains billions of stars. Each star may have planets, comets and asteroids orbiting them.		**Meteor** : are bits of dust, rocks that burn up as they move through the Earth's atmosphere.
10	The Moon has different phases due to the positioning of the Earth, Sun and Moon.		**Meteorite** : is a meteor that has made it to the Earths surface
11	Our solar system is part of the Milky Way - a galaxy containing hundreds of millions of stars.		**Gravity:** the force that helped pull the dust and gas together to form our Solar system
12	There are millions of galaxies in the universe.		**Constellation :** A group of stars we can see in the night sky.
13	A solar eclipse happens when the moon is between the Sun and the Earth		**Solar System:** The planets form a solar system
14	A lunar eclipse happens when the Earth is between the sun and the moon		**Milky way:** the name of our galaxy

Know the facts		Key words	
1	Physical changes are reversible	1	**Fuel:** Stores energy in a chemical store which it can release as heat.
2.	Chemical changes are NOT reversible	2	**Chemical reaction:** A change in which a new substance is formed.
3	In a reaction atoms are rearranged to make a new substance	3	**Physical change:** One that changes the physical properties of a substance, but no new substance is formed.
4.	Chemical reactions can make useful products and transfer energy.	4	**Reactants:** Substances that react together, shown before the arrow in an equation.
5.	In oxidation reactions ,substances join together with oxygen to form oxides	5	**Products:** Substances formed in a chemical reaction, shown after the reaction arrow in an equation.
6.	Exothermic change transfers energy **to** the surroundings	6	**Conserved:** When the quantity of something does not change after a process takes place.
7	Endothermic change transfers energy **from** the surroundings	7	**FeO :** this is the formula for iron oxide
8	Combustion is the burning of a substance in oxygen.		**Fossil fuels :** these are petrol diesel gas and coal
9	Combustion gives off heat and light.	8	**Non-renewable–**a substance which cannot be replaced once it is used up
10	When hydrocarbons undergo combustion the products produced will include carbon dioxide and water vapour.	9	**Balanced symbol equation :**shows the formula of the reactants, how they are arranged and the relative amounts of reactants and products
11	Thermal decomposition involves breaking down large molecules with heat to give simpler products.	10	
12	In a chemical reaction mass is conserved. The mass of the reactants equals the mass of the products.		
13	Atoms in a chemical reaction only get re-ordered - they are not created or destroyed.		

Year 9

Geography

Year 8

KING'S LYNN ACADEMY

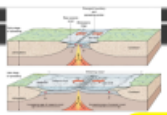
Dubai/UAE

Half Term 6

The Middle East

Earthquake effects

Plate margins



Volcano formation

Half Term 5

Tectonics

Opportunities

Challenges

Adaptations

Desertification

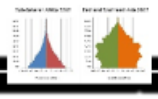
Locations

Half Term 4

Hot deserts

Nigeria focus

Physical Geography



The Sahara

Africa

Populations

Half Term 3

Rainforest threats

Location of biomes

Adaptations

Characteristics

cosystems

Tropical rainforests

Half Term 2

Gender equality

Why do people live in poverty?

Health inequality

Welcome back to KLA. Your journey continues.

Half Term 1

Measuring development

Development

What is Africa like? Year 8 Spring (Term 3)

Background

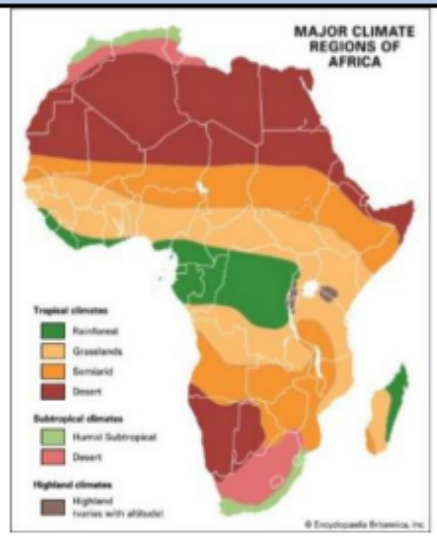
Africa is a more diverse place than is stereotypically perceived. There are many different influences due to past colonisation.

Vocabulary

diverse	If a group or range of things is diverse, it is made up of a wide variety of things.
stereotype	A stereotype is a fixed set of characteristics that a lot of people believe represent a particular type of person or thing.
natural resources	Resources that exist or occur in nature and are not made or caused by people (e.g. trees, minerals, oil, metals).
Colonisation	The act of taking control of an area or country that is not your own.
perception	Your perception of something is the way that you think about it or the impression you have of it.
time zone	Time zones give specific areas on the Earth a time of day that is earlier or later than neighbouring time zones.
savannah	Open grasslands, usually with scattered bushes or trees
semi-arid	Characterized by little rainfall and scrubby vegetation
production	The process of making or growing something in large amounts.
vegetation	Plants, trees, and flowers
plateau	A large area of high and fairly flat land.

Map of Africa

Climate



Terrain

Africa has eight main physical regions:

- the Sahara,
- the Sahel,
- the Ethiopian Highlands,
- the savanna,
- the Swahili Coast,
- the rain forest,
- the African Great Lakes
- Southern Africa.

Some of these regions cover large areas of the continent while others are remote areas. Each of these regions have unique animal and plant communities.

Natural Resources found in Africa

- Gas and oil
- Copper and iron ore
- Uranium
- Gold and diamonds

Physical map of Africa

Highest Mountain:
Kilimanjaro (5,895m high)

Tallest Waterfall:
Victoria Falls (Zambia)

Major Desert:
Sahara (The largest in the world)

Surrounding Oceans / Seas:
Atlantic Ocean, Indian Ocean, Mediterranean Sea, Red Sea

Key City:
Cairo, Egypt (population of 15.6 million people)

GEOGRAPHY YEAR 8 TERM 4 HOT DESERTS

Desertification

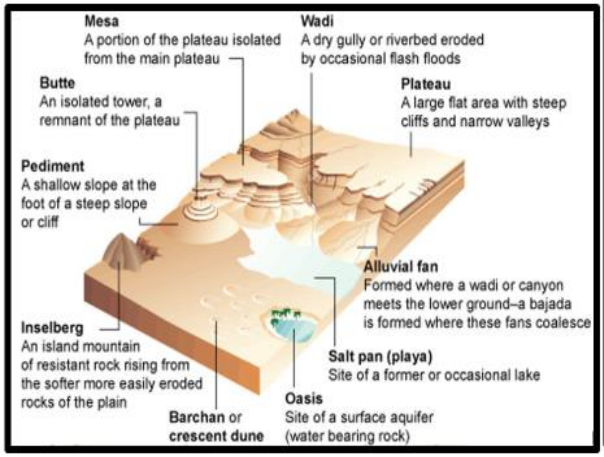
This is the process that see productive land turn into non-productive desert. It usually affects dry areas on the edges of deserts, e.g The Sahel, south of the Sahara Desert in Africa

Desertification causes

Climate change	The dry conditions cause the vegetation to die, so the land loses the protective cover that vegetation provides.
Farming	Too many animals in an area – leads to overgrazing
Population growth	There is more pressure on the land for fast growing crops
Logging	Wood is used for buildings, heating, and firewood, causes deforestation and soil erosion.

Challenges in the desert: Extreme temperatures (over 40^{0}C in the day and below freezing at night), inaccessibility (deserts are huge with little infrastructure), water supply (low rainfall means water for drinking, washing and agriculture difficult to supply)

Desert landforms



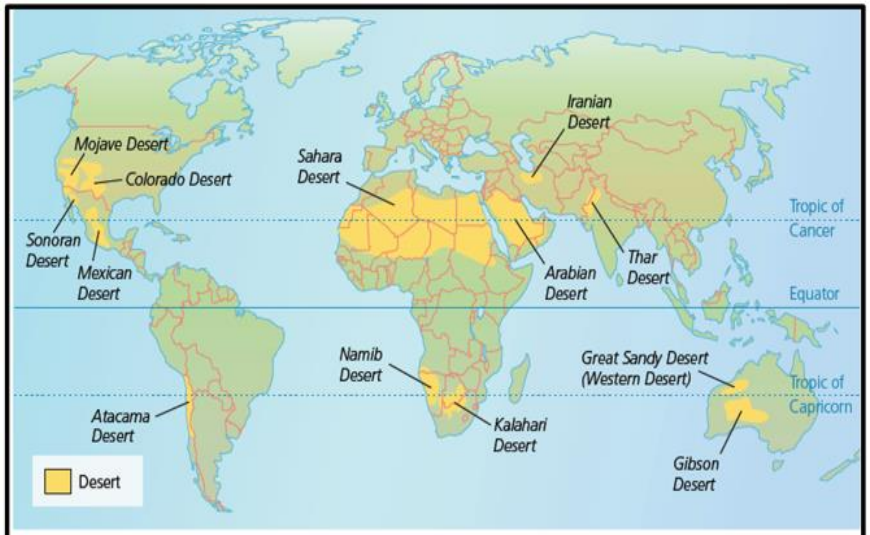


Figure 7.1 The global distribution of the world's hot desert environments (semi-arid areas or drylands not shown)

Opportunities in the desert

Tourism: Grand Canyon, Joshua Tree National Park, Las Vegas, Colorado Museum and Lake Mead.
Farming: High temperatures and sunlight are good for growing crops as long as there is a water source!
Mineral extraction: Lots of natural resources – copper, uranium, lead, zinc and coal.
Energy: Solar power. Sonoran Solar project has 1.2 million panels.

Key terms

arid	dry, with little or no rainfall
butte	an isolated hill with steep sides and a flat top
extreme temperatures	temperatures that present challenges for people, animals and plants
irrigation	artificial application of water to the land or soil
mesa	an isolated flat-topped hill with steep sides, found in landscapes with horizontal strata.
overcultivation	where the intensive growing of crops exhausts the soil leaving it barren
wadi	a valley, ravine, or channel that is dry except in the rainy season.

Plant adaptations

***thick, waxy skin to reduce loss of water and to reflect heat**
***large, fleshy stems to store water**
***thorns and thin, spiky or glossy leaves to reduce water loss**
***spikes protect cacti from animals wishing to use stored water**
***deep roots to tap groundwater**
***long, shallow roots which spread over a wide area**

Animal adaptations

***long eyelashes, hairy ears and closing nostrils help to keep out sand**
***thick eyebrows which stand out an shade eyes from the sun**
***wide feet so they don't sink into the sand**
***they can go without water for over a week because they can drink gallons in one go**
***they can go months without food – they store fat in their humps**
***they are well camouflaged**
***thick fur helps to keep them warm at night**

History

1453 - 1760

Year 8

KING'S LYNN ACADEMY

Year 9

Introduction to Empire

Georgian Aristocracy

Half Term 6

Parliamentary Government

Creation of Great Britain

Jacobite uprisings

Restoration England

The Great Fire of London

The Glorious Revolution

The Restoration

Half Term 5

Cromwell's Commonwealth

Trial and execution

Fighting the English Civil War

Charles I and Parliament

The Outbreak of War

Half Term 4

James I and the Gunpowder Plot

Rich and Poor in Tudor England

The Elizabethan Golden Age

The Spanish Armada

Elizabeth I

Mary I's counter reformation

Half Term 3

Henry VIII and Edward VI

Henry's 'Great Matter'

The English Reformation

The Reformation

The young Henry VIII

Half Term 2

Global exploration

Christopher Columbus

The 'New' World

Welcome back to KLA. Your journey continues.

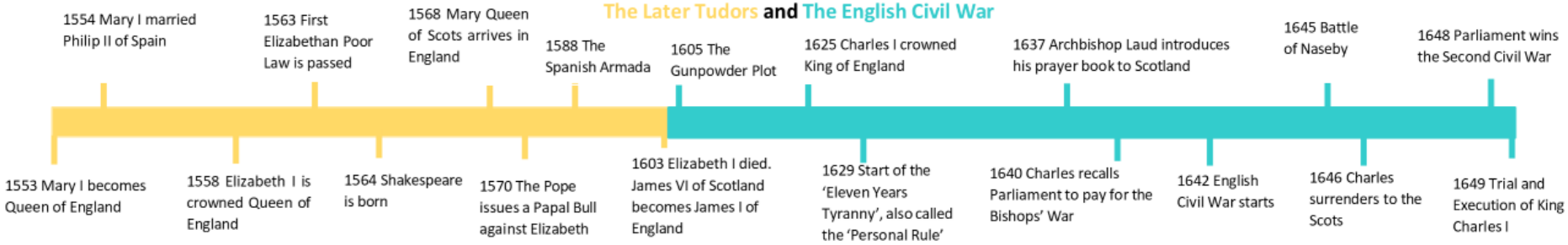
Half Term 1

Print, gunpowder and astronomy

The Italian Renaissance

Year 8 History Knowledge Organiser Spring Term

The Later Tudors and The English Civil War



The Later Tudors 1553 -1603

Tier 2 Vocabulary	Tier 3 Vocabulary
Armada: fleet of warships, often used to describe Spanish force sent to invade England in 1588. **Counter reformation**: Catholic fight back against the spread of Protestantism in Europe. **Galleon**: a large sailing ship, particularly from Spain. **Gentleman**: someone who earns enough money from land and investments not to work for a living. **Gentry**: class of wealthy landowners without Noble titles, position just below the nobility. **Martyr**: a person who is killed for their beliefs, often religious. **Poor Laws**: laws passed during the Tudor period making local parishes raise money to help the poor. **Propaganda**: a piece of art or information used to promote a particular cause or point of view. **Stately Home**: a large country house at the centre of a gentleman or noble's estate. **Vagrant**: a person with no job, who travels from place to place begging.	**Burning at the stake**: a slow and painful execution, usually reserved for religious heretics. **Deserving Poor**: category developed by the Tudor's for those amongst the poor in genuine need of help. **Fox's Book of Martyrs**: a work of Protestant propaganda against Mary the first, published in 1563. **Gloriana:** a name given to Elizabeth towards the end of her reign, from the Latin for glorious. **Golden Age**: a period of flourishing in the history of a nation or an art form. **Papal Bull**: a formal and important announcement, issued by the Pope. **Rack**: torture device you slowly to stretch a person's body until all their joints dislocate. **Royal Progress**: a summer journey taken by monarch, visiting the stately homes of court favourites. **Ruff**: an elaborate lace collar encircling the neck, fashionably during the Elizabethan. **Wars of Religion**: a series of European wars fought between Catholics and Protestants between 1524-1648.

The English Civil War 1625 - 1649

Tier 2 Vocabulary	Tier 3 Vocabulary
Absolutist: a ruler who has absolute power over his or her people. cavalier: the nickname for royalist cavalry meant during the English Civil War. **Civil war**: a war between two sides from the same nation. **Member of parliament**: someone elected to sit in the House of Commons, often abbreviated to 'MP'. **Parliament**: a collection of people representing all of England, who approve or refuse laws. **Parliamentarians**: those who are loyal to parliament, often during dispute with the King. **Royalist** Callum those who are loyal to the King, often during dispute with parliament. **State opening of parliament**: the ceremony where England's monarch opens a session of parliament. **Treason**: a crime against your own people, nation, or monarch.	**Bishop's war**: an uprising against Charles the first the religious reforms which began in Scotland. **Divine Right of Kings**: the theory that a monarch is appointed by God and should have absolute power. **Levellers**: radical group during the civil war who demanded equal legal and political rights. **New Model Army**: a full time, professional army formed by Oliver Cromwell during the civil war. **Puritan**: a group of radical Protestants who wore plain clothes and tried to live without sin. **Roundhead**: the nickname for Parliamentarian soldiers during the English civil war. **Star Chamber**: the English monarchs personal court, which did not have to give defendants a fair trial. **Eleven Years Tyranny**: a period from 1629 during which Charles the first ruled without calling Parliament.

KING'S LYNN ACADEMY

PE Yr 8

Evaluation & Development of Head Heart Hands

Rules – Confidence – Solving

Goal Setting

Analysis – Resilience – Competitive

Goal Setting

Responsibility – Leadership - Tactics

Components of Fitness

Feedback – Respect - Technique

Components of Fitness

Understanding – Communication - Ability

Muscles and Bone

Knowledge - Effort - Fitness Levels

Muscles and Bones

Welcome to PE

Year 8 Evaluation & Development

Students begin to evaluate their own and others' performance using the Head, Heart, Hands framework. They reflect on how to improve skills, behaviours, and decision-making.

HEAD

- Knowledge

- Understanding

HEART

- Effort

- Communication

HANDS

- Fitness Levels

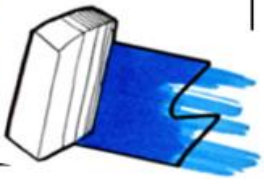
- Physical Ability

Physical Education Specific Learning Content
Muscles and Bones
Major bones muscles
Muscles working in pairs
Types of movement
Knowledge of the rules

8

Over the year students rotate through areas of departmental specialism, experiencing specialist teaching to develop knowledge and understanding of key creative skills.

Year 8

Specialism	Project	Core content					Assessment
3D Design	Candle Holder 	Health and Safety in 3D 	Metals 	Use of Tools & equipment 	Metal Forming 	Surface Finishes 	
Food	Special Diets						End of topic tests for each specialism 
Textiles	Core Textile Skills	Health and Safety in Textiles 	Problem analysis 	Hand sewing skills 	Design ideas 	Making products 	Assessment of outcome
Graphics	Architecture 	Moodboard research 	2-point perspective 	Rendering with markers 	Modelling of ideas 	Presentation skills 	

Year 8 Textiles Knowledge Organiser

What is a brief?

Brief - A brief set of instructions given to a person about a job or task.

What is a specification?

A list of rules that a product must fit to when being made and designed. Precise detail.

Natural materials

Textiles made from natural fibres are known as natural fabrics. Used for hundreds and even thousands of years. Some natural textiles include:

Linen – Cotton – Hemp – Silk – Cashmere – Wool – Jute – Bamboo – Mohair –Leather

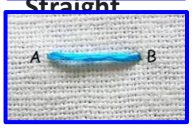
Synthetic materials

Synthetic fibres (man-made fibres) are produced by joining chemical monomers into polymers using a chemical reaction called polymerisation. Some synthetic materials include:

Acetate - Acrylic - Microfiber - Nylon - Polyester - Polyvinyl-chloride (PVC) - Spandex

Embroidery Stitches:

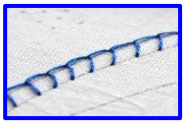
Straight



Stem

Star

Blanket



Possible research methods

Market Research

Questionnaires or interviews can be used to find out people's likes/dislikes and so on. This helps the designer understand what the target group wants from a product.

Product Analysis

Designers analyse and evaluate similar existing products to what they plan on designing to highlight positive and negative aspects and help them in what they design.

Designer/Artist research

Designers may look to designers/artist to help them decide on visual information in their design and help them to understand how something is made using design/artistic processes.

H&S Rules:

- Listen to the Teacher at all times and follow instructions INSTANTLY
- All tripping hazards removed – Stools tucked under work stations, bags/coats away
- Equipment put away neatly where found after use
- Focus on your own work – not a chatting opportunity

Textile scissors

Felt

Embroidery needle

Embroidery thread

Food KS3 Learning Journey


YEAR 9

Students on rotation with DT

Food Technology - Theory: Focusing on theory ready for KS4 -Health and Safety, Food allergies/intolerances, consumer awareness and food waste. Practical: A range of dishes using higher level cooking skills with presentation.


9


YEAR 8

Students on rotation with DT

Food Technology Theory - Health and Safety, Nutrition- focusing on dairy, protein, fats and oils, carbohydrates and fruits and vegetables. Practical - A range of dishes building on cooking skills with dishes that incorporates the following - fermentation, coagulation, aeration and gelatinisation.

8


YEAR 7

Students on rotation with DT

Food Technology - Theory - Health and Safety, personal hygiene and the Eatwell Guide. Sensory Analysis. Practical - A range of dishes building cooking skills, such as learning about knife skills, different cooking methods and presentation.



7

Knowledge organiser

Year 8 KS3 Cooking and Nutrition

Prior Learning / Context:
Prior learning includes introduction to the Eatwell Guide and the principles of healthy eating. Basic cooking skills, including knife skills and cooker safety completed.

Assessment:
- Retrieval Practice – quizzing, starter/plenary tasks
- Formal knowledge assessments – delivered in time with reporting
- Food skills assessed after practical

Themes:
- Healthy Eating guidelines
- Food preparation
- Food safety
- Food provenance
- Food labels
- Methods of cooking

Context: Lessons

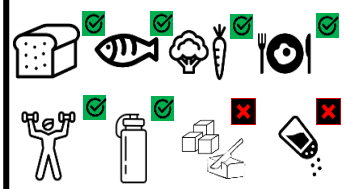
- Six Practical lessons
- The 4 CS
- Healthy Eating
- Preventing food poisoning
- Key Temperatures
- Recall of Eatwell Guide
- Food Provenance
- Food labels
- Assessment

Preventing Food Poisoning (the 4Cs)

Key temperatures
Freeze -18C, Chill 0-5C, Danger Zone 5-63C, Cook 75C+

The Eatwell Guide

8 healthy eating tips



Dairy and Alternatives
- Products made from cows milk
- Good sources of protein and calcium

Protein
- Products including meat, fish, egg & plant alternatives eg soya
- Needed for growth and repair

Fats and Oils
- Animal fats (saturated) and vegetable oils (unsaturated)
- For energy and warmth

Carbohydrates
- Pasta
- Flour both for Energy

Fruit & Vegetables
- How to incorporate 5 a day

Methods of Cooking
- **Rubbing in use of shortening** – prevent gluten formation when making pastry
- **Fermentation –** use of yeast for making of dough
- **Coagulation** – heating protein to set a mixture
- **Aeration** – role of fats and eggs
- **Gelatinisation** - All in one sauce

Future Learning:
- **Year 9:** Macro/ Micronutrients, Seasonal foods, Types of Food Poisoning, Different choices
- **KS4:** Hospitality and Catering

Key Vocabulary
Eatwell guide ,Food Provenance, Red Tractor, British lion stamp, Bacteria, Danger zone, Key Temperatures, Protein, Food Labels, Coagulation, Rubbing in, Fermentation ,Aeration, Gelatinisation, Eight tips for Healthy Eating

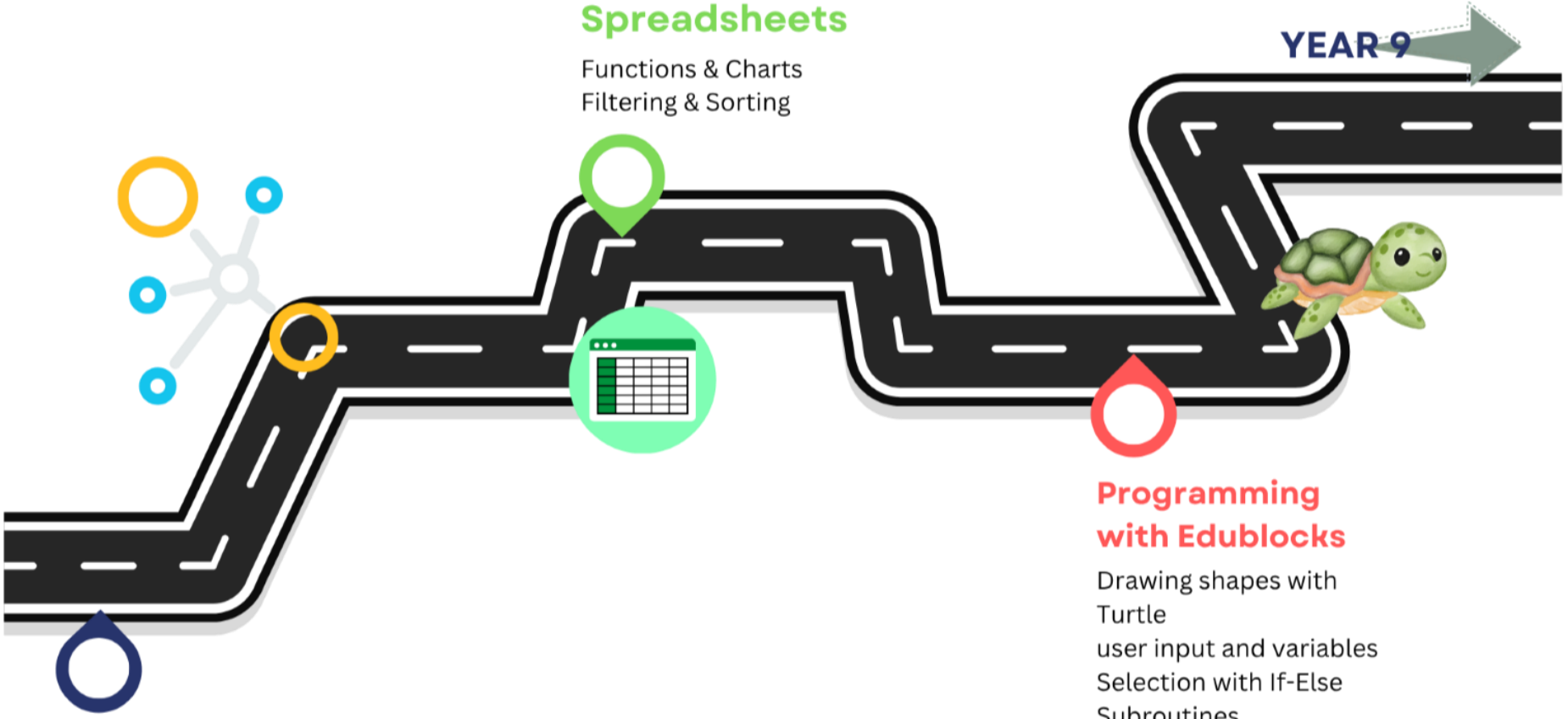
Year 9 –

Year 8 Computing Learning Journey

Spreadsheets

Functions & Charts
Filtering & Sorting

YEAR 9



Programming with Edublocks

Drawing shapes with Turtle
user input and variables
Selection with If-Else
Subroutines

Networks

LANs, WANs & Connection Types
Topologies
Network Hardware

python™

edublocks

KING'S LYNN ACADEMY

EMAT
EASTERN MULTI-ACADEMY TRUST

KEY VOCABULARY

Term One - Networks

- **Network**: Two or more computers connected to share data and resources.
- **LAN**: Local Area Network – a network in a small geographical area like a school.
- **WAN**: Wide Area Network – a network that covers a large geographical area.
- **Topology:** The physical or logical layout of a network (e.g., star, bus).
- **Router**: A device that connects different networks together and routes data.

Term Two - Spreadsheets

- **Spreadsheet**: A program that stores data in rows and columns for analysis.
- **Cell:** The intersection of a row and column in a spreadsheet.
- **Formula**: A calculation using cell references (e.g., =A1+B1).
- **Function:** A predefined formula (e.g., SUM, AVERAGE, IF).
- **Filter**: A tool to display only the rows that meet specific criteria.

Term Three - Programming with Edublocks

- **Variable:** A storage location in a program that holds a value.
- **Input**: Data given to a program by the user.
- **Selection:** A decision-making process using if, elif, else.
- **Iteration:** Repeating a block of code using loops (for, while).
- **Subroutine:** A named section of code that performs a specific task (function or procedure).

Quick Recap Questions

1. What is the difference between LAN and WAN?
2. Give an example of a spreadsheet function and explain what it does.
3. What is a variable used for in programming?
4. What is the difference between selection and iteration?
5. What is the purpose of a subroutine in code?

PD & PDA

KING'S LYNN ACADEMY

Year 8

Half Term 6

Intimate Relationships & consent

Spirited Arts

What religion thinks about Money & Wealth

Sexual Orientation & Gender

Puberty Recap

Careers

What religion thinks about Environment

Careers

What religion thinks about celebrity & social media

What religion thinks about poverty

Half Term 5

What religion thinks about war

What religion thinks about Gender & Sexuality

First Aid – Fainting

Legal and Illegal Drugs

First Aid – Bleeding & Head Injuries

Women in Islam

Islam Today

Festivals

Half Term 4

Hajj

Sawm & Zakah

Muhammad

Qur'an

Mosque

Shahadah and Salah

Body Image

Sending Pics

Digital Footprint

History of Islam

Festivals

Half Term 3

Political Parties

Pilgrimage

Worship

Parliament

Church Visit

Monarchy

Heaven and Hell

Resurrection and Ascension

Half Term 2

History of Christianity

Incarnation

Mental Health

Crucifixion

Mental Health

Half Term 1

Beliefs about

What are the Abrahamic Faiths?

Goal Setting

Welcome to your Personal Development Journey

YR8 KNOWLEDGE ORGANISER - PD

ISLAM

THINGS YOU NEED TO BE ABLE TO DO:

- UNDERSTAND WHAT ISLAM IS
- UNDERSTAND DIFFERENT ISLAMIC WORLD VIEWS
- UNDERSTAND THE DIFFERENCE BETWEEN SUNNI AND SHIA
- UNDERSTAND THE IMPORTANCE OF THE PROPHET MUHAMMAD
- UNDERSTAND WHAT THE FIVE PILLARS OF ISLAM ARE

KEY QUESTIONS

- WHAT IS ISLAM?
- WHAT ARE THE FIVE PILLARS OF ISLAM?
- WHY IS THE PROPHET MUHAMMAD CENTRAL TO MUSLIMS?
- WHAT ROLE DO ANGELS PLAY IN THE MUSLIM FAITH?

TIER 2 VOCAB

REAL – ACTUALLY, EXISTING AS A THING OR OCCURRING IN FACT; NOT IMAGINED OR SUPPOSED

BELIEF – AN ACCEPTANCE THAT SOMETHING EXISTS OR IS TRUE, ESPECIALLY ONE WITHOUT PROOF

ACCEPTANCE – THE ACTION OF CONSENTING TO RECEIVE OR UNDERTAKE SOMETHING

PROPHET – A PERSON WHO IS BELIEVED TO HAVE A CONNECTION WITH A DIVINE BEING AND TO SPEAK ON THEIR BEHALF.

YR8 KNOWLEDGE ORGANISER - PDA

INTERNET SAFETY

THINGS YOU NEED TO BE ABLE TO DO:

- UNDERSTAND WHAT IS A DIGITAL FOOTPRINT
- UNDERSTAND WHAT DEVICE ADDICTION IS
- THE IMPACTS OF SOCIAL MEDIA
- EXPLAIN THE LAW ON SEXTING AND SENDING PHOTOS
- WHAT EFFECTS OUR BODY IMAGE
- THE IMPACT OF ONLINE GAMING

KEY QUESTIONS:

WHAT IS A DIGITAL FOOTPRINT?
WHAT IS DEVICE ADDICTION
WHAT EFFECTS OUR BODY IMAGE?

TIER 2 VOCABULARY

DIGITAL FOOTPRINT – INFORMATION ABOUT A PERSON THAT EXIST BECAUSE OF AS A RESULT OF THEIR ONLINE ACTIVITY
DEVICE ADDICTION – A BEHAVIOURAL ADDICTION THAT INVOLVES COMPULSIVE AND EXCESSIVE USE OF A DEVICE
BODY IMAGE – A PERSONS SUBJECTIVE PICTURE OR MENTAL IMAGE OF THEIR OWN BODY

HEALTHY LIFESTYLE & WELL BEING

THINGS YOU NEED TO BE ABLE TO DO:

- TO UNDERSTAND WHAT A HEALTHY LIFESTYLE IS
- WHAT IS MEANT BY HEALTHY EATING & SLEEPING
- WHAT ARE UNHEALTHY HABITS
- HOW TO DEAL WITH INJURIES
- HOW TO DEAL WITH FAINTING

KEY QUESTIONS:

WHAT IS A HEALTHY LIFESTYLE?
WHAT ARE THEY WAYS WE CAN IMPROVE OUR EATING?
HOW CAN WE OVERCOME UNHEALTHY HABITS?
WHY IS FIRST AID IMPORTANT?

TIER 2 VOCABULARY

HEALTHY LIFESTYLE – A WAY OF LIVING THAT PROMOTES PHYSICAL, MENTAL AND SOCIAL WELL-BEING, AND LOWERS THE RISK OF SERIOUS ILLNESS OR EARLY DEATH
UNHEALTHY HABITS – A BEHAVIOUR THAT CAN NEGATIVELY IMPACT A PERSONS MENTAL AND PHYSICAL HEALTH
FIRST AID – HELP GIVEN TO A SICK OR INJURED PERSON UNTIL FULL MEDICAL TREATMENT IS AVAILABLE

Drama (Performing Arts)

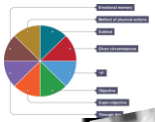
Year 9

KING'S LYNN ACADEMY

Applying Realism Techniques

Konstantin Stanislavski

Performing



Year 8

Topic 4

Realism

Key System

Performing

Preparing a Performance

Taking Direction

Working as a team

Topic 3 Continued

Script Work

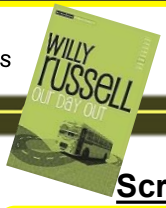
Learning a script

Writing scripts

Curious Incident of the Dog in the Night-Time

Features of a script

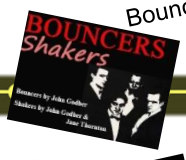
Playwrights



Our Day Out

Dear England

Bouncers



Topic 3

Script Work

Performing

Improvisation Techniques

Improvisation games

Building confidence

What is improvisation?

Topic 2

Improvisation

Performance

Creating a Performance

Audience Participation

Little Red Riding Hood

Typical Plot

Watching and Evaluating Performance

Topic 1 Continued

Pantomime

Gender Role Reversal

Slapstick Comedy

Character Development

Names & Stories

Use of voice

Explorative Activities

Stock Characters

Pantomime

Topic 1

Welcome back to KLA your Journey continues

Pantomime

PANTOMIME

Stock Characters

Hero

Damsel

Aged Parents

Trusty Servant

Villain

Villain's Sidekick

Keywords

Stock Character – A stereotypical character, easily recognisable by audiences because of their predictable traits. This is usually seen in common social or literary stereotypes. Example: Hero, Villain or Princess.

Gender Role Reversal – Taking on a role of the opposite gender and acting using their typical behaviours.

Audience Participation – The audience being actively involved in the performance.

IMPROVISATION

What is it? - Making something up on the spot.

Required from students:

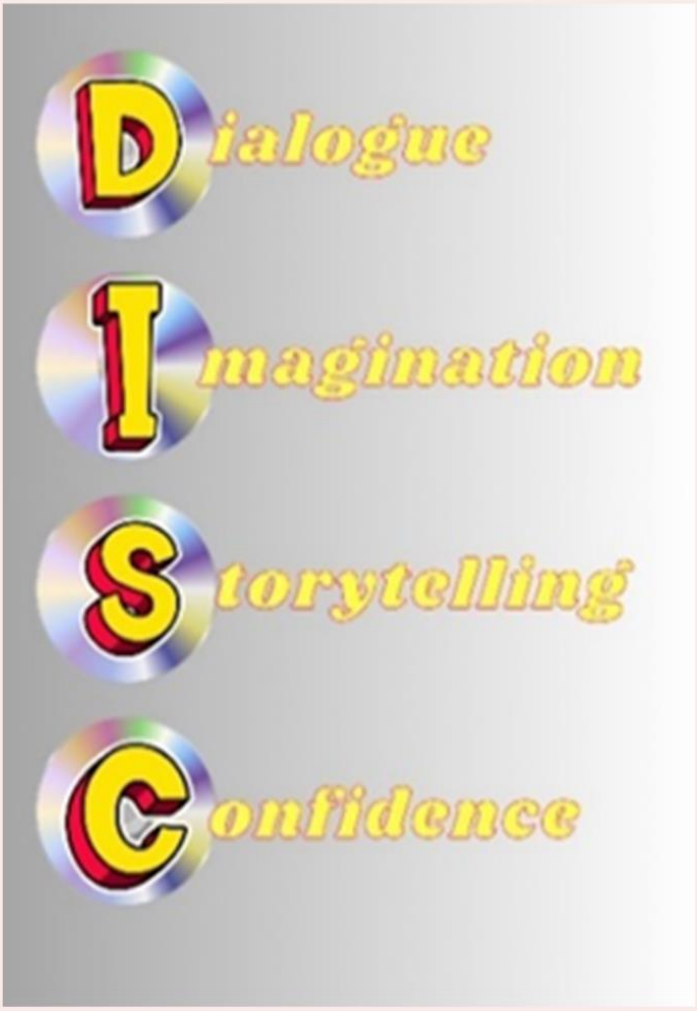
–Time and practice

–Freedom and confidence to be silly

–Confidence in dialogue and storytelling

–Team work

DISC – FOUR MAIN SKILLS NEEDED FOR IMPROVISATION



Year 9

Music

Year 8

KING'S LYNN ACADEMY

Topic 4

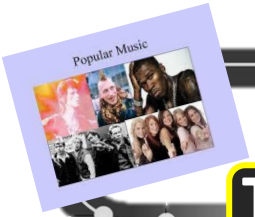
Music in Game

Game Themes

Composing and Performing

Exploring Ostinatos in Western Classical Tradition

Patterns in Classical Music



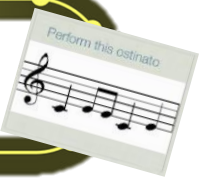
Topic 3 Continued

Riffs and Hooks in Popular music

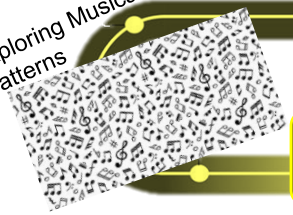
Hooks

Riffs

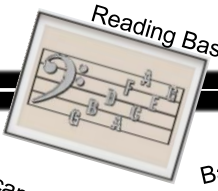
Ostinato



Exploring Musical Patterns



Topic 3



Reading Bass Clef

Hook and Riffs

Off Beat Chords

Recapping notes

Bass Cle

Reggae Context

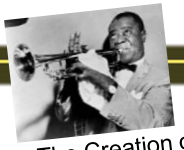
Typical Features

Topic 2

Offbeat

Rehearsing

Introduction of Records



The Creation of Jazz

The 1920s

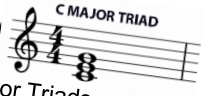
Topic 2 Continued

Jazz and Blues Continued

Learning the 12 Bar Blues Chords

Context (Delta Blues)

Features of Blues



Major Triads on Keyboards

Topic 1

Welcome back to KLA your Journey continues

Jazz and Blues

Year 8 Topic 2

Offbeat

Key Facts:

Genre:

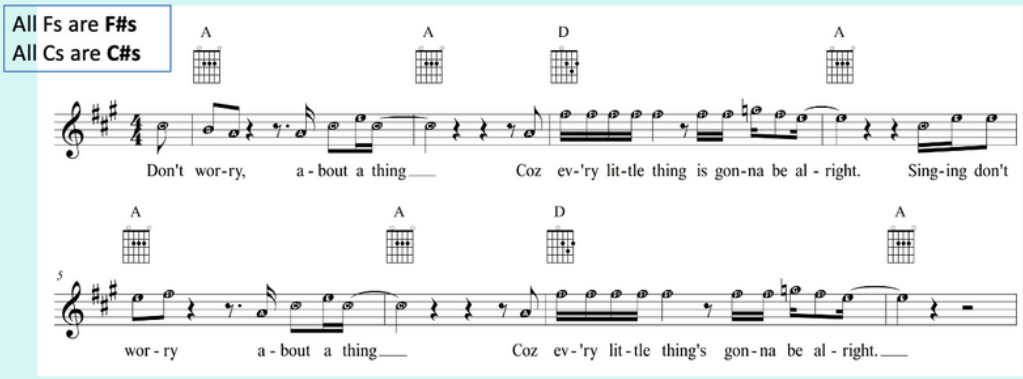
Reggae music is extremely common for chords being played on the offbeat. Reggae music comes from Jamaica

Offbeat

Notes are not played on the main beats of a bar. this makes them sound out of time, and gives a more relaxed feel.

Three Little Birds (Melody)

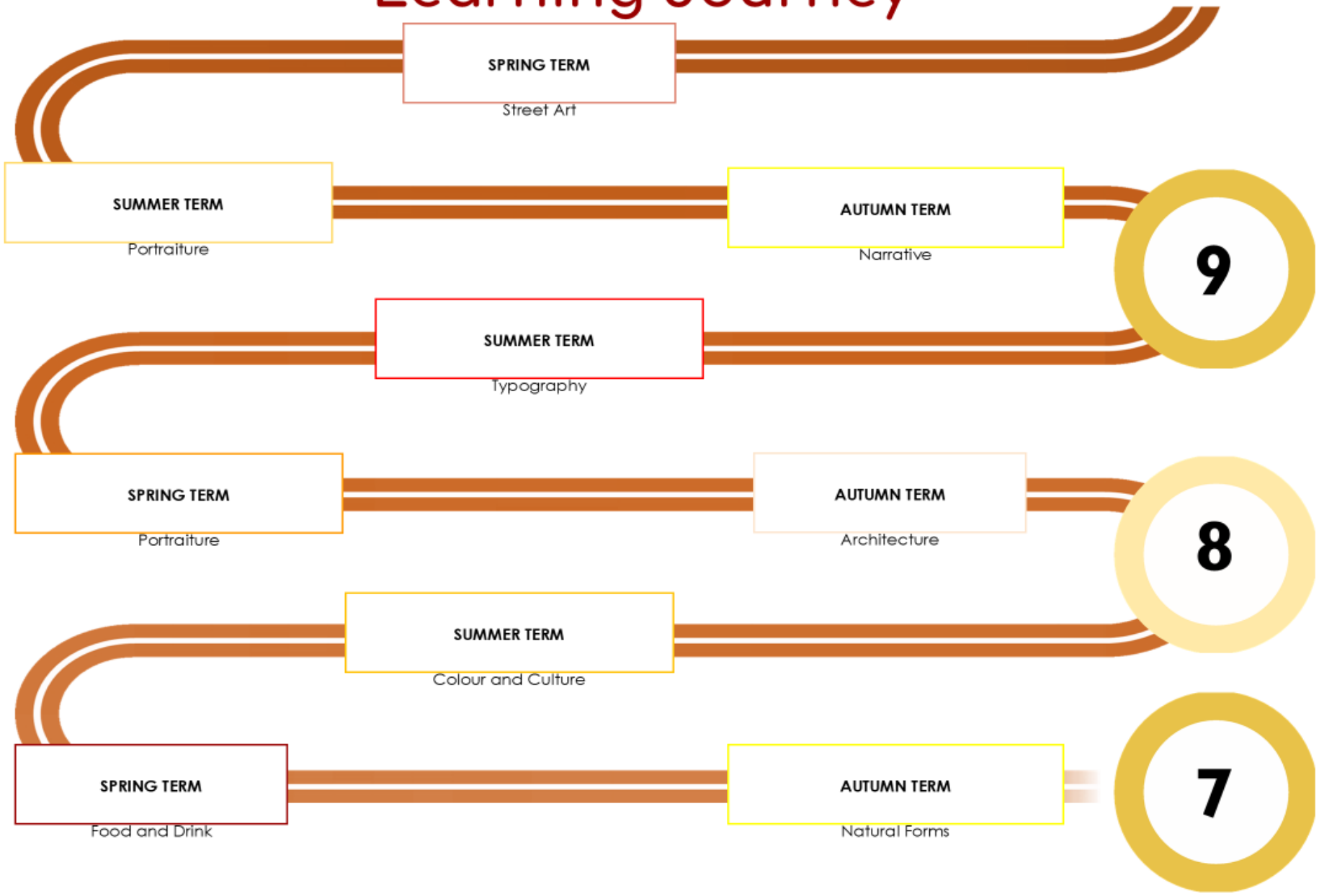
All Fs are **F#s**
All Cs are **C#s**



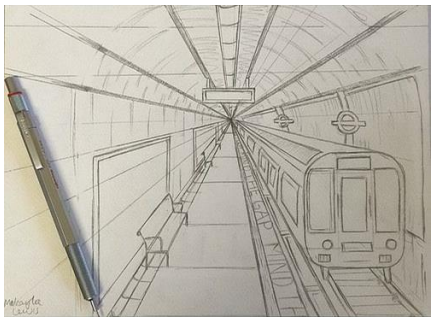
Chords

A = A C# E **D** = D F# A

KS3 Art
Learning Journey



Year 8 Autumn Term Knowledge Organiser



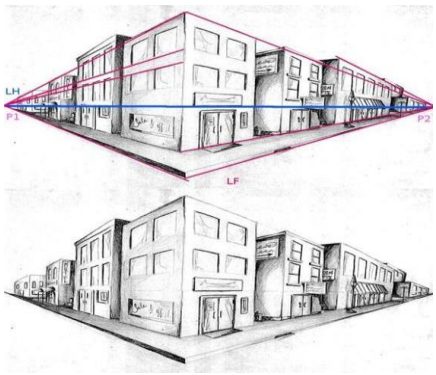
1 point perspective drawing

Matt Hollings

Monoprinting is a form of printmaking that has lines or images that can only be made once, unlike most printmaking, which allows for multiple originals.

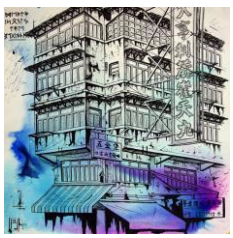
Architecture is the art or practice of designing and constructing buildings.

Ollie Maxwell



2 point perspective drawing

Petra Dufkova



Peter Yuill

Art Specific Language and Terms

One point perspective	One-point perspective is a drawing technique where all receding lines appear to converge at a single point on the horizon line, known as the vanishing point.	**Collage**	A piece of art made by sticking various different materials such as photographs and pieces of paper or fabric on to a backing.
Watercolour	Watercolour is a painting method in which the paints are made of pigments suspended in a water-based solution.	**Line Drawing**	Line drawing, also known as line art, refers to a style of illustration that uses only lines to create images, without any shading or color.
Two point perspective	Two-point perspective is a linear perspective technique where parallel lines recede and converge towards two distinct vanishing points along the horizon line.	**Burnishing**	Layering and blending until no paper grain shows through the coloured pencil layers.

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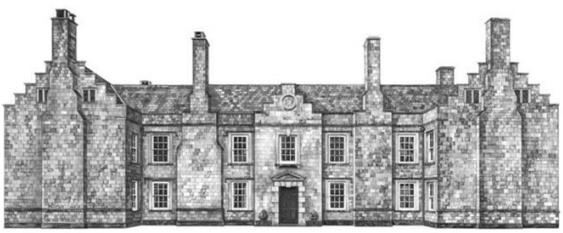
MINTY SAINSBURY

Minty Sainsbury is a London-based artist born September 21 1991. Sainsbury is best known for her highly detailed and instantly recognisable stylised architectural pencil drawings.

Currently, Minty's work focuses on fragments - architectural jewels - revealing the hidden harmony and beauty in their composition.



Friedensreich Hundertwasser was a painter, architectural doctor, ecological activist and philosopher. Born in Vienna in 1928, he is known for making one of the most important contributions in the art history of post-war modernism. One of the central motifs of his colorful picture world is the spiral.

HUNDERTWASSER

Art Specific Language and Terms			
Chine Colle	"Chine collé" is a printmaking technique where thin, delicate papers are adhered to a heavier support paper during the printing process.	**Annotation**	Explaining and labelling your own work.
Layering	The process of layering while painting makes it easier to add surface texture, subtle colour changes and depth in a piece of art.	**Secondary Source imagery**	Using the work or imagery of others to help inspire and influence your own ideas and work.
Depth	Refers to making objects appear closer or further away and making a two-dimensional image seem three-dimensional.	**Control**	How carefully you work with a specific media.
Accuracy	The extent to which one piece of work looks like another.	**Negative shape**	The empty or unfilled areas of a piece of artwork.

Year 8 Spring/Summer Term Knowledge Organiser

Art Specific Language and Terms			
Scaling Up	A technique to help enlarge an image accurately. A grid is drawn over the image to be copied and also onto the paper (both to scale). The image is then copied in sections.	**Colour Blending**	The change from one colour to another gradually. The colour change should appear smooth and is achieved when the two colours are mixed and layered smoothly without an obvious step or line.
Oil paint	Oil paint is a slow-drying paint that consists of particles of pigment suspended in a drying oil that forms a tough, coloured film on exposure to air.	**Layering**	Applying paint in stages, starting with lighter base colours and adding darker tones later over the top. Often there can be multiple layers to a painting.
Acrylic Paint	Acrylic paint is a fast-drying paint made of pigment suspended in acrylic polymer emulsion.	**Poster Paint**	Poster paint is a distemper paint that usually uses a type of gum-water or glue size as its binder.
Gouache Paint	Gouache is a type of water-soluble paint that, unlike watercolour, is opaque so the white of the paper surface does not show through.	**Observation**	Looking closely at the original image/source so that all the detail and colour changes are seen and replicated.

In art, the term **painting** describes both the act of painting, (using either a brush or other implement, such as palette knife, sponge, or airbrush to apply the paint); and the result of the action – the painting as an object.

Paintbrush choice:

Flat brushes are versatile. Their long bristles can lay smooth patches of color, make long, bold strokes or when using their edges, execute fine crisp lines. Marks made with a flat brush have a distinctive square edge.

Round brushes come in pointed and blunt tips. Both can be used to create a linear mark by applying more or less pressure during the stroke; the pointed round brush is ideal for fine detail.

The 4 most versatile brushes:

Filbert

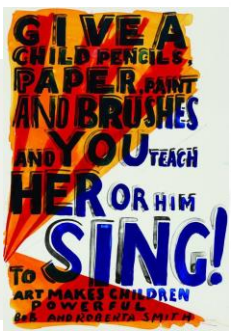
Bright

Round

Flat

David Carson

Bob and Roberta Smith



Year 8 Spring/Summer Term Knowledge Organiser

Art Specific Language and Terms			
Typography	Typography is the art and technique of arranging type to make written language legible and appealing when displayed.	**Leading**	Leading is the space between individual lines of type.
Typographer	A Typographer is someone who designs a typeface or who arranges type.	**Display Typeface**	A display typeface is a typeface that is used for visual impact, rather than for extended passages of text.
Kerning	kerning is the process of adjusting the spacing between letters.	**Script Typeface**	Script fonts can be formal scripts, derived from 17th century formal writing or styles that look informal or handwritten as well as calligraphic scripts which emulate calligraphy.
Lino-cut printing	Lino-cut printing is a form of printmaking where the printing plate is cut into lino. The lino-cut is then inked, a piece of paper placed over it, and then run through a printing press or pressure applied by hand to transfer the ink to the paper.	**Graphic Designer**	Graphic designers create visual concepts, using computer software or by hand, to communicate ideas that inspire, inform, and captivate consumers. They develop the overall layout and designs for advertisements, brochures, magazines, and branding.

Types of Font:

Sans-serif:
(without flicks)

Serif:
(with flicks)

Sans is the French word for without.

AaBbCc
AaBbCc

Weight and Size:

Changing the
weight or
size
of type
changes the emphasis

Joby Carter

Joby Carter, born in Maidenhead in 1975 is a traditional signwriter, decorative artist, restoration specialist and author. I'm also an experienced teacher of heritage decorative art skills including signwriting and the endangered craft of fairground art.