Haggerston School

Year 8 Knowledge Organiser Term 3

2024

Aspiration Creativity Character

Knowledge Organiser - Guidance

- You must bring your Knowledge Planner to school every day in your school bag.

- You should place your Knowledge Planner on your desk at the start of every lesson so that you can refer to it when instructed by your teacher.

- If you lose your Knowledge Planner, you will need to purchase a replacement one from Student Services.

- **In the Study Centre**, you will use your Knowledge Planner to study the relevant subject's Knowledge Organiser and **learn** the information provided.

- Use your blue exercise book to make notes to help revise and learn the information provided in each Knowledge Organiser.

KS3 Knowledge Organiser - Contents

Aspiration Creativity Character

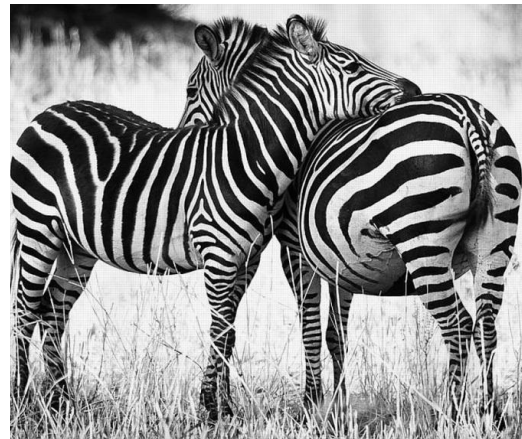# Term 3

Aspiration Creativity Character

Bridget Riley

When Bridget Riley first exhibited her black and white abstract paintings in the 1960s, people were amazed at how they seemed to move. It was like she was painting with electricity and the patterns were live wires!

This style of painting is known as op art. Op artists put colours, shapes and patterns together in clever ways to create an optical illusion. This can make an image look like its moving!

Bridget Riley was born in 1931 in London, but when World War II broke out she left the city and moved to Cornwall. She would walk along the coastline and explore the caves where she would sit and watch the reflections in rock pools. She also liked looking at the sea and how the light made it change colour during the day.

She started experimenting with colour, putting warm and cold colours together like red and blue to make the paintings vibrant. She travelled to many different countries, like Egypt and India, and looked closely at the way the artists in those countries used colour. She was interested in the way hot countries used very bright colours to stop them fading in the sun.

Key term: **Abstract**
Abstract art is art that does not have any recognisable subject matter (what is in the artwork). The truth is, abstract art is not "about nothing". It is about **form, colour, line, texture, pattern, composition** (layout) and **process** (how the work is made). These are the formal qualities of artwork, because they describe what the art looks like and how it is created. Abstract art is an exploration of these formal qualities.

Self Quiz:
1. Can you explain what op art is?
2. What was Riley's work influenced by?
3. Can you explain what abstract art is?
4. Can you explain how Riley's work is abstract?
5. Can you create a list of different patterns and shapes that you see in the city around you or in nature that could be used as inspiration for a piece of op art?

Practical application of art history:
1. Can you draw one of Riley's artworks with a pencil?
2. Can you recreate one of Riley's artworks using pen?
3. Can you create a tonal drawing of the photo of two zebras?
4. Can you create your own op art pattern inspired by any shapes or patterns that you can see around the room?
5. Write in full sentences WWW and EBI.

ART

Aspiration Creativity Character

COMPUTING

Beginner's Python Cheat Sheet

Variables and Strings
Variables are used to store values. A string is a series of characters, surrounded by single or double quotes.

Hello world
```
print("Hello world!")
```

Hello world with a variable
```
msg = "Hello world!"
print(msg)
```

Concatenation (combining strings)
```
first_name = 'albert'
last_name = 'einstein'
full_name = first_name + ' ' + last_name
print(full_name)
```

Lists
A list stores a series of items in a particular order. You access items using an index, or within a loop.

Make a list
```
bikes = ['trek', 'redline', 'giant']
```

Get the first item in a list
```
first_bike = bikes[0]
```

Get the last item in a list
```
last_bike = bikes[-1]
```

Looping through a list
```
for bike in bikes:
    print(bike)
```

Adding items to a list
```
bikes = []
bikes.append('trek')
bikes.append('redline')
bikes.append('giant')
```

Making numerical lists
```
squares = []
for x in range(1, 11):
    squares.append(x**2)
```

Lists (cont.)

List comprehensions
```
squares = [x**2 for x in range(1, 11)]
```

Slicing a list
```
finishers = ['sam', 'bob', 'ada', 'bea']
first_two = finishers[:2]
```

Copying a list
```
copy_of_bikes = bikes[:]
```

Tuples
Tuples are similar to lists, but the items in a tuple can't be modified.

Making a tuple
```
dimensions = (1920, 1080)
```

If statements
If statements are used to test for particular conditions and respond appropriately.

Conditional tests
```
equals                x == 42
not equal             x != 42
greater than          x > 42
  or equal to         x >= 42
less than             x < 42
  or equal to         x <= 42
```

Conditional test with lists
```
'trek' in bikes
'surly' not in bikes
```

Assigning boolean values
```
game_active = True
can_edit = False
```

A simple if test
```
if age >= 18:
    print("You can vote!")
```

If-elif-else statements
```
if age < 4:
    ticket_price = 0
elif age < 18:
    ticket_price = 10
else:
    ticket_price = 15
```

Dictionaries
Dictionaries store connections between pieces of information. Each item in a dictionary is a key-value pair.

A simple dictionary
```
alien = {'color': 'green', 'points': 5}
```

Accessing a value
```
print("The alien's color is " + alien['color'])
```

Adding a new key-value pair
```
alien['x_position'] = 0
```

Looping through all key-value pairs
```
fav_numbers = {'eric': 17, 'ever': 4}
for name, number in fav_numbers.items():
    print(name + ' loves ' + str(number))
```

Looping through all keys
```
fav_numbers = {'eric': 17, 'ever': 4}
for name in fav_numbers.keys():
    print(name + ' loves a number')
```

Looping through all the values
```
fav_numbers = {'eric': 17, 'ever': 4}
for number in fav_numbers.values():
    print(str(number) + ' is a favorite')
```

User input
Your programs can prompt the user for input. All input is stored as a string.

Prompting for a value
```
name = input("What's your name? ")
print("Hello, " + name + "!")
```

Prompting for numerical input
```
age = input("How old are you? ")
age = int(age)

pi = input("What's the value of pi? ")
pi = float(pi)
```

Python Crash Course
Covers Python 3 and Python 2

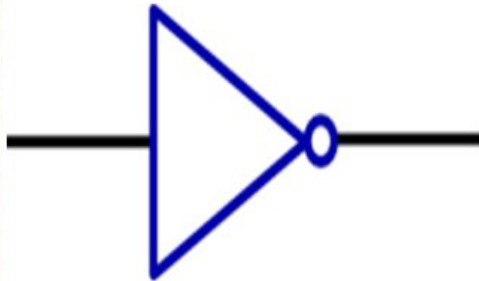nostarchpress.com/pythoncrashcourse

3

2.4 BOOLEAN LOGIC

NOT GATE

A NOT gate takes an input and outputs the opposite.

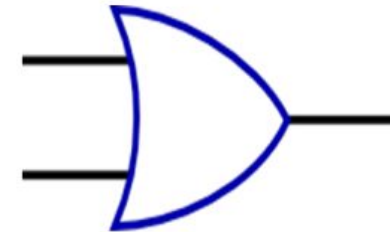| Input	Output
0	1
1	0

AND GATE

For an AND gate to give an output of 1, both inputs must be 1.
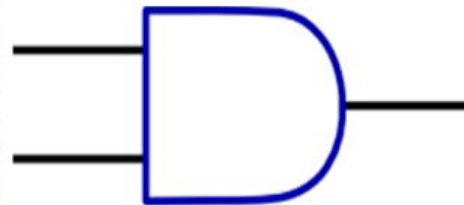
Input A	Input B	Output
0	0	0
1	0	0
0	1	0
1	1	1

OR GATE

For an OR gate to give an output of 1, either inputs must be 1.

Input A	Input B	Output
0	0	0
1	0	1
0	1	1
1	1	1

COMBINED GATES

Logic gates can be combined:
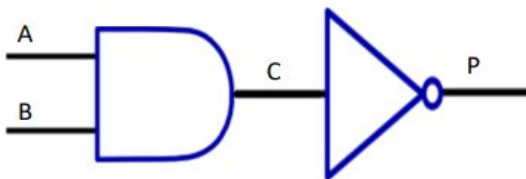
A	B	C	P
0	1	0	1
1	0	0	1
1	1	1	0
0	0	0	1

LOGIC EXPRESSIONS

The table below shows the logic gate expressions and notations that you need to know:

Gate	Expression	Notation
NOT	NOT A	$\neg A$
AND	A AND B	$A \wedge B$
OR	A OR B	$A \vee B$

WHY COMPUTERS USE BINARY

Computers use 1s and 0s to represent the flow of electricity in their circuits.

0 = off
1 = on

Bit = a single bit (0 or 1)
Nibble = 4 bits
Byte = 8 bits
Kilobyte = 1000 bytes
Megabyte = 1000 kilobytes
Gigabyte = 1000 megabytes
Terabyte = 1000 gigabyte
Petabyte = 1000 terabytes

COMPUTING

4

COMPUTING

Year 8 Python Knowledge Organiser

Programming with Python

```
File  Edit  Format  Run  Options  Windows  Help
#Password Checker

print("Welcome to PGO Security Systems")
print("****************************")

password = input("Enter your password: ")

if password == "abcd1234":
    print("Access Granted")
else:
    print("Access Denied")

input("Press ENTER to exit the program")
                                            Ln: 1 Col: 0
```

Python's Development Environment
Called IDLE – Integrated Development Environment

Two Modes:
Interactive Mode lets you see your results as you type them.
Script Mode lets you save your program and run it again later.

Writing error-free code
When writing **programs**, **code** should be as legible and error free as possible. **Debugging** helps keep **code** free of **errors** and documenting helps keep **code** clear enough to read.

Syntax errors
Syntax is the spelling and grammar of a **programming language**. In **programming**, a **syntax error** occurs when:

- there is a **spelling mistake.**
- there is a **grammatical mistake.**

Data Types
String - holds alphanumeric data as text
Integer - holds whole numbers
Float - holds numbers with a decimal point
Boolean - holds either 'True' or 'False'

Defining Variable Data Types
Python automatically assigns a data type to a variable. You can override this to manually define or change the data type using:

str()   ,   int()   or   float()

Selection
When designing **programs**, there are often points where a **decision** must be made. This **decision** is known as **selection** and is implemented in **programming** using **IF statements**.

Operator	Meaning	Example	Evaluates to
==	equal to	7==7	True
!=	not equal to	6!=7	True
>	Greater than	7>6	True
<	Less than	5<8	True
>=	Greater than or equal to	6>=8	False
<=	Less than or equal to	7<=7	True

Iteration
Algorithms consist of steps that are carried out (performed) one after another. Sometimes an **algorithm** needs to **repeat** certain steps until told to stop or until a particular condition has been met.

Iteration is the process of repeating steps.

Variables
A **variable** is a location in **memory** in which you can temporarily store text or numbers. It is used like an empty box or the Memory function on a calculator. You can choose a name for the box (the "**variable name**") and change its contents in your **program.**

Using a Variable (firstname)
print ("What is your name?")
firstname = input()
print ("Hello,",**firstname**)

Functions
Functions are special keywords that do a specific job. **Functions** appear in purple.

print() and **input()** are examples of functions

```
print ("What is your name?")
firstname = input()
print ("Hello,",firstname)
```

Adding Comments
Comments are useful to help understand your **code.** They will not affect the way a **program** runs. **Comments** appear in red and have a preceding **#** symbol.

```
#firstname is a variable
print ("What is your name?")
firstname = input()
print ("Hello,",firstname)
```

Cooking & Nutrition

Nutrient	Function	Source
Carbohydrates	-Broken into Starch and Sugar -Starch foods are called complex carbohydrates and release energy over a long period of time. -Sugar are called simple carbohydrate. They release energy quickly. Lactose, Fructose and Sucrose are all Sugars.	**Nutrients**
Fibre	-Prevents constipation -Absorbs poisonous waste from digestive food -Stays undigested but helps move digested food through our system	
Protein	-Helps repair and grow new cells (muscles and body tissue) -Provides some energy	
Fat	-Insulates the body from the cold -Cushions your bones and organs from any damage caused by knocks. -Stores energy	
Vitamins	Unlike the other nutrients, they are only needed in small amounts. They are generally used to: -Controls chemical reactions -Keeping the body healthy and preventing some diseases linked to a poor diet -Regulate the function and repair of cells	
Minerals	Unlike the other nutrients, they are only needed in small amounts. They are generally used to: -Turn the food we eat into energy -Build strong bones and teeth - Control body fluids	
Water	-Our bodies are 65% water. It is vital for our body to stay hydrated. -Chemical reactions in our cells take place in water. -Waste products are passed out of our bodies in water. -Our blood transports substances that are dissolved in water. -Water is in sweat that cools us down	

MACRONUTRIENTS — Needed by the body in large amounts

MICRONUTRIENTS — Needed by the body in small amounts

Factors affecting food choice: When, how, who and what we eat can all be affected by a number of factors; health, **medical issues**, **stage of life**, personal preference, family, religion, social media, cost, availability, cultural celebrations, lifestyle, ethical and environmental implications etc.

Medical Issues

Lactose Intolerance: The inability to digest the sugar **Lactose** found in Dairy based foods
Gluten Intolerance: The inability to digest the protein **Gluten** found in **Wheat** based foods
Coeliac Disease: Adverse reaction to **gluten** causing the small intestine to become inflamed.
Obesity: The state of being overweight, having too much body **fat** as a result of over eating and not enough exercise. Being obese can result in **High Cholesterol**, this refers to the amount of fat in the veins. As the fat builds up it makes it more difficult for the blood to flow, this is described as **Blood Pressure.** Having high blood pressure or cholesterol increases the risk of an **heart attack.**
The older you get it is more difficult to manage obesity.
Anaemia: Condition where the body does not have enough **iron** and therefore does not produce enough **red blood cells**. More common in females (teenage girls and pregnant women)
Osteoporosis: Condition that causes the **bones** to weaken and become fragile. More common in older people.
Type 2 Diabetes: Issues producing **Insulin** which controls the **blood sugar levels**

Stages of Life

Babies: Initially fed Milk from either their mother or formula milk which contains the essential nutrients - particularly fat and calcium. After 6 months approx., Babies are given soft pureed food to help swallowing and digestion.
Children 1-4: Meals should be small and regular to sustain energy use; high in protein, fat, complex carbohydrates but low in fibre.
Children 5- 12: Should have a healthy balanced diet (following the EWG) and be active. It is at this stage that children can become obese.
Teenagers: During the change from child to adult muscles begin to grow more rapidly, therefore plenty of protein is needed. Girls may need more Iron as they lose blood during menstruation.
Adults: Need to follow a healthy lifestyle; keeping to 2000 Cals F/2500 Cals M, avoid drinking alcohol, smoking or taking drugs. Exercise should be regular and varied.
Old People: Protein to maintain muscles, calcium to maintain bones and teeth, Vitamin D to maintain skin and absorb calcium, Iron to avoid anaemia, fibre & water to maintain a healthy digestive system.

COOKING & NUTRITION

Aspiration Creativity Character

COOKING & NUTRITION

Food Spoilage

When a food deteriorates in quality or becomes unsafe to eat it is called **spoiled.** This can happen through natural **decay**, **bacterial growth** or **contamination**. If the conditions are correct the rate of spoilage will increase.

Bacteria is harmful **micro-organism** make food **dangerous** to eat. To multiply (and become dangerous) bacteria needs enough food and moisture, the right temperature and enough time. To stop the multiplying of bacteria, you must limit these conditions.

You can use the **4 CS** to do this:

Cross Contamination: preventing bacteria from spreading across different surfaces eg. bacteria from raw meat spreading to ready to eat food.
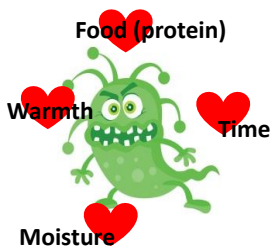preventing raw foods (meat) from contacting ready to
Cooking: Kills the bacteria
Chilling: Keeps it dormant (not active)
Cleaning: Kills bacteria, but also prevents food and moisture from being available.

As well as drying hands and surfaces effectively as this takes away the moisture.

Food (protein)

Warmth   **Time**

Moisture

Contamination: The transfer and subsequent presence of harmful bacteria or chemicals in food or preparation area. There are 4 types of contamination:

Biological Contamination: Any transfer of bacteria from human, animal or food to food or preparation area. Including sneezing, coughing, blood, pus/transfer of bacteria from animal to their food product -meat, eggs, milk/transfer of bacteria from unclean hands

Cross contamination: is an example of biological contamination, it refers to the transfer of bacteria from raw meat to ready to eat foods

Physical Contamination: when a tangible object (you can see or feel) falls into food eg. hair, finger nails, plasters, plastic, dirt. Physical contaminants can act as vehicles to transfer of bacteria

Chemical Contamination: any transfer of chemicals eg, bleach, pesticides, cleaning product and perfume.

Food & The Wider World: Seasonal Foods

Seasonal Foods are foods that are ready to harvest and eat at certain times of the year eg. Strawberries in the UK in Summer. Seasonal foods are better in nutritional quality, taste and texture and cheaper. Buying seasonal foods reducing **food miles** and **carbon footprint** as you are using food that is naturally available within your country, rather than importing it from other countries. In the UK many foods are imported as they cannot grow in the UK climate and soil conditions.

Food Miles refers to the distance food has travelled from farm to fork. Food that has travelled further has a higher **carbon footprint**

Farmer Markets are markets that sell local goods from **local** farmers and suppliers. Produce is most likely to be organic, **seasonal,** sold/stored in less packaging but also fresher and better in quality and nutritional value. Shopping locally will reduce food miles/carbon footprint as it is using local suppliers.

Carbon Footprint refers to the amount Carbon dioxide created and released into the atmosphere at each stage of processing a food.

Every time a light is turned on or a machine is used or car travels or a fridge is used, energy is used. The production of this energy creates pollution, causing CO2 to be released.

Food Science: Function of Ingredients - FATS

Rubbing in technique:

Jamaican Patties, Shortbread Biscuits, the toppings of an apple crumble and Mini Quiches are all **crumbly in texture** and buttery in flavour. This is because they all contain high amounts of fat - butter.

When **flour is mixed with water, gluten is formed**. Gluten is needed in bread making to give a stretchy dough and an overall chewy texture.

HOWEVER, when **butter is rubbed into flour** (in the rubbing in technique) the fat from the butter coats the flour and acts like a waterproof coating. This means that l**ess gluten is formed** or **shorter strands of gluten are formed.**

Butter (or FAT) is used as a shortener when making pastry and other baked goods to create a short crumbly texture. That is why shortcrust pastry and shortbread biscuits have 'short' in their name

DRAMA
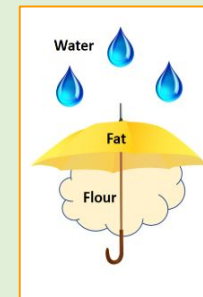
'Lord Of The Flies'

Lord of the Flies – Plot Summary
The play begins when a group of school boys are on a plane leaving Britain. The plane is shot down and eventually crashes leaving the boys stranded on a desert island with no adults. At first the boys are excited to explore the island but over time, when they start to realise they may not be rescued, the boys begin to argue and the island becomes divided. Two rival gangs are formed with two very different leaders.

Ralph and his gang
Ralph is voted leader of the camp by the boys. **Ralph** and his friend **Piggy** discover a conch shell on the beach and realise it could be used as a horn to summon the other boys. When all the boys are together Ralph suggests that if someone wants to speak they must hold the conch shell so that everyone is listened to. Ralph instructs his gang to light a signal fire to track the attention of passing ships. He also suggests building huts as shelter.

"There was a stillness about Ralph as he sat that marked him out: there was his size, and appearance; and most obscurely, yet most powerfully, there was his conch."

"Fair boy" with "mildness of mouth"

"Ralph wept for the end of innocence, the darkness of man's heart."

Jack and his gang
Jack was annoyed that Ralph was voted leader as he wanted to be leader but no one chose him. He rebels against Ralph's rules encouraging the boys to have fun and play. When a passing ship fails to see the smoke signal because Jack and his friends have not tended the fire, Ralph and Jack argue. Jack, fed up of Ralph's moaning, declares himself as a new leader of a tribe of hunters and organises a violent hunt where the boys slaughter a pig and smear its blood on their faces. This savage behaviour eventually escalates with tragic consequences.

"I ought to be chief," said Jack with a simple arrogance, "because I'm head boy."

"Forget the rules! We're strong, we hunt! If there's a beast, we'll hunt it down! We'll close in and beat and beat!"

"We had a smashing time. We hit a pig. I cut the pig's throat."

Context

William Golding wrote 'Lord of the Flies' in 1954, not long after WW2. The novel is symbolic exploring what happens when humans are free from the structure of civilisation and society. Golding highlights the struggle between being civilised, conforming to norms, obeying rules and behaving morally and a savage instinct and impulse that makes us power hungry, selfish and even leads to extreme violence and evil.

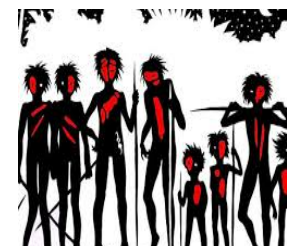### Self Quiz – LOOK, COVER, WRITE, CHECK & CORRECT
Make sure you plot, characters and the context.

Task 1
Having read about Ralph and Jack how would you describe their personalities and style of leadership? Use at least three adjectives (describing words) for each character.
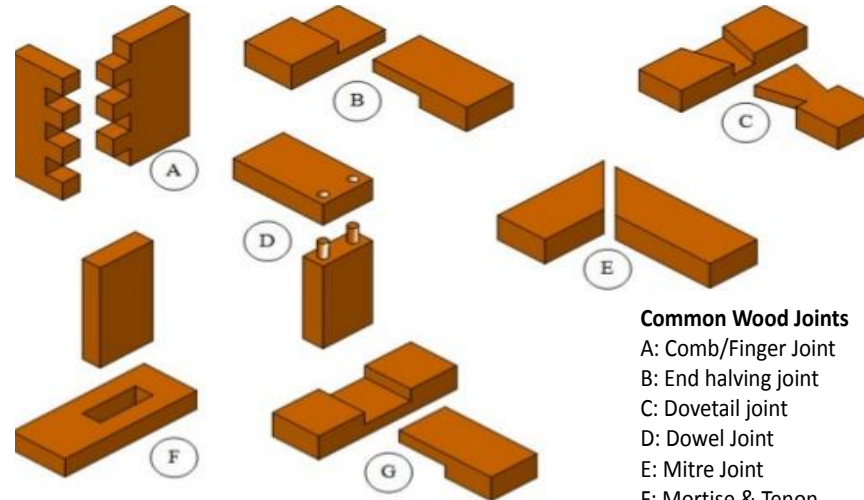
Task 2
'Lord of the Flies' is symbolic. Can you make links between what happens to the boys in the novel and the wider world?

DT

Materials and Metals

Metal Rule

Try Square

Sand Paper

Coping Saw

Wet & Dry Paper

Tools & Equipment

Belt Sander

Flat File & Needle File

Disc sander

Pillar Drill

Tenon saw

Common Wood Joints
A: Comb/Finger Joint
B: End halving joint
C: Dovetail joint
D: Dowel Joint
E: Mitre Joint
F: Mortise & Tenon
E: Tee halving

Material Characteristics

Material Characteristics	
Hardness	resist cutting and indentations to its surface
Toughness	Ability to withstand shock
Strength	The ability to withstand being pulled or stretched, crushed or compressed or twisted.
Elasticity	Ability to be stretched and return to its original size
Flexibility	The ability to bend without breaking and then spring back to its original shape.
Impact Resistant	Ability to resist sudden shocks
Strength to Weight Ratio	Measure of strength to weight, for instance Aluminium is a light weight material but is strong. Therefore having a high strength-to-weight ratio
Ductility	Ability to be stretched like the length of wire without breaking
Malleability	The ability to be hammered, rolled or pressed into shape without breaking
Durability	Able to last a long time

Hardwoods

Type of wood	Description	Usage
American White Oak	A very strong wood Light brown in colour. Open grained Difficult to work with	High quality furniture Beams used in buildings Veneers
Mahogany	An easy to work with materials, Reddish brown in colour	Indoor furniture Shop fittings Bars Veneers
Beech	A straight- grained wood with a fine texture. Light in colour Very hard but easy to work with Can be steam bent	Furniture Toys Too handles
	A very durable oily wood Golden brown in colour. Highly resistant to moisture	Outdoor furniture Boat building Laboratory furniture and equipment

Softwoods

Type of wood	Description	Usage
Spruce	Creamy-white colour Has small hard knots Not very durable	General indoor work Used mainly for kitchens and bedrooms
Scots Pine	A straight-grained wood, but knotty. Light cream/ pale brown in colour Fairly strong but easy to work with. Inexpensive	Readily available for DIY Constructional work and simple joinery work
Parana Pine	Hard and straight grained. Almost knot free. Fairly strong and durable. Expensive Pale yellow in colour with red/ brown streaks	Better quality pine furniture and fittings such as doors and staircases
Yellow cedar	A pale yellow colour with fine even texture Light in weight but stiff and stable	Furniture, amateur aeroplane building, boat building, veneers

Manufactured boards (man made woods)

Type of wood	Description	Usage
MDF medium density fibre board	Smooth even surface. Easily machined and painted or stained. Also available in water and fire-resistant forms	Used mainly for furniture and interior panelling due to its machining qualities. Often veneered or painted
Plywood	A very strong board which is constructed of layers of veneer or plies which are glued at 90degrees to each other. Interior and exterior grades available	Structural panelling in building construction. Furniture making. Some grades used for boat building and exterior work
Hardboard	A very inexpensive particle board which sometimes has a laminated plastic surface	Furniture backs, covering curved structures. Door panels
Chipboard	Made from chips of wood glued together. Usually veneered or covered in plastic laminate	Kitchen and bedroom furniture when veneered or plastic laminated. Shelving and general DIY work

Computer Aided Design

Advantages of CAD	Disadvantages of CAD
Ideas can be drawn and developed quickly	Expensive to set up
Designs can be viewed from all angles and with a range of materials	Needs a skilled workforce
Some testing and consumer feedback can be done before costly production takes place	Difficult to keep up with constantly changing and improving technology
More accurate drawings can be achieved	Files can be corrupted or lost
Changes can be made to the drawings easily	
Easier to store drawings as digital files that can be sent all around the world in an instant	

Animal Farm

Themes
Power and corruption
Responsibility
Hopes and dreams
Class

Plot - learn this and quiz yourself on what happens in each chapter	
1	Old Major, the prize boar, calls a secret meeting of all the farm animals on Manor Farm. He states that a rebellion against their human master, Mr Jones, will one day come.
2	A cow starts the rebellion by walking into the store-shed. The animals end up chasing Mr Jones off the farm.
3	Now they are free, the animals all agree on the Seven Commandments that they will live by. The farm is renamed 'Animal Farm'; there's hope for a better future.
4	The pigs start to order the other animals around and take more food than they should.
5	The animals bravely fight off a human attempt to retake the farm, this becomes known as 'The Battle of the Cowshed'.
6	The animals set to work building a windmill and Napoleon takes charge.
7	Napoleon reduces the rations and rights of the animals and starts breaking the commandments. There is another invasion by the men and the windmill is blown up. Boxer collapses whilst rebuilding it for the second time.
8	Napoleon and the other pigs learn to walk on their hind legs, wear human clothes and carry whips. Despite all their hard work, the animals of the farm are right back to where they began, hungry, scared and exploited by those in charge.

Character - use this section to link characters to key themes and context	
Mr and Mrs Jones	The humans of the story. The farmer and his wife. They symbolise Tsar Nicholas and his wife.
Napoleon	A large, fierce talking pig who is insistent on getting his own way. Represents Joseph Stalin.
Old Major	An older pig who longs for change. He is a good public speaker and inspires the animals to revolt, but dies shortly after. Represents Lenin.Upon his death Napoleon takes charge of the animals and begins to distort Major's ideas.
Snowball	Consistently clashes with Napoleon over the direction of the revolution. Represents Trotsky an enemy of Stalin.
Squealer	Napoleon's second in command and minister of propaganda. Represents Molotov.
Boxer	The hard working farm horse. Represents the working class.
Benjamin	The cynical old donkey. Represents those who were resistant to change.
Mr Pilkington	Owner of a nearby farm. Represents UK and USA.
Mr Frederick	Owner of nearby farm. Represents Nazi Germany.
Mr Whymper	A human who works for the pigs as a messenger.
Mollie	The beautiful white horse. Careless and vain. Represents the upper class.
Muriel, Clover, Moses	The goat, the brown horse and raven on the farm.

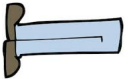| Vocabulary - Use these words in your writing |
|---|
| **tyrant**: a cruel, power hungry leader |
| **dictatorship**: a type of government in which only one ruler has power. |
| **corrupt**: not honest; wicked |
| **rebellion**: an armed fight against one's government |
| **propaganda**: information used to promote a political point of view |
| **allegory**: a story with a hidden meaning |
| **society**: people in living in a community |
| **equality**: the state of being the same, especially in terms of rights, wealth and status |
| **revolution**: a forcible overthrow of government |
| **inferior**: lower in rank or status |
| **superior**: higher in rank or status |
| **dystopia**: a nightmare world in which negative elements of the real world are exaggerated |
| **hypocrisy**: when someone pretends to be different or better than they really are |

Context - write a sentence linking this to key moments from the plot
Author George Orwell - a writer known for being outspoken. Orwell criticised social injustices and over powerful rulers/governments. Orwell also wrote 1984.
Written During WW2 but published in 1945 just after war. The book could not be published during the war, because Great Britain and Russia were allies.
Russia 1894 Russia is ruled by Tsar Nicholas II. Tsar Nicholas is an incompetent and ineffective ruler. He made poor decisions that worsened life for his civilians and refused to listen to advisors.
Russian Revolution February 1917 During WW1 Russia is in ruins. The people of Russia are furious at Tsar Nicholas for taking them into a war they were ill-equipped to fight.
Bolshevik Revolution October 1917 A second revolution in the same year. The Bolsheviks, led by Vladimir Lenin, consolidate their power and eliminate their remaining enemies. The Bolsheviks promised to take care of the workers and the peasants. The Bolsheviks murdered Tsar Nicholas and his family by firing squad.
Dictator Lenin ruled Russia until his death in 1924. At that point Joseph Stalin took over. He wanted Russia to modernise and was prepared to do so at any cost. He worked his people into the ground in low paid factory jobs . He murdered and 'brainwashed' anyone who stood in his way.
Communism The belief that money, homes and resources should be shared equally amongst everyone. Lenin, The Bolsheviks and Stalin all believed in this political philosophy. Similar to Marxism, made famous by Karl Marx.

ENGLISH

ENGLISH

Descriptive techniques (DPRO1)

Technique:	Example:
Personification - a metaphor attributing human feelings to an object.	*As Zeus' rage grew, thunder roared in the dark, ominous skies.*
Onomatopoeia - words that sound a little like they mean.	*The gravel crunched as the army marched.*
Pathetic fallacy - using the weather to create or reflect a certain mood.	*As Zeus' rage grew, thunder roared in the dark, ominous skies.*
Metaphor - a descriptive technique that names a person, thing or action as something else.	*Jealousy is a green-eyed monster.*
Simile - a descriptive technique that compares one thing with another, usually using 'as' or 'like'.	*Manipulation is a force as powerful as an earthquake.*

Ambitious vocabulary: look, cover, write, check, correct.

justice - fair behaviour or treatment

oppression - cruel or unjust treatment

colossal - huge

diabolical - disgracefully bad or unpleasant

abolish - to get rid of

tranquility - calm and peaceful

disparity - a great difference

pompous - arrogant and self-important

Sentences (DPRO 3,4): write an example of your own

Technique:	Example:
Subject - the person/ thing performing the main action.	*The candlelight danced.*
Verb - word expressing action/ doing/ state of being	*The candlelight danced.* *It was cold.*
Main clause - Part of a sentence containing one **subject** and one main **verb** (makes sense by itself).	*The pallid candles flickered.*
Subordinate clause - Part of a sentence which does not make sense by itself.	*Flickering ominously, the candles shook from the blowing wind.*
Coordinating Conjunctions - words that join two main clauses to create a compound sentence	
Subordinating Conjunctions - start subordinate clauses which help create complex sentences	

Sentences (DPRO 3,4)
Can you write an example of each?

Sentence Type	Example:
Simple Sentence: One clause. Contains a subject and verb. Makes sense by itself.	*She ran.* *She was home.* *They were bored.*
Compound Sentence: two sentences joined by FANBOYS (for, and, nor, but, or, yet, so) or a semicolon	*She was scared yet she kept walking.* *She was scared but she stopped walking.*
Complex sentence: main clause (makes sense on its own) and subordinate clause (does not). Includes a comma. The subordinate clause can be moved.	*Although she was scared, she kept walking.* *She was scared, although she kept walking.* *She scanned the room, squinting through the hole in the stone.* *Squinting through the hole in the stone, she scanned the room.*
Minor Sentence: An incomplete sentence missing a subject or verb used for effect.	*Look!* *Weird!*

Using TiPToP for Paragraphs:

Use TiPToP to remember how to use paragraphs accurately.
Start a new paragraph when…
Ti: You move to a new period of time
P: You move to a different place/ location
To: You move from one topic to another
P: You bring a new person into your writing, or change from one person to another (this includes dialogue)

DZFE: A useful structure for writing stories/ descriptions
Drop: Start in the middle of exciting action/ describe setting

In that moment… / All around, I could feel...
A sudden gust of hot air blew, pushing...
The music pounded louder and louder until...

Flash: Change the time or place of your story

It had only been a few hours ago when..
Earlier that morning..
The streets had been deserted when… / Back at home..

Zoom: Choose something that you will 'zoom in' on and describe in detail

Immediately, the colours of the ___ caught my eye…
The subtle shades of

Echo: Bring it back to where you were at the start. What has changed?

The _____ grew louder than ever before…
Repeat a word / phrase / image from the opening of the piece

ENGLISH

ANIMAL FARM FUNDAMENTALS: (*The things you need to know!*)

Quotations

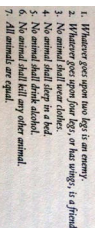| Quotations	Meaning	Analysis
Chapter 1 "**The life of an animal is misery and slavery: that is the plain truth**" (Old Major to Animals)	Old Major says this to persuade the animals to rise up against Mr Jones	• The word "slavery" highlights inequality • Short sentences and emotive language are used to present opinion as fact
Chapter 3 "**Four legs good, two legs bad.**" (Sheep to Animals)	The sheep bleat this expression of animal unity like a chant	• An example of propaganda • Shows that Napoleon hates the humans • Orwell shows how language is used by those in power to control people - sheep are known to be unintelligent and to follow anyone
Chapter 5 "**Suddenly the dogs sitting round Napoleon let out deep, menacing growls, and the pigs fell silent and sat down again**" (Pigs)	Napoleon uses vicious dogs to scare anyone who challenges him.	• The adjectives "deep" and "menacing" convey the dogs' vicious nature • The dogs control the other animals • Orwell uses the dogs to represent Stalin's bodyguards
Chapter 10: "**Four legs good, two legs better!**" (The sheep)	The "four legs" quote from chapter one has changed.	• Shows that the sheep have been brainwashed and manipulated • The pigs have become more and more like the humans • Orwell does this to show how corrupt communist regimes become the same as any others
Chapter 10 "**All animals are equal but some animals are more equal than others**" (Pigs)	Said by the pigs who control the government.	• The Commandment has been changed with "but some animals are more equal than others" being added on • This shows the inequality - the animals in power live comfortably and the others do not

Moments to mention

Moments to mention	Analysis
Old Major's Dream The novella opens with Old Major gathering the farm animals together to tell them about his dream of rebellion.	• Old Major is the character who inspires the revolution. • He is a fantastic speaker and motivates the animals to act • Sheds light on how the animals are mistreated by farmer Jones. • His speech/dream is an important moment because it shows that power corrupts.
The Seven Commandments After the Rebellion the animals begin to organise themselves and establish the Seven Commandments (rules) that they will live by. 1. Whatever goes upon two legs is an enemy. 2. Whatever goes upon four legs, or has wings, is a friend. 3. No animal shall wear clothes. 4. No animal shall sleep in a bed. 5. No animal shall drink alcohol. 6. No animal shall kill any other animal. 7. All animals are equal.	• The Seven Commandments are agreed on by the animals and painted on the barn wall. • The commandments are supposed to build a fair and equal society. • The commandments are important because they are changed and manipulated throughout the story. What started out as well meaning policies become strict and corrupt rules by which the animals must live. • The changes made represent Napoleon becoming dictator of the farm.
The Battle of Cowshed Mr Jones returns to the farm with weapons. He wants to take control of the farm again but is defeated by the animals.	• The animals unite to defend the life they have built since Jones's expulsion from the farm. • The animals want to live by the Seven Commandments. • There is a real belief that change is in the air and the animals are prepared to fight for this.
Some are more equal than others Napoleon and the other pigs learn to walk on two legs, wear human clothes and carry whips. They have become similar to the humans who they used to hate.	• The novella has a cyclical structure. It begins with the animals protesting and dismayed at dictatorial rules and ends in the same way. • Orwell's message is that power corrupts - ideas like communism and socialism do not work once those in charge have power.

GEOGRAPHY

Coasts

Coastal erosion and weathering

Coasts are constantly changing due to the action of **waves**, **weathering**, **erosion**, **transportation** and **deposition**.
How coasts change will depend on the types of rocks that are in an area. **Harder rocks**, like granite and limestone, will erode slowly. **Softer rock**, like clay, erodes quickly

Types of Erosion

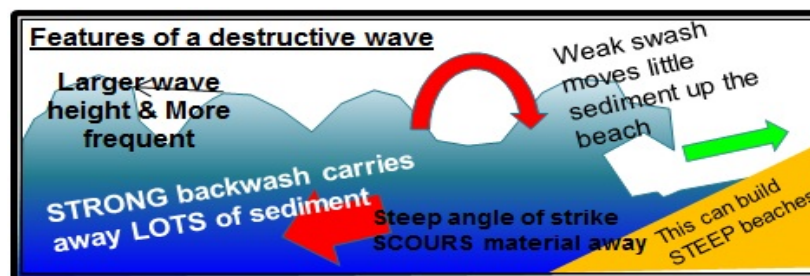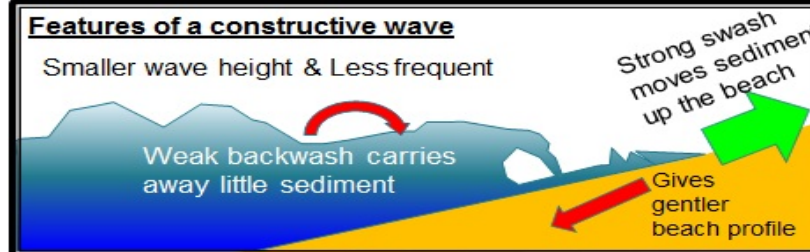| Abrasion	As waves smash rocks against cliff surfaces, they are worn away and become smoother. This is known as the "sandpaper effect".
Hydraulic action	Air becomes trapped in cracks in the cliffs. When waves break against the cliffs, air is compressed and this forces the crack to get bigger. This eventually causes a piece of the cliff to break away.
Attrition	Rocks being transported by the sea knock against each other and gradually become smaller and more rounded.
Solution	When the slightly acidic sea water dissolves cliffs such as limestone or chalk

Types of Weathering

Chemical	Physical	Biological
Rainwater and seawater can be a weak acid. If a coastline is made up of rocks such as limestone or chalk, over time they can become dissolved by the acid in the water.	Freeze-thaw: water enters cracks in rock. It freezes and expands, widening the crack. Ice melts and goes deeper into crack – this process repeats until rock splits	Plant roots enter small crack in rocks, as plants grow the cracks get larger. This causes rock to break away.

Wave Types and Characteristics

Waves are ripples in the sea caused by the transfer of energy from wind blowing over the surface of the sea. The factors that affect wave size are:
　Wind speed
　Length of time wind has been blowing
　Fetch (Distance over water the wind has blown)

Features of a constructive wave
Smaller wave height & Less frequent
Weak backwash carries away little sediment
Strong swash moves sediment up the beach
Gives gentler beach profile

Features of a destructive wave
Larger wave height & More frequent
Weak swash moves little sediment up the beach
STRONG backwash carries away LOTS of sediment
Steep angle of strike SCOURS material away
This can build STEEP beaches

Transportation - Longshore Drift (LSD)

LSD is the zigzag movement of sediment along a shore caused by waves going up the beach (swash) at the enable of prevailing wind and returning (backwash) at a right angle due to gravity. This results in movement of sediment along the coasts.

LAND
BEACH　SWASH　BACKWASH　Direction of the longshore drift
SEA　Prevailing wind
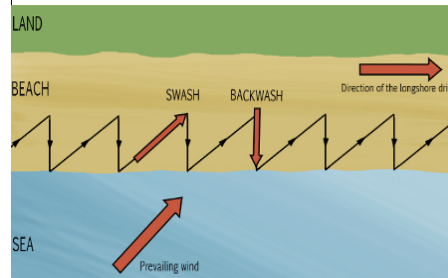
Depositional Landforms - Formation of a Spit

Material moved along beach in zig-zag way
Coastline changes direction
Spit curved with change of wind direction
Prevailing winds bring waves in at an angle
Material deposited in shallow, calm water, to form a spit
Spit
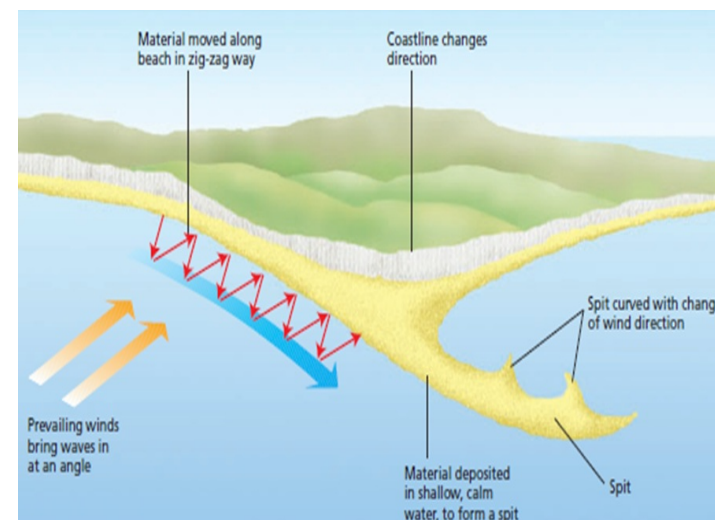
Coastal Landforms and Management

Formation of Caves, Arches, Stacks and Stumps (CASS)

1. Large crack, opened up by hydraulic action
2. The crack grows into a cave by hydraulic action and abrasion
3. The cave becomes larger
4. The cave breaks through the headland forming a natural arch
5. The arch is eroded and collapses
6. This leaves a tall rock stack
7. The stack is eroded forming a stump

Headland

Direction of cliff retreat

Headlands and Bays

hard
soft
hard
soft
hard

waves
sea
waves

→

headland
bay
headland
bay
headland

sea

hard rock – erodes slower
soft rock – erodes faster

A wave-cut platform is formed when:

Cliff Retreating

Previous position of cliff face

Wave-cut Notch

Wave Attack Zone

High Tide

Wave-cut Platform (sloping rocky platform left behind as cliff retreats - exposed at low tide)

- The sea attacks a weakness in the base of the cliff. For example, this could be a joint in chalk.
- A wave-cut notch is created by erosional processes such as hydraulic action and abrasion
- As the notch becomes larger, the cliff becomes unstable and collapses as the result of gravity.
- The cliff retreats inland.
- The material from the collapsed cliff face is eroded and transported away. This leaves a wave-cut platform.
- The process repeats over time

Coastal Management

Type of management	Method	Benefit	Cost
Hard engineering: The use of concrete and large artificial structures to defend land against natural erosion processes	**Sea walls** - concrete walls are placed at the foot of a cliff to prevent erosion	1. Effective at protecting base of cliff 2. Sea walls usually have promenades so people can walk along them.	1. Not everybody likes the look of them 2. Expensive - approx. £2,000 per metre
	Rock armour - Large boulders are placed at the foot of a cliff. They break the waves and absorb the energy.	1. Cheaper than a sea wall and easier to maintain. 2. Can be used for fishing	1. They look different to the local geology, as the rock has been imported from other areas 2. Rocks are expensive to transport.
	Gabions - rocks are held in mesh cages and placed in areas affected by erosion	1. Cheap - approx. £100 per metre 2. Absorbs waves energy	1. Not very strong 2. Looks unnatural
	Groynes - wooden or rock structures built out at right angles into the sea	1. They trap sediment carried by longshore drift creating a beach which is a barrier to erosion. 2. Beaches encourage tourism	1. By trapping sediment it starves beaches further down the coastline, increasing rates of erosion elsewhere.
Soft engineering: Managing erosion by working with natural process to help restore beaches and coastal ecosystems	**Beach nourishment** - the addition of material to a beach artificially, through the dumping of large amounts of sand and shingle	1. Improves coastal protection 2. Widens beach- good for tourism	1.Has to repeated year after year Sand has to brought from elsewhere
	Beach reprofiling - changing the profile or shape of the beach. It usually refers to the direct transfer of material from the lower to the upper beach.	1. Improves protection for seafront properties/infrastructure 2. Relatively cheap	1.Needs to be repeated constantly
	Dune regeneration - action taken to build up dunes and increase vegetation to strengthen the dunes and prevent excessive coastal retreat.	1.Relatively cheap 2.Looks natural	Areas can be damaged by storms Areas sometimes need to be fenced off which angers public
	Managed retreat: controlled flooding of low lying coastal areas. Usually areas of high risk to erosion and land of low value e.g. farmland	1.Cheaper than hard engineering 2. Creates salt marsh which is great for wildlife. 3. Leisure space	1. Land lost is reclaimed by the sea 2. Landowners need to be compensated

GEOGRAPHY

14

KS3 History

Y8, KO, History, Cycle 3/Term 3	KS3 History – Black and British

Summary: Black people have lived in Britain for over a thousand years, with the earliest records starting in Roman times. This topic traces Black British history from the earliest times to the present day, focusing on the people, legislation, social justice and cultural movements that help demonstrate the vast impact of the community.

Key concepts

Medieval Britain: The 'Ipswich Man' is the name given to the skeleton of a man found in Ipswich, Suffolk. The Ipswich Man had been buried there between 1258 and 1300 and through forensic investigation was found to have direct African ancestry.
Tudor Britain: King Henry VIII had an African trumpeter called John Blanke. We know about him because he was not paid as much as the other white English trumpeters and wrote to Henry VIII to ask to be paid the same. Mary Fillis was born to a Muslim family in Morocco. She moved to Britain in 1583 at the age of six and worked as a servant (not a slave) for a man named John Barker, a merchant and sometime factor for the Earl of Leicester.
Industrial Britain: (1820-50) In the nineteenth century some talented Black people began to make remarkable contributions to the arts and entertainment. Ira Aldridge was an actor. Some people objected to a Black actor and tried to prevent him acting, but he had many supporters. Aldridge acted in theatres all over Britain and Europe. Some Black people became political activists and campaigned to make Britain a better country for all its citizens. For example, William Cuffay. He became a leading London organiser of the Chartists who fought for political rights

Key Individuals of the 20th Century:
Claudia Jones - political activist, creator of the early version of Notting Hill Carnival and founder of the West Indian Gazette in 1958
Stephen Lawrence - Was killed in a racist attack in 1993. The Race Relations Act (2000) was passed due to his death that prevented racism in the police force.
Doreen Lawrence: Political activist who campaigned to expose institutional racism in the police after her son Stephen's death

Key Legislation of the 20th Century:
British Nationality Act of 1948 - Allows Black people part of the British Empire to live in Britain.
Race Relations Act 1965 - Makes racism illegal in public
Race Relations Act 1968 - Made it illegal to discriminate against people of a different race in the areas of housing, employment and healthcare services.
Race Relations Act of 1976 - This Act included indirect discrimination - any practice that disadvantaged a particular racial group as a crime.
Race Relations (Amendment) Act 2000- This Act officially made it illegal for the police to be racist.
The Equality Act 2010 - This law stopped people from limiting others not only in terms of race, but also gender and disability

Social Justice Movements of the 20th Century:
The Bristol Bus Boycott of 1963 - The Bristol Bus Company stopped black and Asian people from working on busses in the city of Bristol, England. Black people protested by refusing to ride on the busses in Bristol. As a result black and other non white communities were allowed to work on the busses.
Michael X and Roy Sawh - After 1967 they encouraged the black community to take violent action in self-defense against racists. As a result Micheal X was jailed because he broke the Racial DIscrimination Act of 1965.
Mangrove NIne Trials - In 1970 black power activists unfairly accused of crimes they did not commit were put on trial. They were found innocent - a great success in an age that usually found black people guilty of any crime they were accused of.
Spaghetti House Siege - In September 1975 three black men - Anthony Monroe, Wesley Dick and Frank Davies - started a robbery in the Spaghetti House restaurant in London to raise money for black power movement. Their robbery failed and the black power movement became less popular as a result.

Cultural Movements:
Linton Kwesi Johnson - Poet and reggae musician, He inspired many groups of black British writers in the 1970s to write about their own experiences being black and British.
Reggae music is a mix of jazz and calypso. Common lyrics in reggae encouraged black people to resist racism and stay connected to their African roots and culture.
Ozwald Boateng has had a vast impact on menswear fashion for almost three decades.
Norman Jay MBE is a British musician. He moved from childhood gigs playing ska music at family gatherings to having a hugely popular gig at London's Notting Hill Carnival.
Malorie Blackman was born in Clapham, London. Her parents were both from Barbados. She has written more than 60 children's books

Key words

Institutional racism	The policies and practices of a whole organization that result in harmful treatment of a group based on ethnicity or race
riots	Violent action by one group of people against another
boycott	Refusing to use or buy something in protest
legislation	law
black power	A belief in anti-racism supported by the black British and British Asian community.
social justice	equality for all people.
movement	A campaign for change
activist	Someone who campaigns or fights for a cause
campaign	When a group of people work together to change society.
Act	A law
Chartist	A group who fought for the right for poor men to vote.
HMS Windrush	The ship that brought large numbers of Caribbean migrants to the Tilbury Docks in the UK in 1948.

Negative Number Examples

1	Put these numbers in ascending order: 4, -5, 0, 2, -3	-5, -3, 0, 2, 4
2	$-4 - 3 =$	-7
3	$\_\_\_ + 4 = 0$	-4
4	$4 - -3 =$	+7
5	$-4 \times -3 =$	+12
6	$-4 \times 3 =$	-12
7	$-20 \div -4 =$	+5
8	$20 \div -4 =$	-5
9	$-4^2 =$	-16
10	$(-4)^2 =$	+16
11	$-3 - -4 =$	$-3 + 4 = +1$
12	$-3 + -4 =$	$-3 - 4 = -7$
13	If $a = -3$, $10 - a =$	$10 - -3 = 10 + 3 = 13$
14	If $a = -3$, $a^2 =$	$(-3)^2 = +9$

Percentage	Decimal	Fraction
1%	0.01	$\frac{1}{100}$
3%	0.03	$\frac{3}{100}$
10%	0.1	$\frac{1}{10}$
20%	0.2	$\frac{2}{10} = \frac{1}{5}$
50%	0.5	$\frac{5}{10} = \frac{1}{2}$
99%	0.99	$\frac{99}{100}$
100%	1	$\frac{1}{1} = 1$

Fraction Skills

1	$\frac{1}{8}$ of 40	$40 \div 8 = 5$
2	$\frac{3}{8}$ of 40	$40 \div 8 \times 3 = 15$
3	To add fractions, you first need…	A common denominator
4	To subtract fractions, you first need…	A common denominator
5	$\frac{3}{5} + \frac{1}{5} =$	$\frac{4}{5}$
6	$\frac{3}{5} - \frac{1}{5} =$	$\frac{2}{5}$
7	$\frac{3}{5} + \frac{1}{4} =$	$\frac{12}{20} + \frac{5}{20} = \frac{17}{20}$
8	$\frac{3}{5} - \frac{1}{4} =$	$\frac{12}{20} - \frac{5}{20} = \frac{7}{20}$
9	$\frac{3}{5} \times \frac{1}{4} =$	$\frac{3 \times 1}{5 \times 4} = \frac{3}{20}$
10	$3 \times \frac{1}{4} =$	$\frac{3}{1} \times \frac{1}{4} = \frac{3 \times 1}{1 \times 4} = \frac{3}{4}$
11	$\frac{3}{5} \div \frac{1}{4} =$	$\frac{3}{5} \times \frac{4}{1} = \frac{3 \times 4}{5 \times 1} = \frac{12}{5}$
12	$3 \div \frac{1}{4} =$	$\frac{3}{1} \div \frac{1}{4} = \frac{3}{1} \times \frac{4}{1} = \frac{12}{1} = 12$

Prime Factors

1	List the first 10 prime numbers	2, 3, 5, 7, 11, 13, 17, 19, 23, 29
2	1 is not a prime because…	It has only one factor: 1. A prime has exactly two factors.
3	15 is not a prime because…	It has four factors: 1, 3, 5, 15. A prime has exactly two factors.
4	Product means…	Multiply
5	Express 30 as a product of its prime factors	$30 = 2 \times 3 \times 5$
6	Write $2 \times 2 \times 2 \times 3 \times 5 \times 5$ in index form	$2^3 \times 3 \times 5^2$

Section G: Standard Index Form

$10^0 =$	1
$10^1 =$	10
$10^2 =$	100
$10^4 =$	10,000
$10^{-2} =$	0.01
$10^{-4} =$	0.0001
5200 in standard index form	5.2×10^3
0.052 in standard index form	5.2×10^{-2}
43×10^2 is not in standard index form because…	43 is not between 1 and 10
6.72×1000 is not in standard index form because…	1000 should be 10^3
To compare numbers in standard index form…	Compare the powers of 10. Higher power of 10 means higher value.
Which is greater: 4.3×10^7 or 3.82×10^9 ?	3.82×10^9 because $10^9 > 10^7$

Algebra: Simplify

$a + a$	$2a$
$a + a + a$	$3a$
$a \times a$	a^2
$a \times a \times a$	a^3
$3a + a$	$4a$
$3a - a$	$2a$
$3a \times a$	$3a^2$
$3a + 4b$ cannot simplify because…	They are not like terms
$3a + 4b - 2a + 2b$	$a + 6b$
If $a = 3$ and $b = 4$, $5a - b =$	$5(3) - (4) = 15 - 4 = 11$

MATHS

MUSIC

Stories and Cartoon and Motifs

Element	Core knowledge [this will be in your assessment]
Melody	• Range - *difference between the highest and lowest note in a melody* • Glissando- *an effect where you move smoothly between pitches* • Leaps - *a melody moving in leaps*
Articulation	• Pizzicato - plucking a usually bowed string • Arco - Using a bow
Dynamics	• Diminuendo - *getting gradually quieter* • Sforzando - *Suddenly Loud*
Texture	• Thick - *many layers of sound* • Thin - *few layers of sound*
Structure	• Graphic score - *Non-standard music notation that is drawn to direct the performe*r • Ternary form *ABA* • Binary form *AB*
Harmony	• Major / minor - *happy/ sad sounding chords*
Instrumentation	• Piano • Orchestra • Voice
Rhythm	• Syncopation - *Accenting off beats* • Dotted - *Note pairs with a longer first note and a shorter second note* • Anacrusis - *Starting a piece part way through a bar*
Tempo/**T**ime Signature	• 6/8

Stories and Cartoons Context

Recommended Listening:
• *Cathy Berberian* - Stripsody
• *Larry Marks* - Scooby-doo Theme
• *Mark Harrison and Blaise Smith* - Spongebob Theme
  ○ Inspired by [Blow The Man Down - Sea Shanty for Context]

• *Shuki Levy* - Inspector Gadget

Motifs Context

Recommended Listening
• Beethoven's Symphony No.5

Muscular system

Structure of the muscular system

- Pectorals
- Biceps
- Abdominals
- External Obliques
- Hip Flexor
- Quadriceps
- Tibialis Anterior
- Deltoid
- Triceps
- Latissimus Dorsi
- Gluteus Maximus
- Hamstring
- Gastrocnemius
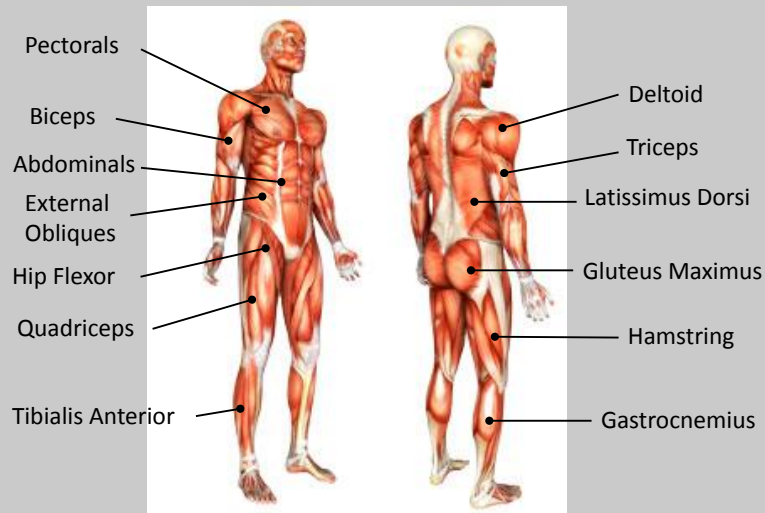
Antagonistic pairs - Muscles are arranged in antagonistic pairs.

As one muscle contracts (shortens) its partner relaxes (lengthens) *i.e. Biceps and Triceps.*

Flexion

Extension
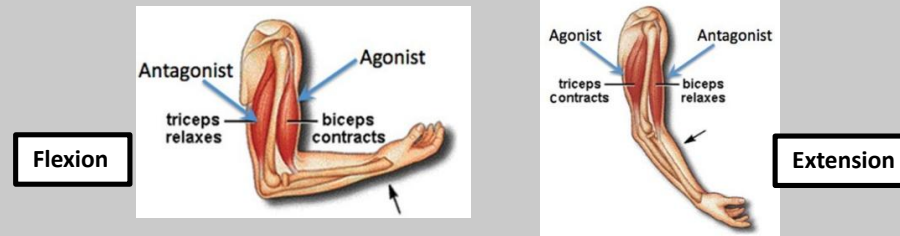
Agonist = the muscle that contracts to produce movement.
Antagonist = the muscle that relaxes to allow the movement to occur.

Examples in the body:
- Biceps & Triceps
- Quadriceps & Hamstring
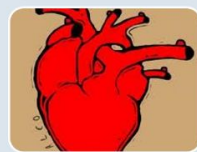- Hip Flexor & Gluteus Maximus

Types of muscle

Voluntary muscles enable movement throughout the body.

Involuntary muscles are essential in maintaining healthy body systems.

Cardiac muscle is vital in sport because it makes the heart pump. Fitness training will strengthen cardiac muscle making the heart more efficient at pumping blood around the body.

The **short term effects** of exercise on the muscles:
1. Working muscles produce heat
2. Increased muscle fatigue due to lactate accumulation
3. Blood is redistributed to working muscles (Shunting)

Muscle fibre types

Slow twitch muscle fibres (Type I)	Fast twitch muscle fibres (Type IIa)	Fast twitch muscle fibres (Type IIx/b)
1. Smaller in size. 2. Work aerobically with high fatigue resistance. 3. Have a good oxygen supply = deep red in colour. 4. They contract slowly, but can work for long periods. **Marathon runner**	1. Larger in size 2. Work anaerobically & linked to high intensity activities. 3. Are paler in colour and have limited oxygen supply. 4. They contract quickly and powerfully, but tire easily. **400/800m runner**	1. Large in size 2. Work anaerobically & linked to extreme high intensity activities. 3. Very high speed of contraction but low fatigue resistance. **100m Sprinter**

Link of the muscular and skeletal system – both systems work together to produce movement. *i.e. a contracting muscle pulls on a bone which changes the angle at a joint.*

PE

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Year 8: Summer 1 Expressing Faith

Key Terms		Key Individuals
Equality	Having the same rights and opportunities as everyone else in society	**Martin Luther King** – MLK was one of the most influential civil rights activists in American history. He was a Christian pastor whose ideas and methods of peaceful protest were based on agape love that Jesus taught. He never used violence to achieve his aims and worked tirelessly with communities in the southern United States as well as with the American government to change laws to ensure African-Americans were given their civil rights.
Prejudice	Judging a person before you know them based on a certain aspect e.g. race, religion, gender or other perceived difference	**Malcolm X** – Malcolm was also a civil rights activist, but had very different ideas to MLK. His famous phrase 'by any means necessary' showed that he thought people should achieve equality through the use of violence if peaceful methods didn't achieve their aims. Malcolm later converted to Islam and had a life changing experience on the Hajj. He became a much more peaceful man and stopped using violent protest.
Discrimination	Treating someone differently because of a certain aspect e.g. race, religion, gender or other perceived difference	**Gandhi** – Mohandas Gandhi, known as Mahatma Gandhi was a civil rights activist in Indian. He experienced racism while living in South Africa and continued his fight for equality and freedom in India. Through his peaceful protest he eventually won freedom for India from British colonial ownership. His beliefs of equality and peaceful protest came from his Hindu faith and the teachings of ahimsa.
Stereotyping	A generalised and simplistic idea of a group which is usually negative	**Dalai Lama** – The Dalai Lama is the spiritual leader of Tibetan Buddhism. He is known worldwide for his teachings on the value of human rights and freedom. He fought for the rights of Tibetans to express their faith after the country was invaded by China. He lives a simple life based on Buddhist teachings and is considered a role model for many Buddhists the world over.
Segregation	Dividing people based on race, gender or religion.	**The Prophets in Islam** – There are hundreds of prophets in Islam, we will focus on Musa, Isa and Mohammed (pbuh). Musa fought for freedom from slavery for his people in Egypt. Despite being raised by royalty and living a privileged life, he was called upon by Allah to fight for the freedom of his people. Isa taught key messages of equality and was a key role model for Muslims in how to treat others. Mohammed was also called upon by Allah to fight for the religious freedom of his people when Muslims were not allowed to practice their religion in Saudi Arabia.
Ahimsa	Respect for all living things and avoidance of violence towards others.	

Useful Quotations

Christianity	*'There is neither Jew nor Greek, there is neither slave nor free man, there is neither male nor female; for you are all one in Christ Jesus.'* Galatians 3:28
Islam	*"All people are equal as the teeth of a comb. No Arab can claim merit over a non-Arab, nor a white over a black, nor a male over a female"* – Prophet Muhammad from The Hadith
Hinduism	*'I look upon all creatures equally. I am neither inimical nor partial to anyone. But the devotees who worship Me with love reside in Me and I reside in them.'* Bhagavad Gita 9.29
Buddhism	*'Change only takes place through action, not through meditation and prayer alone'* – The Dalai Lama
Islam	*"Who among men is most favored by Allah?' He, sallallaahu `alayhi wa sallam (may Allah exalt his mention) replied: "A man who does the most good to people."* - Quran

Aspiration Creativity Character

Year 8: Summer 2 Expressing Faith Through Expressive Arts

Key Terms		Key Concepts

Key Terms	
Express	convey a thought or feeling in words or by gestures and conduct.
Faith	strong belief in the doctrines of a religion, based on spiritual conviction rather than proof.
Interpretation	a stylistic representation of a creative work or dramatic role that can sometimes be seen in different ways by different people.
Representation	the description or portrayal of someone or something in a particular way.
Spirituality	the quality of being concerned with the human spirit or soul as opposed to material or physical things.
Allegory	a story, poem, or picture which can be interpreted to reveal a hidden meaning, typically a Religious one.
Worship	Believers expressing love, respect and devotion to God.
Pentecostal	relating to or denoting any of a number of Christian movements emphasizing baptism in the Holy Spirit, evidenced by 'speaking in tongues', prophecy, healing, and exorcism.

Key Concepts

Christian Worship
For many denominations (types) of Christians, expressing their faith through the arts is considered worship. Pentecostalism is a type of Christianity who emphasize the idea of following the holy spirit when they worship, which means they may sing, shout, dance and speak in tongues (which sounds like other languages) in order to celebrate God.

Fine Art
This denotes creative art, especially visual art whose products are to be appreciated primarily or solely for their imaginative, aesthetic, or intellectual content, of which examples include paintings and sculptures. From the beginning of time people have used art to show their faith, from ancient paintings of myths inside the Egyptian pyramids to Michelangelo in Renaissance Europe. Religion, God and religious stories have long been a source of inspiration for artists and used as a way to show the artist's devotion to God, but also to educate others, particular in the past when many ordinary people were unable to read religious texts for themselves.

Music
Music is another form of art that has long been used for believers to express their reverence and love for God. Examples of religious music goes throughout the world and is demonstrated by almost all religions. Hindus use music in day to day worship (part of pooja). Gospel is a key tradition in many Christian denominations. Much modern music also uses religion as a source of inspiration.

Drama and Film
Film and drama often use allegory to tell a new story with a classic meaning which often times is rooted in religion, whether that be key messages about humanity and how to treat one another or stories of a 'chosen one' who will save humanity.

Key Example

Michelangelo - Michelangelo spent his life painting and creating sculptures believing that his pieces of art honoured God. Michelangelo was commissioned to paint the ceiling of the Sistine Chapel in the Vatican (1508-1512), which is the historic home of the Catholic Church and seen as one of the most important churches for Catholics to this day. His paintings often depicted bible stories, particularly the events during Jesus' life and his own interpretations of creation and the day of judgement.

RE

SCIENCE

	Question	Answer		Question	Answer
1	animal	A member of the animal kingdom. Animals are multicellular and have cells without cell walls.	22	chromosome	A long molecule that contains instructions for organisms and their cells.
2	bacterium	A type of prokaryote organism. Plural is bacteria.	23	enzyme	A substance that can speed up some processes in living things (e.g. by breaking down food molecules).
3	cell (biology)	The basic unit of all life. All organisms are made of cells.	24	flagellum	A tail-like structure that rotates, allowing a unicellular organism to move. Plural is flagella.
4	diffusion	When particles spread and mix with each other without anything moving them.	25	statement key	A series of descriptive statements used to work out what something is.
5	fungus	A member of the fungus kingdom. A fungus can be multicellular or unicellular but does not make its own food. Plural is fungi.	26	chlorophyll	The green substance found inside chloroplasts.
6	kingdom	There are five kingdoms into which organisms are divided: plants, animals, fungi, protoctists and prokaryotes.	27	cilium	A small hair-like structures on the surface of some cells. Plural is cilia.
7	microorganism	An organism too small to be seen with the naked eye.	28	food chain	A way of showing what eats what in a habitat.
8	multicellular	An organism made of many cells.	29	organic molecule	A molecule that is built using a chain of carbon atoms.
9	plant	A member of the plant kingdom. Plants have chloroplasts and so can photosynthesise.	30	photosynthesis	A process that plants use to make their own food. It needs light to work.
10	prokaryote	A member of the prokaryote kingdom. Prokaryotes are all unicellular and have cells that lack nuclei.	31	producer	An organism that is able to produce its own food (e.g. by photosynthesis).
11	protoctist	A member of the protoctist kingdom. Many protoctists are unicellular.	32	pseudopod	An extension from a cell that can extend and contract and so pull a cell in a certain direction.
12	unicellular	An organism made of one cell.	33	pyramid of numbers	A way of showing the numbers of different organisms in a food chain.
13	virus	A nonliving particle that can change how a living cell functions when it enters a cell. Inside a cell, a virus often causes the cell to make copies of the virus.	34	vacuole	A storage space in cells.
14	aerobic respiration	A type of respiration in which oxygen is used to release energy from substances such as glucose.	35	carbohydrate	A nutrient that is used as the main source of energy.
15	anaerobic respiration	A type of respiration that does not need oxygen.	36	carbon cycle	A model used to show how carbon compounds are recycled in an ecosystem.
16	asexual reproduction	Producing new organisms from one parent only.	37	decay	The breakdown of dead organisms or animal wastes, which allows the substances they contain to be recycled.
17	budding	A type of asexual reproduction in which a new small cell, a bud, grows out from a parent cell.	38	decomposer	An organism that feeds on dead organisms or animal wastes, causing them to decay.
18	fermentation	Anaerobic respiration occurring in microorganisms.	39	ecosystem	All the physical environmental factors and all the organisms that are found in a habitat.
19	limiting factor	Something that stops a population growing.	40	fat	A nutrient that is stored to be used for energy in the future. It also acts as a thermal insulator.
20	population	The number of a certain organism found in a certain area.	41	protein	A nutrient used for growth and repair.
21	binary fission	When a cell splits in two.			

Unicellular organisms Knowledge Grid

Plants and their reproduction Knowledge Grid

	Question	Answer		Question	Answer
1	biodiversity	The range of different species of organisms in an area.	21	inherited	A feature that an organism gets from a parent is inherited.
2	characteristic	A feature of an organism.	22	inherited variation	Differences between organisms passed onto offspring by their parents in reproduction.
3	classify	To sort things into groups.	23	runner	A stem that grows from certain plants (e.g. strawberry), from which new plants grow using asexual reproduction.
4	extinct	An organism that no longer exists is extinct.	24	sexual reproduction	Reproduction that needs two individuals to produce a new organism of the same type.
5	genus	A group of similar organisms. The genus name is the first word in the scientific name for a species (the second word is the 'species name').	25	tuber	The swollen part of an underground stem used as a storage organ and as a method of asexual reproduction in some plants (e.g. potato).
6	plant kingdom	A group of organisms that have cells with cell walls made of cellulose and that are able to photosynthesise.	26	variation	The differences between things.
7	species	A group of organisms that can reproduce with each other to produce offspring that will also be able to reproduce.	27	zygote	Another term for 'fertilised egg cell'.
8	accuracy	A measure of how close a value is to its real value.	28	anther	A male reproductive organ in plants that produces pollen grains.
9	accurate	A measurement that is close to the true value.	29	carpel	The set of female reproductive organs in plants (ovary, style and stigma).
10	estimate	An approximate answer, often calculated from a sample or using rounded values.	30	cross-pollination	When pollen is transferred from one plant to a different plant of the same species.
11	population	The number of a certain organism found in a certain area.	31	filament	A male reproductive organ in plants that supports the anther.
12	quadrat	A square frame, thrown randomly on the ground, which is used to sample plants in an area.	32	pollen grain	The container for the male gamete in plants.
13	random	When there is an equal chance for one event occurring as there is for any other events in the same set.	33	pollen tube	A tube that grows from a pollen grain down through the stigma and style and into the ovary.
14	random error	An error that can be different for every reading.	34	pollination	The transfer of pollen from an anther to a stigma.
15	sample	To take a small part of something to investigate. You use a sample to draw conclusions about what the larger whole is like.	35	self-pollination	When pollen is transferred from a flower on a plant to a stigma in the same flower or to another flower on the same plant.
16	asexual reproduction	Producing new organisms from one parent only.	36	sepal	A leaf-like structure that protects a flower bud.
17	fertilised egg cell	What is produced when two gametes fuse.	37	stamen	The set of male reproductive organs in plants (anther and filament).
18	fertile	Able to produce offspring.	38	cell division	The splitting of a cell to form two identical cells.
19	gamete	A cell used for sexual reproduction.	39	competition	There is competition between organisms that need the same things as each other. We say that they compete for those things.
20	hybrid	An organism produced when members of two different species reproduce with each other.	40	egestion	When faeces are pushed out of the anus.
41	embryo	The tiny new life that grows by cell division from a fertilised egg cell.	52	byproduct	A substance produced by a chemical reaction that is not the desired product of the reaction. For example, the desired product of photosynthesis is glucose, and oxygen is a byproduct.
42	faeces	Waste food material produced by the intestines.	53	chloroplast	A green disc containing chlorophyll. Found in plant cells. Where the plant makes food, using photosynthesis.
43	fertilisation	Fusing of a male gamete with a female gamete.	54	dormant	If something is dormant its life processes are very slow.
44	fertilised egg cell	What is produced when two gametes fuse.	55	enzyme	A substance that can speed up some processes in living things (e.g. breaking down food molecules).
45	fruit	Something used to carry the seeds of flowering plants. Fruit can be fleshy or dry.	56	germinate	When a seed starts to grow.
46	gamete	A cell used for sexual reproduction.	57	interdependent	Organisms that depend on one another are said to be interdependent.
47	germinate	When a seed starts to grow.	58	life cycle	The series of changes in an organism as it grows, matures and reproduces.
48	pollen tube	A tube that grows from a pollen grain down through the stigma and style and into the ovary.	59	mineral salt (biology)	A compound containing an important element that is needed in small quantities for health (e.g. calcium). Plants get their mineral salts from the soil, animals get them from food.
49	seed	A small part of a plant formed by sexual reproduction that can grow into a new plant.	60	photosynthesis	A process that plants use to make their own food. It needs light to work.
50	seed coat	The tough outer covering of a seed.	61	respiration	A process in which energy is released from substances so it can be used by an organism. All organisms respire.
51	seed dispersal	The spreading of seeds away from a parent plant.	62	starch	A type of insoluble carbohydrate found in plants.

SCIENCE

SCIENCE

The Periodic Table Knowledge Grid

	Question	Answer		Question	Answer
1	law of conservation of mass	The idea that mass is not lost or gained during a chemical reaction. The mass of all the reactants is equal to the mass of all the products.	15	catalytic converter	A device fitted to the exhaust pipe of a vehicle to change harmful pollutant gases into less harmful gases.
2	metal	Any element that is shiny when polished, conducts heat and electricity well, is malleable and flexible and often has a high melting point.	16	complete combustion	When a substance reacts fully with oxygen, such as: carbon + oxygen ® carbon dioxide
3	metal oxide	A metal that has combined with oxygen in a chemical reaction, e.g. magnesium oxide. The general word equation for the reaction is: metal + oxygen ® metal oxide	17	incomplete combustion	When a substance reacts only partially with oxygen, such as when carbon burns in air producing carbon dioxide, carbon monoxide and soot (unburnt carbon).
4	non-metal	Any element that is not shiny and does not conduct heat and electricity well.	18	filter (chemistry)	Anything, such as cloth, paper or a layer of sand, through which a fluid is passed to remove suspended pieces of solid.
5	oxidation	Reacting with oxygen. For example, when a fuel combusts or when a metal reacts with oxygen to form a metal oxide.	19	filter (physics)	Something that only lets certain colours through and absorbs the rest.
6	oxide	A compound of a metal or non-metal with oxygen, such as magnesium oxide or carbon dioxide.	20	nitrogen oxide	Acidic gas formed when nitrogen reacts with oxygen at high temperatures, such as in a car engine. There are different types of nitrogen oxide.
7	oxidiser	A substance that supplies oxygen for a reaction.	21	pollutant	A substance that can harm the environment or the organisms that live there.
8	phlogiston	A substance that scientists once thought explained why things burn; it has since been proved that it does not exist.	22	soot	A form of carbon, which is produced as very fine particles when hydrocarbon fuels undergo incomplete combustion.
9	exothermic	A reaction that gives out energy that can be felt as it heats the surroundings, such as combustion.	23	sulphur dioxide	An acidic gas released from burning fossil fuels, which contributes to acid rain.
10	fire extinguisher	Something that is used to put out a fire, such as a canister of carbon dioxide, powder, water or foam.	24	climate change	Changes that will happen to the weather as a result of global warming.
11	fire triangle	A way of showing in a diagram that heat, fuel and oxygen are needed for fire.	25	global warming	Increased warming of the Earth's surface as a result of increased amounts of carbon dioxide and other greenhouse gases in the air.
12	hazard symbol	A warning symbol that shows why something is dangerous.	26	greenhouse effect	The warming effect on the Earth's surface caused by greenhouse gases absorbing energy emitted from the warm Earth's surface and re-emitting it back to the surface.
13	acid rain	Rainwater that is more acidic than usual due to air pollution, usually caused by sulphur dioxide and nitrogen oxides dissolved in it.	27	greenhouse gas	A gas, such as carbon dioxide, water vapour or methane, in the Earth's atmosphere, which absorbs energy emitted from the Earth's surface and then emits it back to the surface.
14	asthma	A condition in which the tiny tubes leading to the alveoli become narrow and start to fill with mucus.			

The Periodic Table Knowledge Grid

	Question	Answer
1	basalt	An igneous rock with very tiny crystals.
2	bond	A force that holds some atoms tightly together.
3	crust	The solid rocks at the surface of the Earth.
4	extrusive	Igneous rocks formed when lava freezes above the ground.
5	gneiss	A metamorphic rock formed when schist is heated and squashed more. It usually has bands of different coloured minerals.
6	igneous rock	Rock made from interlocking crystals that are not in layers. Formed when magma or lava cooled down and solidified.
7	intrusive	Igneous rocks formed when magma freezes underground.
8	lava	Molten rock that runs out of volcanoes.
9	magma	Molten rock beneath the surface of the Earth.
10	mantle	The part of the Earth below the crust.
11	metamorphic rock	A rock formed from interlocking crystals that are often lined up in layers. It is formed when existing rocks are heated or compressed.
12	particles	The tiny pieces of matter that everything is made out of.
13	schist	A metamorphic rock formed when slate or other rocks are heated and squashed more. It is usually shiny with flat crystals in wavy layers.
14	mining	Obtaining metal ores or other substances from the Earth.
15	native state	When a metal is found in the Earth as an element.
16	ore	A rock that contains enough of a certain mineral or metal to make it worth mining.
17	recycling	Using a material again, often by melting it and using it to make new objects.
18	toxic	A toxic substance is poisonous.

Routine & Holidays

1. ¿Cómo es tu rutina diaria? (How is your daily routine?) Quizlet list

Todos los días (Every day) **Los fines de semana** (On the weekends) **Si tengo tiempo** (If I have time)	**me despierto** (I wake up) **me levanto** (I get up) **me ducho** (I shower) **me visto** (I get dressed) **me peino** (I comb my hair) **me lavo los dientes** (I brush my teeth) **desayuno** (I have breakfast) **voy al instituto** (I go to school)	**Además** In addition **Aunque** although	**Cuando llego a casa** (When I arrive home) **Cuando me apetece** (When I feel like it) **Si mis padres me dejan** (If my parents let me)	**me cambio de ropa** (I change clothes) **me relajo en el sofá** (I relax on the sofa) **me acuesto** (I go to bed) **meriendo** (I have a snack) **hago los deberes** (I do my homework) **paseo al perro** (I walk the dog) **ceno** (I have dinner)

HORA: **a la una** (at one) **a las seis** (at six) **a las siete** (at seven) **a las ocho** (at eight) **a las nueve** (at nine) **a las diez** (at ten) **a las once** (at eleven)	**en punto** (o'clock) **y cuarto** (quarter past) **y media** (half past) **de la mañana** (in the morning) **de la tarde** (in the afternoon)

3. ¿Qué actividades hiciste/ haces durante tus vacaciones? (What activities did you do/ do you do during your holidays?) Quizlet list

Normalmente suelo (Normally I usually) **Solemos** (We usually) **Me gusta** (I like) **A mi hermano le encanta** (my brother loves)	**tomar el sol** (sunbathe) **pasear por la playa** (stroll on the beach) **nadar en el mar** (swim in the sea) **visitar los monumentos** (visit monuments) **ir de compras** (go shopping) **comer en restaurantes típicos** (eat in typical restaurants) **sacar fotos** (take photos) **hacer senderismo** (go hiking)	**y es estimulante** (and it's invigorating) **porque pienso que es educativo** (because I think it's educational) **Además, es relajante** (In addition, it's relaxing) **Pero es peligroso** (but it's dangerous) **aunque es una pérdida de tiempo** (although it's a waste of time)
En el primer día (On the first day) **En el último día** (On the last day) **Por la mañana** (In the morning) **Por la tarde** (In the afternoon)	**fui de excursión** (I went on a trip) **fui de compras** (I went shopping) **visité el centro** (I visited the centre) **compré recuerdos** (I bought souvenirs) **nadé en el mar** (I swam in the sea)	**Luego, bailé en una discoteca** (Then, I danced in a club) **más tarde comí paella** (Later, I ate paella) **Después, leí un libro** (After, I read a book) **más tarde saqué fotos** (Later I took photos) **también tomé el sol** (I sunbathed too)

2. ¿Adónde vas de vacaciones normalmente? (Where do you normally go on holidays?) Quizlet / ¿Adónde fuiste de vacaciones el año pasado? (Where did you go on holidays last year?) Quizlet

Normalmente mi familia y yo vamos a (Normally my family and I go to) **Todos los veranos voy a** (Every summer I go to) **Todos los años mi amiga va a** (Every year my friend goes to)	**España** (Spain) / **México** **Cuba / Perú** **Italia / Irlanda** **Escocia** (Scotland) **Francia** (France) **Alemania** (Germany) / **China** **los Estados Unidos** (the USA) **Turquía** (Turkey) **Grecia** (Greece) **Polonia** (Poland) **Rumanía / Nigeria** **Marruecos** (Morocco)	**en avión** (by plane) **en coche** (by car) **en tren** (by train) **en barco** (by boat) **en autocar** (by coach) **en autobús** (by bus) **en motocicleta** (by motorcycle)	**hace sol** (it's sunny) **hace calor** (it's hot) **hace demasiado calor** (it's too hot) **hace frío** (it's cold) **hace mal tiempo** (there's bad weather) **llueve demasiado** (it rains too much)	**El año pasado fui a** (Last year I went to) **El verano pasado fuimos a** (Last summer we went to) **Hace dos años mi amigo fue a** (Two years ago my friend went to)	**un hotel de cinco estrellas** (a five star hotel) **un hotel barato** (a cheap hotel) **un apartamento en el centro** (an apartment in the centre) **un camping** (a campsite) **la casa de mi amiga en Florencia** (my friend's house in Florence)	**¡Lo pasé bomba!** (I had a great time!) **¡Fue increíble!** (It was incredible!) **¡Fue estupendo!** (It was great!) **¡Fue un desastre!** (It was a disaster!) **¡Fue horroroso!** (It was horrible!) **¡Fue monótono!** (It was boring)

SPANISH

Aspiration Creativity Character

SPANISH

| PRESENT TENSE	PRESENT TENSE	PRESENT TENSE	FREQUENCY EXPRESSIONS
COMER (TO EAT)	*TENER (TO HAVE)*	*IR (TO GO)*	Hoy en día – Nowadays
Yo como– I eat	Yo tengo – I have	Yo voy– I go	De momento – At the moment
Tú comes– You(sg.) eat	Tú tienes – You(sg.) have	Tú vas– You(sg.) go	Normalmente – Normally
Él / Ella come- He/She eats	Él / Ella tiene – He / She has	Él / Ella va– He/She goes	Generalmente – Generally
Nosotros(as) comemos– We eat	Nostros(as) tenemos – We have	Nostros(as) vamos– We go	Todos los días – Every day
Vosotros(as) comeis– You(pl.) eat	Vosotros(as) tenéis – You(pl.) have	Vosotros(as) vais– You(pl.) go	Hoy – Today
Ellos / Ellas comen– They eat	Ellos / Ellas tienen – They have	Ellos / Ellas van – They go	
PRETERITE TENSE	PRETERITE TENSE	PRETERITE TENSE	FREQUENCY EXPRESSIONS
COMER (TO EAT)	*TENER (TO HAVE)*	*IR (TO GO)*	Ayer – Yesterday
Yo comí– I ate	Yo tuve – I had	Yo fui – I went	Anoche – Last night
Tú comiste– You(sg.) ate	Tú tuviste – You(sg.) had	Tú fuiste – You(sg.) went	La semana pasada – Last week
Él / Ella comió– He/ She ate	Él / Ella tuvo – He/ She had	Él / Ella fue – He/ She went	El fin de semana pasado – Last weekend
Nosotros(as) comimos– We ate	Nostros(as) tuvimos – We had	Nosotros(as) fuimos – We went	El mes pasado – Last month
Vosotros(as) comisteis– You(pl.) ate	Vosotros(as) tuvisteis – You(pl.) had	Vosotros(as) fuisteis – You(pl.) went	Hace tres semanas – Three weeks ago
Ellos / Ellas comieron– They ate	Ellos / Ellas tuvieron – They had	Ellos / Ellas fueron – They went	El año pasado – Last year
NEAR FUTURE TENSE	NEAR FUTURE TENSE	NEAR FUTURE TENSE	FREQUENCY EXPRESSIONS
COMER (TO EAT)	*TENER (TO HAVE)*	*IR (TO GO)*	La próxima semana – Next week
Yo voy a comer– I am going to eat	Yo voy a tener– I am going to have	Yo voy a ir– I am going to go	El fin de semana que viene – Next weekend
Tú vas a comer– You(sg.) are going to eat	Tú vas a tener – You(sg.) are going to have	Tú vas a ir– You(sg.) are going to go	En cuatro días – In four days
Él / Ella va a comer– He/She is going to eat	Él / Ella va a tener – He/She is going to have	Él / Ella va a ir– He/She is going to go	El próximo año – Next year
Nosotros(as) vamos a comer– We are going to eat	Nosotros(as) vamos a tener– We are going to have	Nosotros(as) vamos a ir– We are going to go	El próximo mes – Next month
Vosotros(as) vaís a comer– You(pl.)are going to eat	Vosotros(as) vaís a tener– You(pl.)are going to have	Vosotros(as) vaís a ir– You(pl.)are going to go	
Ellos / Ellas van a comer– They are going to eat	Ellos / Ellas van a tener – They are going to have	Ellos / Ellas van a ir– They are going to go	

Aspiration Creativity Character

Year 8 — Textiles

Bioinspired Design

Bioinspired Design is a branch of design that is concerned with the study of all things living. Within the family of bioinspired design, there are 3 sub-categories:
- **Biomorphism** which refers to designs that **visually** resemble elements from life i.e. they "look like" nature.
- **Biomimicry or Biomimetics** whereby designs focus on **function** i.e. they "work like" nature.
- **BioUtilisation** which refers to the **use** of biological material or living organisms in a design or technology.

Biomorphism *looks* like nature

Bioinspired Design

Biomimicry *functions* like nature

Bioutilisation *uses* nature
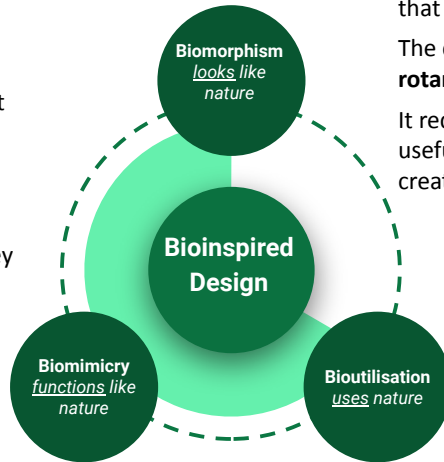
Biomorphism

Stuttgart pavilion inspired by sand dollar

The humble little sand dollar served as the inspiration for this pavilion in Stuttgart, Germany. Thin sheets of plywood were laser cut and pieced together into the polygonal plywood structure.

BioUtilisation

Perez Art Museum in Florida brings the outside, in
An example of bio utilisation is using a living wall of plants to help clean the air in an office building. The columns are meant to create a hanging forest effect that cleans the air and brightens the space.

Biomimicry

Beetle inspires Dew Bank Bottle

The Dew Bank Bottle is inspired by the onymacris unguicularis beetle. It is made in such a way that the steel body helps to assimilate the morning dew and channel it into the bottle immediately. Ideal for the nomads in the desert!
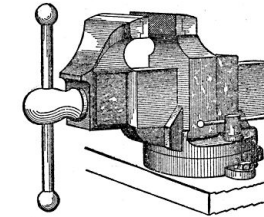
Mechanisms

A **mechanism** is a system of moving parts or **components** that work together to create a **mechanical advantage.**

The different types of **mechanical movement** are **linear**, **rotary**, **oscillating** and **reciprocating**.
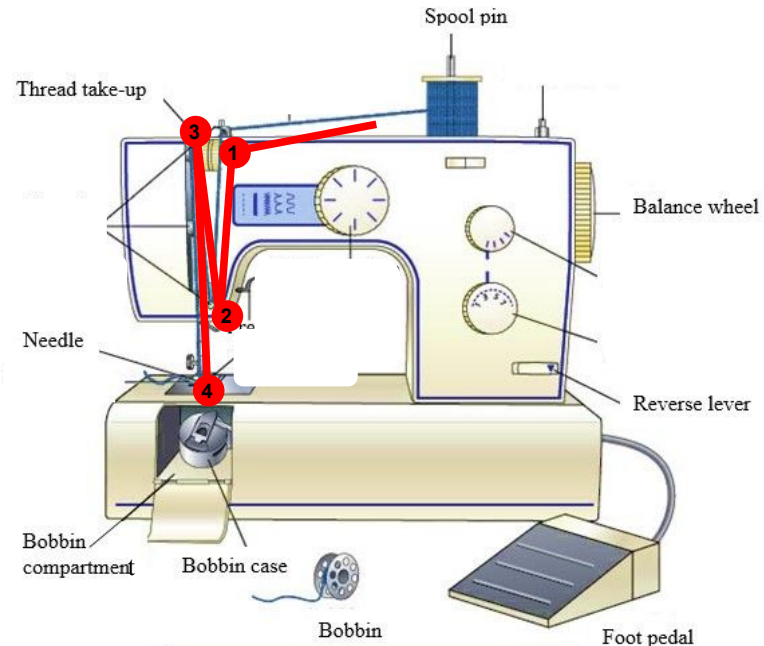
It requires an **input force t**o create an **output** result which is useful e.g A bicycle requires the input force of pedalling to create useful speed.

Weaver's Loom.

How to thread up a Sewing Machine

Spool pin
Thread take-up
3 1
Balance wheel
2
Needle
4
Reverse lever
Bobbin compartment
Bobbin case
Bobbin
Foot pedal

Year 8 — Textiles

In Textiles Design we use a range of **specialist techniques** and **materials** in order to decorate textiles to make them more aesthetically pleasing and interesting. The information below explains some of the techniques you will explore this year.

Embroidery Stitches

Embroidery is the act of decorating fabric or other materials using a needle to apply thread or yarn. Typically embroidery is done by hand using embroidery needles, embroidery thread and an embroidery hoop, however it is becoming more popular to use sewing machines to create designs using a technique called 'free machining'. The use of CAD further enhances the possibilities with specialist sewing machines able to sew designs which have been designed on computers.
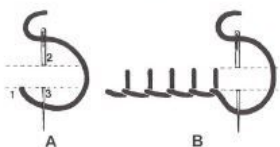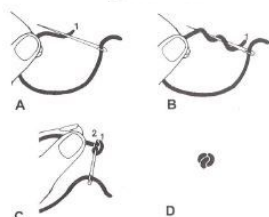
Back Stitch
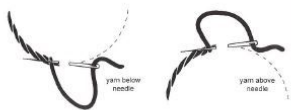
Blanket Stitch
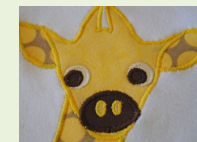
French Knot

Using the Heat Press

A **heat press** can be used to **transfer** an image or a design onto a **substrate** (the underlying layer).
The substrate fabric e.g a t-shirt is placed on to the electronically heated **"platen."** A **transfer sheet** with the design is then positioned on the fabric. By closing the cover, the ink, adhesive, or vinyl melts *into* the fabric.

Applique

Appliqué is **decorative needlework** in which pieces or patches of fabric in different shapes and patterns are sewn or stuck onto a larger piece to form a picture or pattern. Appliqué with Bondaweb involves using a double-sided adhesive web to attach fabric shapes onto a base fabric.
A **template** is created first which enables multiple identical patterns to be cut out. The fabric is then **pinned** or attached using **bondaweb** (use the heat press to melt the fabrics together). Then using hand embroidery techniques stitch around the attached design.

From Fibre to Fabric

- The fibres are collected from the animal or plant.
- The fibres are washed.
- The fibres are twisted together (spun) to form a yarn.
- The yarn is spun onto a big pool.
- The yarn is woven or knitted to form fabric.

Fabric Properties

	Natural			Synthetic	
	Cotton	Linen	Wool	Polyester	Nylon
	Poor Insulators	Poor insulators	Good insulator	Strong, hardwearing	Absorbs little water
	Stronger when wet than dry	Highly absorbent	Good elasticity	Crease resistant	Very strong and resistant to wear
	Able to hold moisture well	Hard wearing	Highly absorbent	Easy to wash and care for	Very crease resistant
	Hardwearing	Crease easily	Does not crease easily	Resistant to staining	Affected by static electricity – which effects the drape
	Poor elasticity	Poor elasticity			

SPaG

Grammar: Write in sentences

A sentence is a group of words that make sense. Sentences start with a capital letter and end with a full stop, question mark or exclamation mark. All sentences contain **clauses.** You should try to use a range of sentences when writing. There are three main types of sentences.

<u>Simple sentence</u>: A sentence containing one main clause with a **subject** and a **verb**.

He reads.
Literacy is important.

<u>Compound sentence</u>: Two simple sentences joined with a <u>conjunction</u>. Both of these simple sentences would make sense on their own. Varying conjunctions makes your writing more interesting.

He read his book <u>because</u> it was written by his favourite author.
Literacy is important <u>so</u> students had an assembly about reading.

<u>Complex sentence</u>: A longer sentence containing a main clause and one or more <u>subordinate clause (s)</u> used to add more detail. The main clause makes sense on its own. However, a subordinate clause would not make sense on its own, it needs the main clause to make sense. The subordinate clause is separated by a comma (s) and/or conjunction. The clause can go at the beginning, middle or end of the sentence.

He read his book <u>even though it was late.</u>
<u>Even though it was late</u>, he read his book.
He read his book, <u>even though it was late</u>, because it was written by his favourite author.

<u>How can you develop your sentences?</u>

1. Start sentences in different ways. For example, you can start sentences with adjectives, adverbs or verbs.
Adjective: **Funny** books are my favourite!
Adverb: **Regularly** reading helps me develop a reading habit.
Verb: **Looking** at the front cover is a good way to choose a reading book.

2. Use a range of **punctuation**.

3. **Nominalisation**
Nominalisation is the noun form of verbs; verbs become concepts rather than actions. Nominalisation is often used in academic writing. For example:
It is important to **read** because it helps you in lots of ways.
Becomes: **Reading** is beneficial in many ways.

Germany **invaded** Poland in 1939. This was the immediate cause of the Second World War breaking out.
Becomes: Germany's **invasion** of Poland in 1939 was the immediate cause of the outbreak of the Second World War.

Connectives and Conjunctions	
Cause And Effect	Because So Consequently Therefore Thus
Addition	And Also In addition Further (more)
Comparing	Whereas However Similarly Yet As with/ equally/ Likewise
Sequencing	Firstly Initially Then Subsequently Finally After
Emphasis	Importantly Significantly In particular Indeed
Subordinate	Who, despite, until, if, while, as, although, even though, that, which

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LITERACY KNOWLEDGE ORGANISER

Aspiration Creativity Character

Year 8 Knowledge Organiser

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