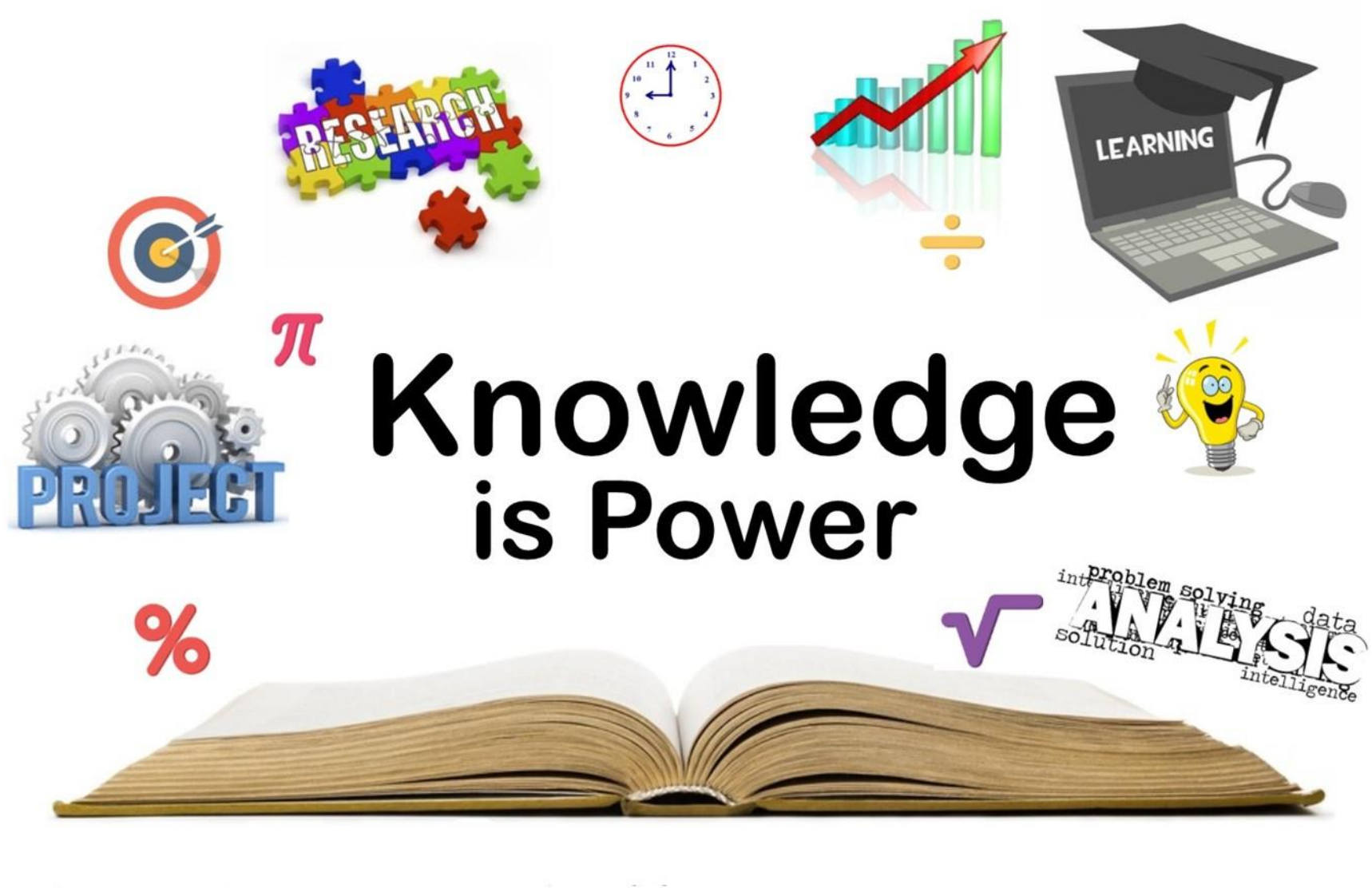
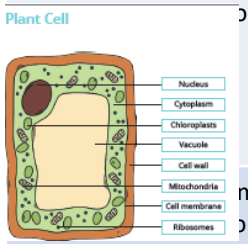
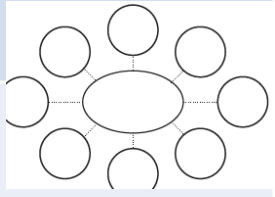
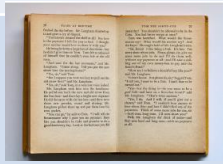


Year 8 Knowledge Organiser - Spring 1

Just reading through your books or a knowledge organiser is not always an effective way to revise. Instead, you should do something with the information. Choose an example of the revision methods on the pages or see if you can come up with another method.

The knowledge is evolutionary not revolutionary. Approximately half the knowledge is new and half helps you revise. Many of the activities are changing. We hope you enjoy them.

In SKL we will be looking at types of discrimination including racism, religious discrimination, disability, discrimination, sexism, homophobia, biphobia and transphobia, as well as why people might discriminate and how it might make people who are discriminated against feel. In the second half of the term we will look at emotional wellbeing - Types of mental ill-health and emotional wellbeing, including body image and coping strategies.

Idea	Explanation
Make some flash cards or PowerPoint slides. Make top trumps. 	Write down key words, quotation, questions or equations on one side of a card. On the other side, write the definition or answer. Use them to test yourself.
 oster.	Turn your notes into posters with lots of colour and illustrations. Summarising the key information in a different way is an effective way of learning and your brain will remember the colours more easily. Do the title last!
ms, ous mind maps. 	Write the topic/keyword in the centre of your page. Add everything you know in subtopics. Then explore each subtopic in turn adding more ideas. Colour/pictures help you recall.
Write a song or a rap. 	Are there songs that stick your head. Change the lyrics to the information you want to learn. If you record and listen back it will be a more fun way of revising.
Plan a lesson  nic	If you teach something to someone else the chance of recalling it is really high. This has been found to be the most effective way of learning something for the long term.
Write a quiz. Design a game. 	Take the keywords or facts that you need to learn and turn them into a story or a cartoon. The sillier the story the more likely you are to remember it.
	Playing is how we learn as young children and it is a very powerful way of learning throughout life. If we enjoy the game it helps us remember.

Year 8 Spring Term Knowledge Organiser

C	C	C	C
F	F	C	C
G	F	C	C

Can you work out the letters of the chords if we started on D, G or A? Use the numbers we've covered in class and a keyboard diagram to help you!

Blues Music 1880 - 1920

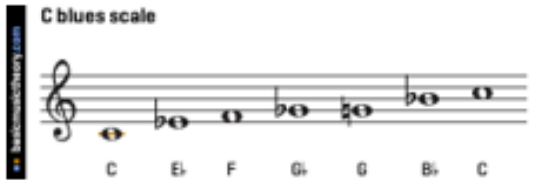
- ✓ Usually in a 4/4 time signature
- ✓ Played at a slow tempo
- ✓ Swung rhythms – this means quavers are uneven and almost have a triplet-like sound
- ✓ Structure is usually set out as an AAB format
- ✓ Lyrics are sad and full of raw emotion
- ✓ Uses the 12-bar blues chord structure

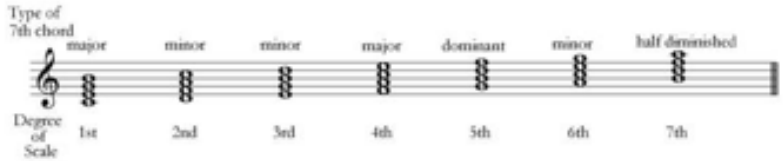
Types of Jazz

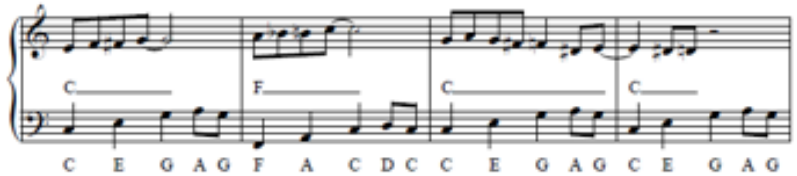
Bebop
Smooth
Cool
Swing
Big Band
Latin
Electric
Free
Gypsy
Rock

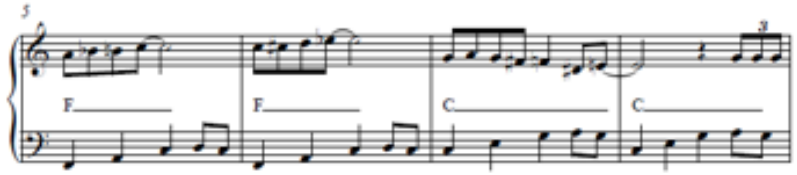
Jazz Music 1920 - 1940

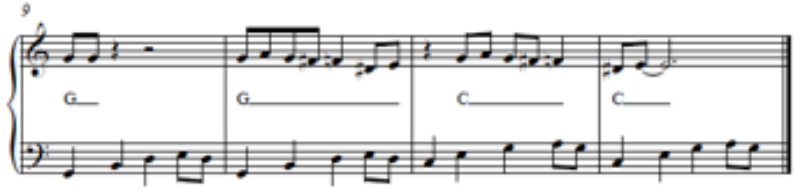
- ✓ Improvisation – making a tune up on the spot
- ✓ Syncopation – playing or stressing the off-beat
- ✓ Irregular time signatures
- ✓ Blues notes from the blues scale & seventh chords
- ✓ Swing rhythms
- ✓ Popular instruments include the drums, saxophone, trumpet, clarinet, double bass, trombones
- ✓ Scat singing – a style of singing that uses a made-up language to emphasise rhythms and imitate instruments







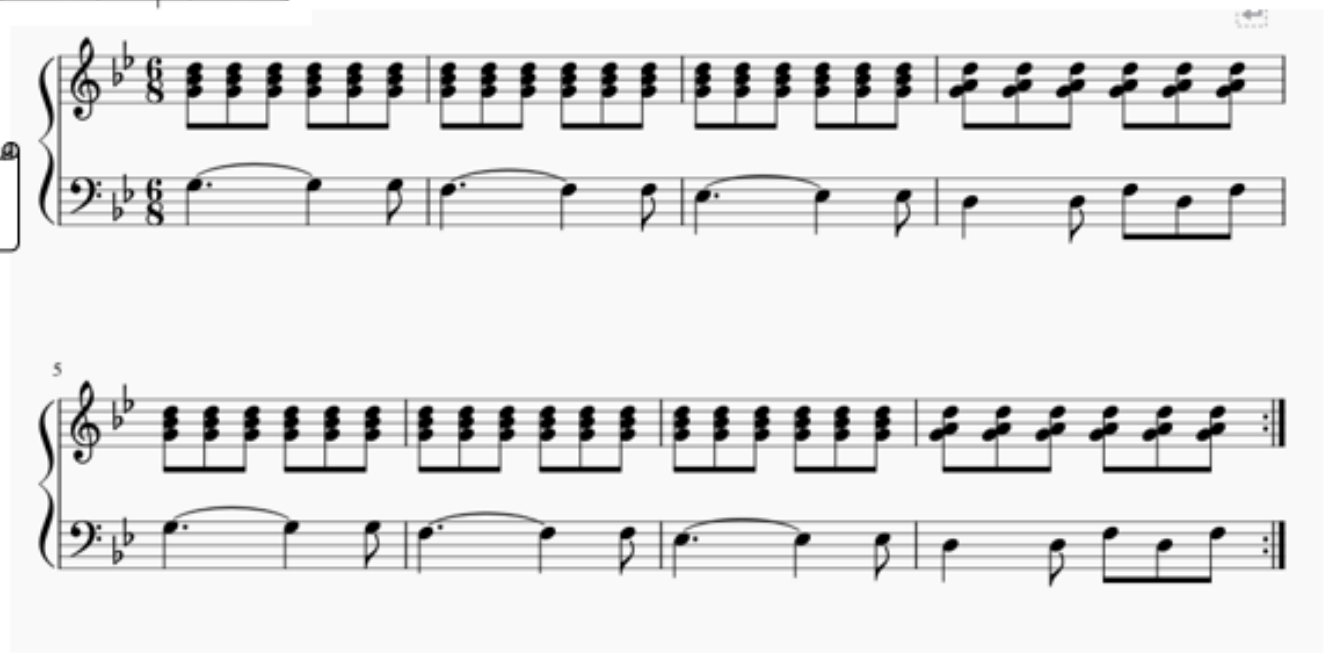




Monk's Blues

These are the songs we will have looked at during the spring term. Have a good at writing in the correct pitches for both the treble AND bass clefs. Then, have a go at playing them at home, either on a keyboard if you have one or on a digital one like this - https://www.onlinepianist.com/virtual-piano

Feelin' Good



READING:STORY FEATURES

QUESTIONS FOR CRITICAL READERS

SETTING

When and where does the story take place?
How is the setting described?
What sense of time and place do you get from the story?

CHARACTERS

Who are the main characters?
Are you interested in them?
How are they described by the writer?
Do they seem believable and original?

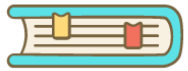
BEGINNING

How does the story start?
How does it grab your attention?
What elements of the story are foreshadowed?

SUSPENCE

How does the writer keep you wanting to read more?
Are there twists and turns in the story?
How does the author build tension?

ENDING



How does the story end?
Is it a satisfying ending?
Is there a twist?
Is the ending left open?

LANGUAGE

What type of language does the writer use?
Do they use certain types of words?
How descriptive is the writing?
How does the writing bring the story to life?

PLOT

What is the storyline?
How is it structured?
What works well in the storyline?

ORIGINALITY

What surprises you about the story?
How is it different from other stories?
Does it meet or surprise your expectations?

TONE

In what tone is the story written (i.e. funny, scary, tense, serious, formal, informal)?
How well does the tone suit the overall story?

GENRE

Does the story fit a particular genre?
Does it have features that are typical of a certain genre?
How does it compare with other stories of its kind?
Does it try to do something original or creative with genre?

ACCELERATED READER

Scan me to take a quiz

HOW TO TAKE A QUIZ

1. Go to the school website: www.open-academy.org.uk
2. Go to Student and then Learning Area
3. Scroll Down and Click on the Accelerated Reader logo
4. To log in:

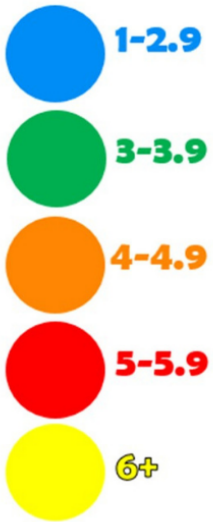
Username: firstname.surname@open-academy.org.uk

Password: Academy

*You can take a quiz on a computer, tablet or phone.

KEY TERMS

BOOK LEVELS



Book Level: A measurement of how difficult the book is.

ZPD: Your personal reading level that reflects a range of book levels. You should read books in your ZPD most of the time.

Points: Each book has a number of points available. A book is given points based on how difficult and how long it is. You earn points by passing quizzes on books you have read.

Star Reader: A reading assessment. We use Star Reader to find out your reading age and ZPD.

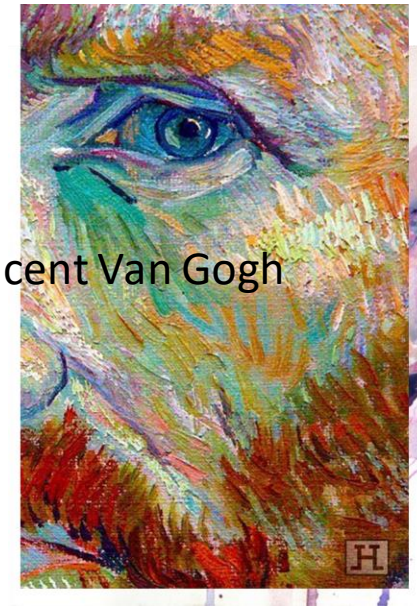
Accelerated Reader: A website that allows you to take quizzes on the books you have read.

Word Millionaire: A reward given to students who read one million words or more.

Year 8- Spring

We have been looking at drawing and painting Eyes this term.

This sheet shows the
Different stages of simple outline to detailed drawing. Try to practise this at home using your own eye or a parent. Remember the secret is “looking really hard!”



Vincent Van Gogh

Agnes Cecile

We have also studied these two artists and how they painted their own eyes.

Rub out your guideline and add tone to make the eye look more realistic

ALL: Draw the basic shape of an eye, looking at the shapes and starting to add tones.

MOST: Carefully draw the shapes in the eye, adding a variety of tones and details.

SOME: Draw the eye with accuracy, adding lots of details and tones. You will fill the space and draw what you can see, not what you imagine!

The iris should have a variety of tones and tends to get darker towards the outer ring.

Even the white part of the eye has tone towards the edges, giving the eye form.

Year 8 – Spring 1 - Adventure

Plot Summaries

Spirit of the Jungle - From real-life adventurer, Bear Grylls, *Spirit of the Jungle* is an exciting contemporary action-adventure inspired by Rudyard Kipling's classic, The Jungle Book. Could you survive in the jungle? After being washed away down the Wainganga River during a flash flood, Mak wakes up alone in the Indian jungle. The jungle is full of danger - poisonous snakes, cunning monkeys and desperate poachers - and every step Mak takes might be his last. Mak finds help and friendship from other jungle creatures, but he will need all his skill and luck to survive and make his way back home.

Life of Pi - After the tragic sinking of a cargo ship, a solitary lifeboat remains bobbing on the wild, blue Pacific. The only survivors from the wreck are a sixteen-year-old boy named Pi, a hyena, a zebra (with a broken leg), a female orang-utan - and a 450-pound Royal Bengal tiger. The scene is set for one of the most extraordinary and best-loved works of fiction in recent years.

The Hobbit - Bilbo Baggins is a hobbit who enjoys a comfortable, unambitious life, rarely travelling further than the pantry of his hobbit-hole in Bag End. But his contentment is disturbed when the wizard, Gandalf, and a company of thirteen dwarves arrive on his doorstep one day to whisk him away on an unexpected journey `there and back again'. They have a plot to raid the treasure hoard of Smaug the Magnificent, a large and very dangerous dragon...
The prelude to The Lord of the Rings, The Hobbit has sold many millions of copies since its publication in 1937, establishing itself as one of the most beloved and influential books of the twentieth century.

a variety of other **non-fiction texts/sources** including the Diary of Captain Scott, reflections from Bear Grylls, a BBC radio interview and the article 'Sharks saved my life'.

Year 8 – Spring 1 - Adventure

Adventure Genre Overview

Adventure was originally a Middle English word derived from the Old French *adventure* meaning "destiny," "fate," or "chance event." Today, we define adventure as a remarkable or unexpected journey, experience, or event that a person participates in as a result of chance. This last detail, *a result of chance*, is a key element of adventure; the stories usually involve a character who is brought to the adventure by chance, and chance usually plays a large role in the episodes of the story. Also, adventures usually include dangerous situations, narrow escapes, problems to be solved through intelligence and skill, exotic people and places, and brave deeds.

Key Terminology

Chance: the occurrence of events without any obvious cause
Fiction: something that is invented. Literature that describes imaginary events and people.
Non-fiction: writing that gives information or describes real events.
Connotations: the ideas of qualities which a word makes you think of.
Foregrounding: bringing something to the front for effect
Cyclical Structure: when a text begins and ends in the same place or with the same idea.
Metaphor: describing something by saying it is something else

Key Conventions

Hero: Adventure heroes have a goal that they need to achieve; they usually grow or develop as a person throughout the story. In non-fiction adventure writing the focus will usually be on one person (or hero) working towards/overcoming s challenge.
Villain: There is usually something working against/to stop the hero. This doesn't necessarily need to be a person though – the weather could be seen to be the villain.
Physical Risk: Adventure writing always has an element of risk or danger to it.
A race against time: In many adventure stories the hero will be battling their challenge with time against them – this helps to raise the tension and keep things interesting!
Plot Twists: Adventure writing often has twists and turns to keep the reader surprised and excited by the narrative.

Year 8 – Spring 1 – Adventure

Music Links

Music – Film adaptations of adventure narratives often choose a score or soundtrack featuring an epic score. There are many composers who write for cinema but one of the most iconic is John Williams. John Williams has written the music for many of our most popular adventure stories including: the Indiana Jones films, Jaws, Hook, Jurassic Park and three of the Harry Potter films.

https://www.youtube.com/watch?v=mD2lhiZKnMo

The Open Values in Adventure:

Courage Hard Work Perseverance

These are demonstrated across the texts we read in Adventure. Protagonists have to show great courage in the face of danger, work really hard in difficult environments and need to show resilience and perseverance to overcome challenges.

Careers https://www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree/english

Ambitious Vocabulary

Desolate - (of a place) uninhabited and giving an impression of bleak emptiness

Embark - go on board a ship or aircraft

Endurance - the ability to endure an unpleasant or difficult process or situation without giving way

Exploration - the action of exploring an unfamiliar area

Inhospitable - (of an environment) harsh and difficult to live in

Jeopardy - danger of loss, harm, or failure

Peril - serious and immediate danger

Savage - (of an animal or force of nature) fierce, violent, and uncontrolled

Solitary - done or existing alone

Trepidation - a feeling of fear or anxiety about something that may happen

Utilitarian - designed to be useful or practical rather than attractive

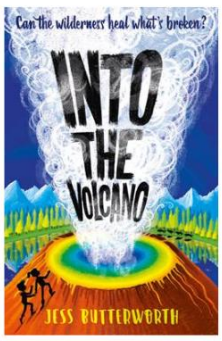
Vulnerable - exposed to the possibility of being attacked or harmed, either physically or emotionally

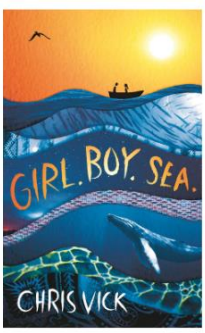
Wider Reading

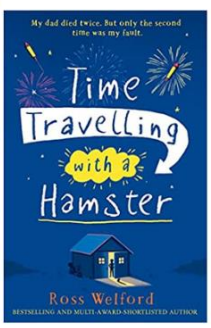
ENGLISH

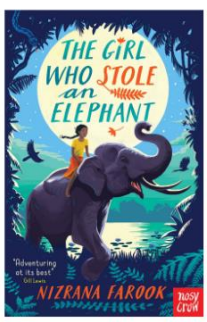
YEAR 8 ADVENTURE

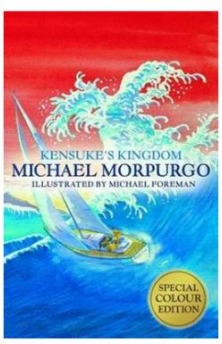
THRILLING FICTION

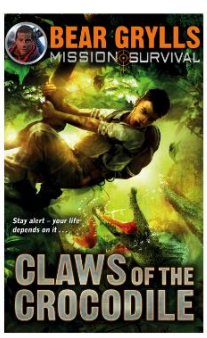


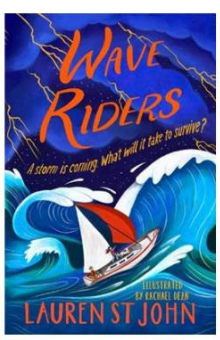


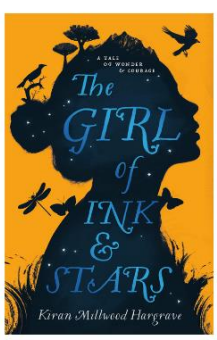


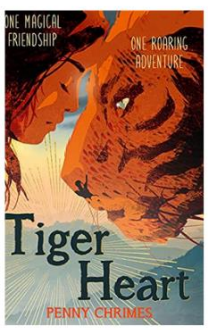


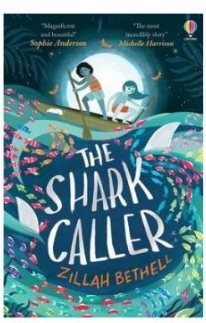


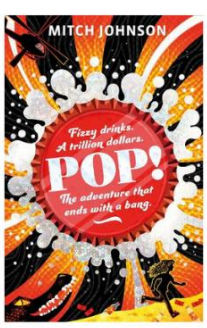


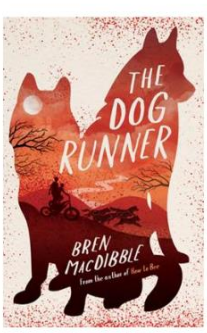






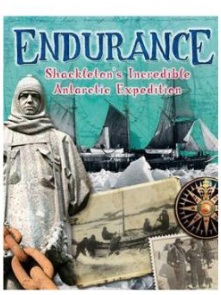




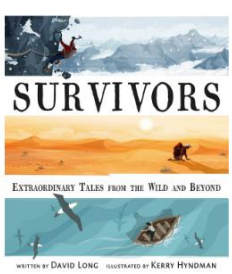


Into the Volcano
by Jess Butterworth
Girl.Boy.Sea
by Chris Vick
Time Travelling With a Hamster
by Ross Welford
Asha & the Spirit Bird
by Jasbinder Bilan
The Girl Who Stole an Elephant
by Nizrana Farook
Kensuke's Kingdom
by Michael Morpurgo
Claws of the Crocodile
by Bear Grylls
Wave Riders
by Lauren St John
Tiger Heart
by Penny Chrimes
The Shark Caller
by Zillah Bethell
The Last Bear
by Hannah Gold
Pop! by Mitch Johnson
Twitch by M G Leonard
The Dog Runner
by Bren MacDibble

REAL-LIFE ADVENTURES

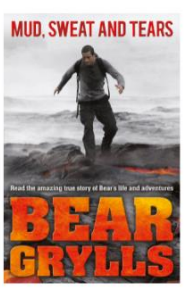


Shackleton's Incredible Antarctic Expedition
by Anita Ganeri

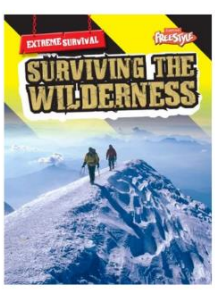


Survivors
by David Long

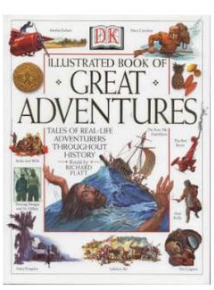
Everest Adventures
by Paul Doswell



Mud, Sweat & Tears
by Bear Grylls



Surviving the Wilderness
by Michael Hurley



Illustrated Book of Great Adventures
by DK

Year 8 – Spring 1 – Adventure – Task Sheet

Adventure Genre Overview

1. Create a plan for your own adventure story. Remember to include the key conventions.
2. Write a newspaper article on a real life adventure you have heard about e.g. someone climbing to the top of Everest or Scott reaching the South Pole.
3. Write a description of an adventure story setting such as a tropical island or ship. Remember to use your five senses to help you.

Key Conventions

1. What might a traditional adventure hero look like? Write a description or draw a picture. Explain the choices you have made.
2. Why are stories that have a plot twist or a race against time in them more exciting? Explain your answer.
3. Why is Bilbo Baggins a traditional adventure hero?

Key Terminology

1. Define the following words: chance, connotations and foregrounding.
2. Write a paragraph about the best bit of your day using a cyclical structure.
3. Give an example of a piece of non-fiction writing.

Retrieval: write as much as you remember from the following skills in class. Use the checklists in class to check your responses.

1. How do we write a summary?
2. List as many structural methods as you can think of.
3. What are the four sentence types?
4. List as many language methods as you can think of.

YEAR 8 - ALGEBRAIC TECHNIQUES...

Brackets, Equations & Inequalities

What do I need to be able to do?

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

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

Keywords

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

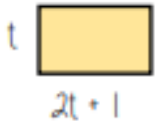
Form expressions

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

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

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

Only similar terms can be grouped together



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

t + 2t + 1 + t + 2t + 1 → 6t + 2

Directed numbers

+ + → +

- - → +

+ - → -

- + → -

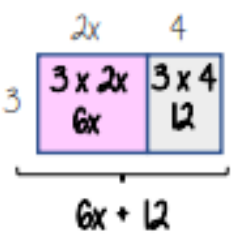
e.g a = -5 and b = 2

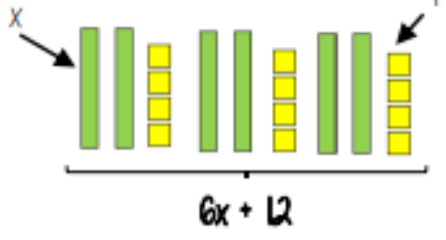
$a^2 = a \times a = -5 \times -5 = 25$

b + a = 2 + -5 = **-3**

Multiply single brackets

3 (2x + 4)





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

Forming Expressions

Multiplying Algebraic Terms

Directed Numbers

Expanding Single Brackets

Factorise into a single bracket $8x + 4$

$8x + 4$ | 4 ← Try and make this the **highest common factor**

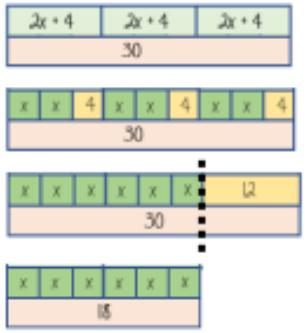
$2x + 1$

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

$8x + 4 \equiv 4(2x + 1)$

Note:
$8x + 4 \equiv 2(4x + 2)$
This is factorised but the HCF has not been used

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



$3(2x + 4) = 30$

Expand the brackets

$6x + 12 = 30$

-12 -12

$6x = 18$

-6 -6

$x = 3$

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

Simple Inequalities

$<$ less than

$\leq$ Less than or equal to

$>$ More than

$\geq$ More than or equal to

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

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

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

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

Form and solve inequalities

Two more than treble my number is greater than 11

Find the possible range of values

Form

$x \rightarrow x3 \rightarrow +2 \rightarrow 11$

$3x + 2 > 11$

Solve

$x \leftarrow -3 \leftarrow -2 \leftarrow 11$

$x > 3$

Check

This would suggest any value bigger than 3 satisfies the statement

$3 \times 3 + 2 = 11$ ✓ $10 \times 3 + 2 = 32$ ✓

Algebraic constructs

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

Equation
A statement that two things are equal

Term
A single number or variable

Identity
An equation where both sides have variables that cause the same answer includes $\equiv$

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

Factorise

Solve Equations

nequalities

Solving Inequalities

A job based on algebra:

Engineer

Many different disciplines of engineering exist today such as mechanical, petroleum and civil. Engineering uses algebra to solve physical problems such as how to build and bridge or design an airplane. Take designing a rocket going to the moon, for example: an engineer must use algebra to solve for flight trajectory, how long to burn each thruster at what intensity and at what angle to lift off. Though a very difficult, mathsheavy discipline, engineering provides a very rewarding career both in achievement and pay.

YEAR 8 - ALGEBRAIC TECHNIQUES...

Sequences

What do I need to be able to do?

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

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

Keywords

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

H Finding the algebraic rule

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

4n

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

4n + 3

4n + 3

This is the constant difference between the terms in the sequence

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

Scatter Graphs

Frequency Trees

Two-Way Tables

Frequency Tables and Tallies

Linear and Non Linear Sequences

Linear Sequences – increase by addition or subtraction and the same amount each time

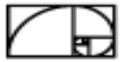
Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci

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

Fibonacci Sequence – look out for this type of sequence

0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms



Sequence in a table and graphically

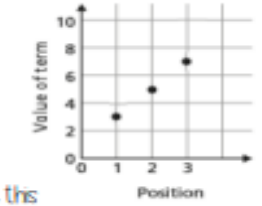
Position: the place in the sequence

3 5 7

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

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

Graphically



In a table

Position	1	2	3
Term	3	5	7

+2 +2

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

Sequences from algebraic rules

This is substitution!

$3n + 7$

This will be linear - note the single power of n. The values increase at a constant rate

$3n^2 + 7$

This is not linear as there is a power for n

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

e.g
1st term = 2 (1) – 5 = -3
2nd term = 2 (2) – 5 = -1
100th term = 2 (100) – 5 = 195

Checking for a term in a sequence

Form an equation

Is 201 in the sequence 3n – 4?

$3n - 4 = 201$

Algebraic rule ← | → Term to check

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

Complex algebraic rules

Misconceptions and comparisons

$2n^2$

2 times whatever n squared is

e.g
1st term = 2 x 1^2 = 2
2nd term = 2 x 2^2 = 8
100th term = 2 x 100^2 = 2000

$(2n)^2$

2 times n then square the answer

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

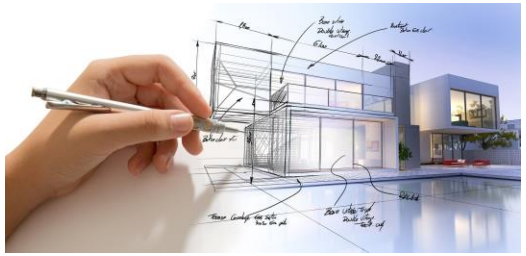
$n(n + 5)$ ←

e.g
1st term = 1 (1 + 5) = 6
2nd term = 2 (2 + 5) = 14
100th term = 100 (100 + 5) = 10500

You don't need to expand the expression

A job based on algebra:

Architect



Architects must use geometry and algebra in order to draw a correct scale of a building onto a blueprint. Every angle for every corner, every curve along the walls, every lighting fixture requires algebra for the most precise measurements.

YEAR 8 - ALGEBRAIC TECHNIQUES...

Indices

What do I need to be able to do?

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

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

Keywords

Base: The number that gets multiplied by a power
Power: The exponent – or the number that tells you how many times to use the number in multiplication
Exponent: The power – or the number that tells you how many times to use the number in multiplication
Indices: The power or the exponent
Coefficient: The number used to multiply a variable
Simplify: To reduce a power to its lowest term
Product: Multiply

Multiply expressions with indices

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

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

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

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

Divide expressions with indices

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

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

Cross cancelling factors shows cancels the expression

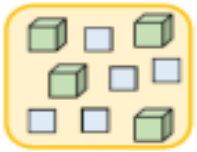
$\frac{23a^7y^2}{5db^6}$ This expression cannot be divided (cancelled down) because there are no common factors or similar terms

Addition/ Subtraction with indices

Coefficient → $5x^2 + 4x^4$ ← Power

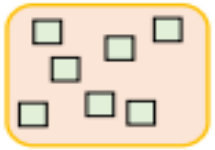
Term Term

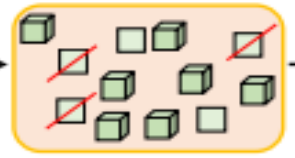
Expression



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

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

$5x^2 + 2x^2$ →  → $7x^2$

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

Laws of Indices

Collecting Term

Using Indices

Addition/ Subtraction laws for indices

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

$-(3 \times 3 \times 3 \times 3 \times 3) \times (3 \times 3)$

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

Addition law for indices

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

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

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

Subtraction law for indices

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

A job based on algebra:

Chef

When it comes to preparing food and serving dinners, arithmetic plays a critical role for most chefs. To be successful, chefs not only need to know basic arithmetic operations, but they also need to have a good understanding of decimals and fractions. Altering and converting recipes requires a healthy dose of proportional reasons and problem-solving skills. Algebra skills are also particularly important for those who double as the restaurant owner to run a successful business.

Year 8 History: The Industrial Revolution

Key words	
Industrial revolution	A time of great change in Britain between 1750 to 1900
Population	The number of people living in a particular place
Invention	Something new which is created, can be an object or an idea
Economy	The system of how money is used within a particular country
Agriculture	The process of producing food, and fibres by farming of certain plants or raising animals
Urbanisation	The increase in the proportion of people living in towns and cities
Sanitation	The system that disposes of human waste
Mass production	The production of many products in one go e.g. textiles
Industry	The process of making products by using machines and factories

From 1750 Britain went through a process of change:

- **Agriculture** – New tools, fertilizers and harvesting techniques were introduced, resulting in increased productivity and agricultural prosperity.
- **Industry** – Factories sprung up all over the country creating more efficient ways to produce goods such as wool, cotton and coal. The increase in factories brought thousands of new jobs.
- **Transport and communications** – Thomas Telford built roads and canals in the 1700s and George Stephenson and Isambard Kingdom Brunel oversaw the 'Railway Mania' of the 1800s. There had previously been no very fast way of transporting goods and people around the country.
- **Technology** – There were many scientific discoveries and technological inventions that changed society and industry. Changes to sanitation and medical treatment such as the work of **John Snow** and **Edward Jenner** improved people's quality of life.

KEY INVENTIONS: The Steam Engine, Water Frame, Spinning Jenny and Locomotive

Factory working conditions

Long working hours: normal shifts were usually 12–14 hours a day, with extra time required during busy periods

Low wages: a typical wage for male workers was about 15 shillings (75p) a week, but women and children were paid much less, with children three shillings (15p). For this reason, employers preferred to employ women and children

Cruel discipline: Frequent "strapping" (hitting with a leather strap). Other punishments included nailing children's ears to the table, and dowsing them in water butts to keep them awake

Accidents: forcing children to crawl into dangerous, unguarded machinery led to many accidents and deaths

Health: The air was full of dust, which led to chest and lung diseases and loud noise made by machines damaged hearing.

Living conditions

Overcrowding: There were not enough houses in the cities

Disease: Typhus, typhoid, tuberculosis and cholera. low standard housing and poor-quality water supplies all helped spread disease.

Waste disposal: gutters were filled with litter. Human waste was discharged directly into sewers, into rivers

Poor quality housing: Built very close together so there was little light or fresh air inside. Houses did not have running water and people found it difficult to keep clean

Lack of fresh water: People could get water from streams, wells and stand pipes, but this water was often polluted

Factory owners such as **Robert Owen** argued improving conditions for workers would bring better profits. This influenced parliament to pass Factory Acts but many workers still lacked protection and a political voice

Year 8 History: Slavery

Key words	
Slavery	A relationship where one person has absolute power over another. They control their life, freedom and wealth
Trade Triangle	The name of the system for trading slaves across the world
Middle Passageway	The names used to describe the journey from Africa to America for slaves, it took up to 2 months
Plantation	A large farm that slaves worked on to produce cotton, tobacco and sugar
Abolition	Is the act of putting an end to something by law e.g. slavery.
The Slavery Abolition Act 1833	The Act passed in Britain that abolished slavery.

During the 19th century Britain saw its **empire** grow significantly. It was regarded as a great source of wealth and status for Britain, however this came at a terrible human cost in the **Transatlantic Slave Trade.**
Slaves were traded across the world. Ships were loaded in England with goods such as guns, cloth and salt. This was taken to Africa and traded for slaves. The ships then went on a 2-month journey known as the **Middle Passageway** to the Caribbean. Here the slaves were sold to work in the **cotton plantations** and farms. The ship was then loaded with sugar and cotton, to be taken back to England to be sold for huge profits.

Slaves suffered through terrible conditions and many died during the journey. They were packed into the ship tightly and laid down for most of the journey. They were severely punished should they disobey orders. Slaves were chained up for the entire journey; diseases spread quickly. Many threw themselves overboard.

Who benefitted from the slave trade?

Plantation Owners – Grew 'cash' crops of sugar, tobacco, coffee, spices and cotton for sale back in Europe

African Tribal Leaders – Captured slaves through war between rivals over land. They would then trade their captures for weaponry and gunpowder to increase their power in their native land

British Business Men – Areas such as Liverpool and Bristol where the ships were built and goods imported got extremely rich

African Slaves – Some slaves worked in the plantation owner's house as butlers, cooks or housemaids. They were able to learn new skills, such as cooking and cleaning. They were often dressed in finer clothing and given a better diet than those that worked in the fields

Why was Slavery abolished?	**Abraham Lincoln** was against slavery. It was abolished on the 31st January 1865 but this did lead to a civil war in the USA	**Economics:** Sugar plantations closed as cheap sugar could be bought from Brazil and Cuba
Slave rebellions such as Nat Turner's Revolt	**Key Individuals:** Granville Sharp and Thomas Clarkson fought freedom cases in court. Olaudah Equiano sold his story. Press and publicity influenced attitudes against slavery	**Religion** – Christian groups, such as the Quakers, thought that slavery was a sin. William Wilberforce used his position as MP to campaign for change

YEAR 8 PE KNOWLEDGE ORGANISER SPRING TERM 1

ADAPTING A WARM UP

Good coaches will adapt the type of activities used to make them more appropriate for the participants performing.

An **elite athlete** will be able to withstand a **higher intensity warm up** and is a requirement in order to sufficiently activate the muscle groups and enable high level performance..

Sport or activity specific warm-ups:

During a warm-up a coach might introduce specific equipment relative to the activity. i.e. tennis groundstrokes or netball ball work

A warm-up may also include **specific movements** and stretch those relevant **muscles**. i.e. dodging and running footwork in netball.

Remember a warm – up should include:

1. Pulse raiser
2. Mobiliser
3. Stretches

YEAR 8 PE KNOWLEDGE ORGANISER SPRING TERM 1

Varying the intensity: The intensity of the warm up (how hard), should be governed by the fitness level of the participating athlete and age/ability of the participants.

Younger participants should be allowed to control their own intensity and is often incorporated in to a game.

Older participants will maintain a low intensity throughout.

Timings: The length of time a warm-up is conducted for will depend on the ability and age of the performer. This can be extended for elite athletes and shortened for older participants.

The factors for consideration when changing a warm up are:

- **Intensity**
- **Impact**
- **Timings**
- **Types of stretches used**

Impact: Low impact movements are those that do not involve a lot of jumping and bounding. This is particularly an issue for **older participants** and those with **physical disabilities.**

Adults and elite athletes, provided they do not suffer from joint injuries, should use high impact warm-up activities. Examples of this include **squat jumps and burpees.**

Types of stretch used: Simple stretches should be used for beginners and more complexed compound stretches for moderate to advanced performers.

German

Module 2: Bist du ein Mediafan? (Are you a Mediafanatic?)

Here is the vocabulary you will need for Stimmt 2, Module 2.

Remember to listen to the German by copying and pasting the blue codes next to the speaker icons here. The full address is: https://www.activeteachonline.com/view

Im Kino • At the cinema

der Actionfilm(e)	*action film*
das Drama (Dramen)	*drama*
der Fantasyfilm(e)	*fantasy film*
der Horrorfilm(e)	*horror film*
die Komödie(n)	*comedy*
die Liebeskomödie(n)	*romantic comedy, rom-com*
der Science-Fiction-Film(e)	*science fiction film*
der Zeichentrickfilm(e)	*cartoon*
Ich bin ins Kino gegangen.	*I went to the cinema.*
Ich habe zu Hause eine DVD gesehen.	*I watched a DVD at home.*

I6IDUzZ5

In this Module you will learn how to:

- talk about your film preferences
- talk about programmes you watch
- talk about your reading preferences
- discuss screen time
- understand opinions and media reviews
- talk about speaking different languages

www.textivate.com
Username: openacademy
Password: surname123
Go to 'my resources' to find your work.

Keep practising your German vocabulary on www.quizlet.com

- *Either*:

click on this link: https://quizlet.com/_8ievl8?x=1qqt&i=25q2il

- *Or*:

use your class link to go directly to your Quizlet class.

German

Im Fernsehen • On TV

Was siehst du gern?	*What do you like watching?*
Ich sehe (sehr/nicht) gern ...	*I (really/don't) like watching ...*
ich hasse	*I hate*
gucken/sehen	*to watch*
die Dokumentation(en)	*documentary*
die Gameshow(s)	*game show*
das Musikvideo(s)	*music video*
die Nachrichten (pl)	*news*
die Realityshow(s)	*reality show*
die Seifenoper(n)	*soap opera*
die Sitcom(s)	*sitcom*
die Serie(n)	*series*
die Sportsendung(en)	*sports programme*

X9AV79V5

Wo liest du? • Where do you read?

im Bus	*on the bus*
im Zug	*on the train*
im Garten	*in the garden*
im Park	*in the park*
im Bett	*in bed*
im Schlafzimmer	*in the bedroom*
in der Pause	*in the break, at breaktime*
in der Schule	*in school*
in der Badewanne	*in the bath*
auf dem Sofa	*on the settee*
auf dem Klo	*on the loo*
auf dem Hof	*on/in the school yard*
auf dem Handy	*on the mobile phone*
am Computer	*on the computer*

G9W5LJaN

Was liest du gern? • What do you like reading?

Ich lese gern ...	*I like reading ...*
Ich lese nicht gern ...	*I don't like reading ...*
Ich lese lieber ...	*I prefer reading ...*
Ich lese am liebsten ...	*I like reading ... most of all*
der Comic(s)	*comic*
der Roman(e)	*novel*
die Zeitschrift(en)	*magazine*
die Zeitung(en)	*newspaper*
die Website(s)	*website*
das Fantasybuch(¨er)	*fantasy book*
das Sachbuch(¨er)	*factual/non-fiction book*
die Biografie(n)	*biography*
das Blog(s)	*blog*

p6HR7£X0

Wie hast du den Film gefunden? • What did you think of the film?

Ich habe den Film (furchtbar) gefunden.	*I thought the film was (awful).*
der Schauspieler(–)	*actor*
die Schauspielerin(nen)	*actress*
blöd	*stupid*
gruselig	*creepy*
interessant	*interesting*
kindisch	*childish*
langweilig	*boring*
lustig	*funny*
romantisch	*romantic*
schrecklich	*terrible*
spannend	*exciting*
unterhaltsam	*entertaining*

X9CJMRXD

Bist du süchtig? • Are you addicted?

eine Stunde pro Tag	*an hour a day*
zwei bis drei Stunden pro Tag	*two to three hours a day*
nicht mehr als drei Stunden pro Tag	*no more than three hours a day*
mehr als 20 Stunden pro Woche	*more than 20 hours a week*
nur am Wochenende	*only at the weekend*
nach den Hausaufgaben	*after homework*
von 20 bis 22 Uhr	*from 8.00 to 10.00 pm*

German

Oft benutzte Wörter • High-frequency words

weil	*because*
letzte Woche	*last week*
am Wochenende	*at the weekend*
das nächste Mal	*next time*
so	*so*
zu	*too*
total	*totally*
gar nicht	*not at all*
immer	*always*
ab und zu	*now and then*
oft	*often*

060kUqJm

Meinungen • Opinions

das finde ich (un)fair	*I think that's (un)fair*
das geht mir auf die Nerven	*that gets on my nerves*
das ist (un)gesund	*that's (un)healthy*
das ist aktiv	*that's active*
das ist passiv	*that's passive*
das macht (un)fit	*that makes you (un)fit*
das macht Spaß	*that's fun*
das stimmt (nicht)	*that's (not) true*
du hast recht	*you're right*
ich bin (nicht) süchtig	*I'm (not) addicted*
meiner Meinung nach ...	*in my opinion ...*
Unsinn!/Quatsch!	*Nonsense!*

ELcHIYhy

Fragen • Questions

Wann?	*When?*
Wo?	*Where?*
Was?	*What?*
Wer?	*Who?*
Warum?	*Why?*
Wie?	*How?*
Wie viel/viele?	*How much/many?*
Wie oft?	*How often?*

dlVtQ9bU

Read the Strategy Box for ideas on writing more complex sentences in German.

Strategie 2

Complex sentences

Try to show as much as possible of the German that you know. Simple sentences in correct German are fine, but if you use more complex sentences it sounds more natural – and more impressive!

- Join shorter sentences together using ***und*** (and), ***aber*** (but) or ***oder*** (or).
- Add an opinion – there are phrases on these ***Wörter*** pages that you can use.
- Use ***weil*** (because) to give a reason – but remember the word order with this 'vile' word!
- Add qualifiers such as ***sehr*** (very), ***zu*** (too), ***ziemlich*** (fairly) and ***gar nicht*** (not at all).
- Learn a few phrases that you can use in a variety of situations – time phrases are always useful.

Moving and breathing knowledge organiser

MOVING

The skeleton

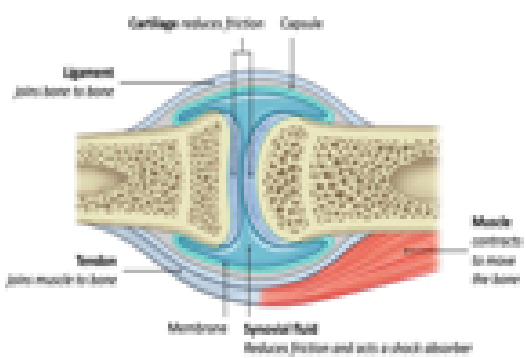
- The skeleton is made of **bones**. Bones are organs which are lightweight but incredibly strong due to the **calcium** they contain.
- The skeleton has four **functions**:
  - To support your body
  - To allow you to move
  - To protect your organs
  - To produce red blood cells

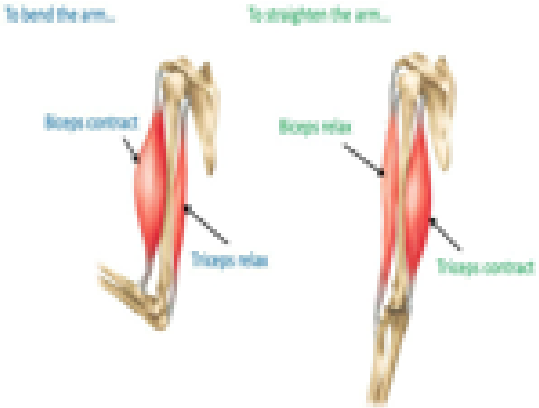
The muscular system

- The muscular system is made of **muscles**. Muscles are organs which can **contract** (get shorter) allowing us to **move**.
- There are three types of muscle in our bodies:
  - **Cardiac muscle** – muscle which the heart is made from, it does not tire.
  - **Smooth muscle** – involuntary muscle e.g. lining the gut for peristalsis.
  - **Skeletal muscle** – voluntary muscles attached to your skeleton e.g. biceps

Joints

- Joints are the points of the skeleton **where bones meet**.
- Whilst you have different joints to allow a different type of movement, they all have the same basic structure:





- **Tendons** connect muscle to bone and *do not* stretch. If ligaments stretched your muscles would not pull on the bone, they would only make the ligament longer.
- **Ligaments** connect bone to bone and *do* stretch in order to prevent dislocation.
- **Cartilage** is a smooth tissue found at the end of bones which reduces the friction between them.

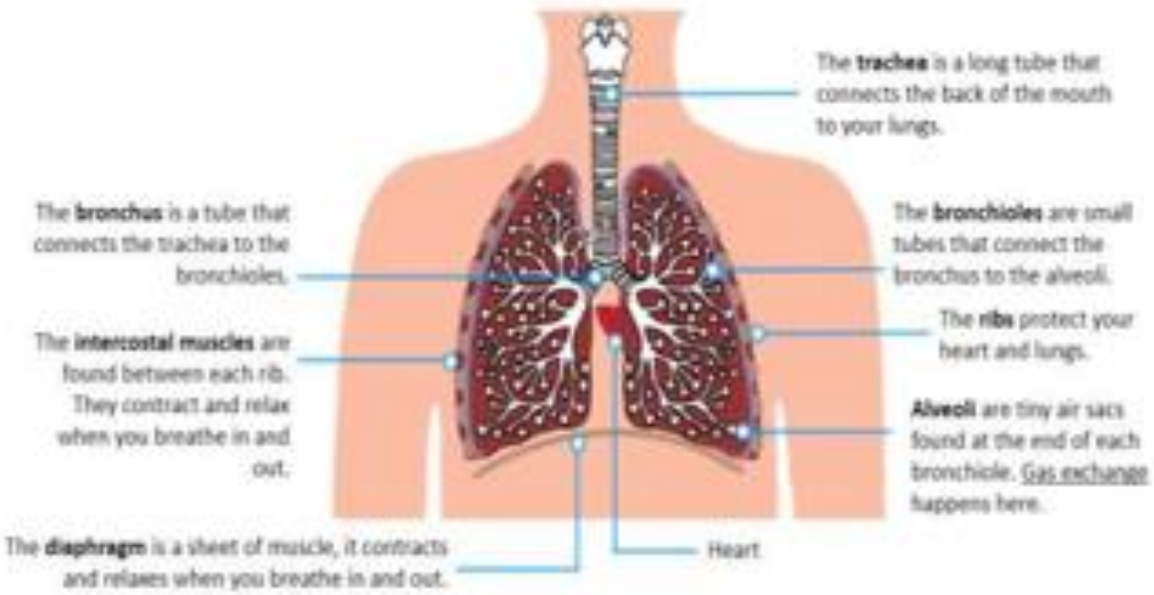
Antagonistic muscle pairs

- When muscles contract, they pull on the bone. Muscles can only *pull* bone; they cannot push it.
- Therefore, to move our bones at a joint we need a pair of muscles called an **antagonistic pair**. Your biceps and triceps are an antagonistic pair which work together to bend and straighten the arm.

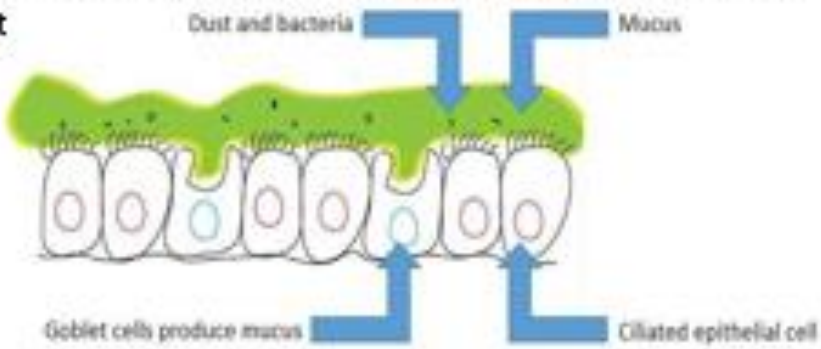
Moving and breathing knowledge organiser

The process of **breathing (also known as ventilation)**: it transfers the oxygen from the air we breathe in to the blood stream. Carbon dioxide moves in the opposite direction and is breathed out.

- The parts of the respiratory system are shown below:

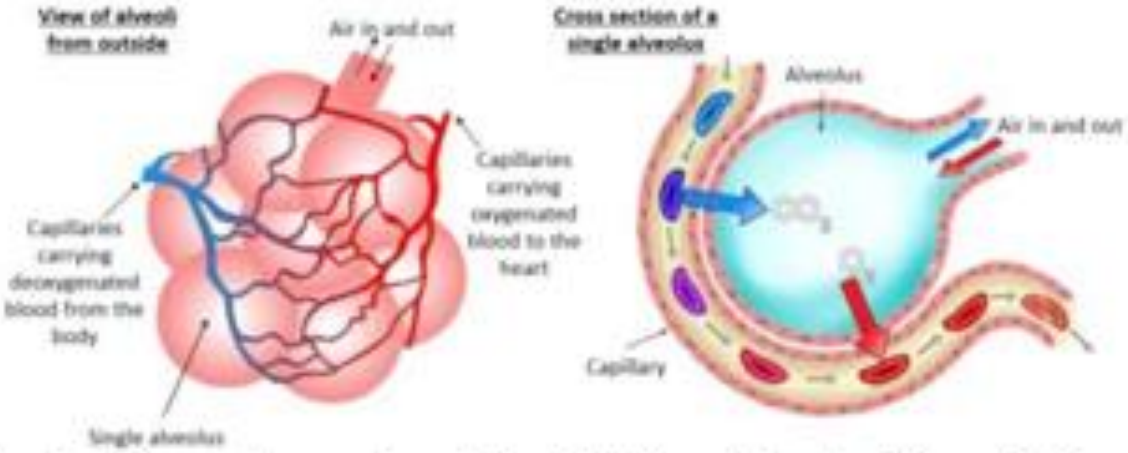


- Rings of **cartilage** stop the airways (trachea, bronchi and bronchioles) collapsing.
- **Mucus** and **ciliated epithelial cells** work together to keep the airways clean: dust and bacteria stick to the mucus and are swept towards the mouth by the cilia hairs. At the mout



Key concept 2: the alveoli are adapted for gas exchange

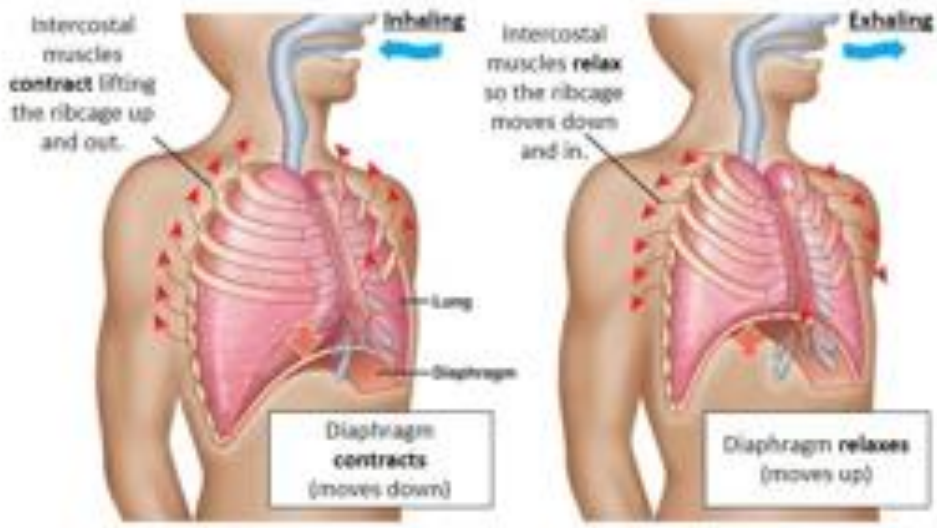
- Due to gas exchange, the air you exhale (breathe out) contains: less oxygen, more carbon dioxide and more water vapour than the air you inhale (breathe in).
- The oxygen has been used up by respiration which produces the waste products carbon dioxide and water which we must remove from our body.
- Your lungs contain millions of alveoli which gives a **huge surface area** over which gas exchange can take place. This means *more* gas can diffuse.



- The alveoli themselves are also adapted: the lining of the alveoli is **very thin** (usually only one cell thick) and **covered with a film of moisture**. This means gases can diffuse ***faster*** into and out of the blood.
- The alveoli are surrounded by tiny capillaries which bring blood close to each alveolus. This also means gases can diffuse ***faster*** into and out of the blood.

Breathing

- The intercostal muscles and diaphragm contract and relax so we can inhale and exhale:



- Your breathing rate depends on the amount of oxygen you need.

At rest most people breathe around 12-20 times per minute.

Key concept 3: the effects of exercise and smoking on the respiratory system

- During exercise you need more oxygen so *more respiration* can take place. Therefore, your breathing becomes faster and deeper.
- Although cigarette smoke is harmful, people continue to smoke because the **nicotine** it contains is addictive.
- Cigarette smoke also contains a chemical called **tar**. Tar causes cancer.
- The **hot smoke** kills the ciliated epithelial cells lining the airways. This means they cannot sweep mucus up towards the mouth, giving rise to a smoker's cough.
- The **hot smoke** also breaks down the lining of the alveoli, reducing the surface area over which gas exchange can happen. Smokers often find it difficult to exercise as they are unable to get enough oxygen to their muscles for respiration.

ACIDS AND ALKALIS

Key Terms	Definitions
Acid	A substance which forms H^+ ions.
Alkali	A soluble base that contains OH^- ions
Base	A substance that will neutralise an acid
The pH scale	A scale which measures how acidic a substance is
Indicator	A chemical which will change colour depending on the acidity of the substance

Safety

When handling acids and alkalis in the lab we need to take many **safety precautions** for example wearing goggles.

If an acid is dilute (lots of water has been added) it will be irritant and cause redness or blistering of the skin.
If an acid is concentrated it will destroy skin cells.

Alkalis

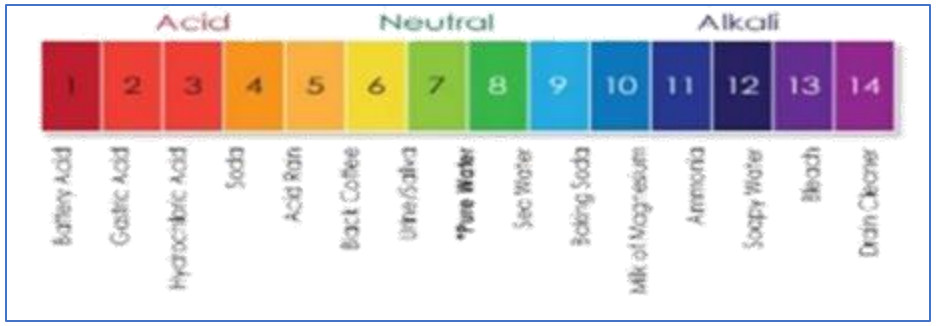
Alkalis, are a family of chemicals that have a soapy feel, they are also corrosive, examples of these are toothpaste, soap and oven cleaner.
Alkalis contain OH^- ions.
Alkalis **are bases** that dissolve in water. Therefore not all bases are alkalis. See the example below. Copper oxide is a base but not an alkali. Sodium hydroxide is a base and an alkali.

Acids

Acids are a family of chemicals, examples are lemon juice, vinegar and Coca Cola. There is also acid in our stomach.
Acids contain H^+ ions.
Strong acids like hydrochloric acid are very corrosive this means they destroy skin cells and cause burns
Weak acids like vinegar are safe to eat but are still irritant to sensitive parts of the body.

Indicators

Indicators are chemicals that show whether a substance is an **acid or an alkali**
There are many examples of indicators for example **litmus paper and universal indicator**
There are also natural indicators like **red cabbage**



THE pH Scale

The pH scale measures how **strong an acid or alkali is**
The pH scale runs from 0-14
The pH scale measures the **concentration of H^+ ions**, the lower the number the higher the concentration.
Acids have a pH between 0 and 6, pH 1-3 are strong acids, 4-6 are weak acids
Alkalis have a pH between 8 and 14, 8-10 weak alkalis, 11-14 strong alkalis
Anything with a **pH of 7 is neutral**, for example water

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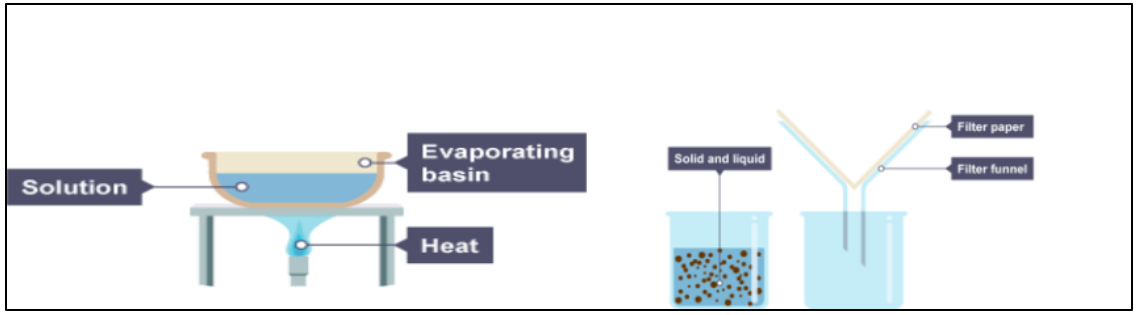
ACIDS AND ALKALIS

Neutralisation

When an acid reacts with an alkali a **neutralisation reaction occurs, this means what you make has a pH of 7.**
When a neutralisation reaction happens the **products are a salt and water. (See below for how to name a salt)**
There are many examples of neutralisation reactions, for example a wasp sting is alkali so we add vinegar (an acid) to it to neutralise it.
Farmers also spread alkalis onto fields to **neutralise the acid in the soil.**
Another example is indigestion when there is to much acid in our stomach, we neutralise this with alkali tablets

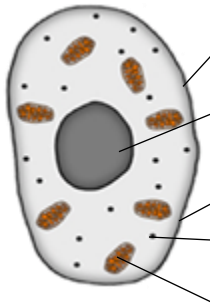


Salts

There are two types of salt that could be made in a neutralisation reaction, soluble or insoluble salt
Insoluble salts can be separated using filtration
Soluble salts dissolve in water and can be separated using evaporation

		Example
Acid and Alkali	Acid +Alkali => Salt + Water	Sodium Hydroxide + Sulphuric Acid => Sodium Sulphate + Water
Acid and Metal Carbonate	Acid + Metal Carbonate => Salt + Water +Carbon Dioxide	Hydrochloric acid + Magnesium Carbonate => Magnesium Chloride + Carbon Dioxide + Water
Acid and metal Oxide	Acid + Metal Oxide => Salt +Water	Sulphuric acid +Calcium Oxide => Calcium Sulphate + Water

Honey I shrunk the kids (cells)

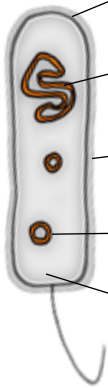


cytoplasm	*site of chemical reactions in the cell*	gel like substance containing enzymes to catalyse the reactions
nucleus	*contains **genetic material***	controls the activities of the cell and codes fro proteins
cell membrane	*semi permeable*	controls the movement of substances in and out of the cell
ribosome	*site of protein synthesis*	Where proteins are made
mitochondrion	*site of respiration*	where energy is released for the cell to function

animal cell

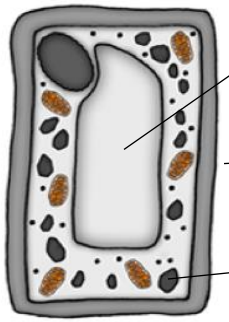
Eukaryotes complex organisms with nucleated cells

Prokaryotes – simple unicellular organisms with DNA present but not in a nucleus



cell membrane	*site of chemical reactions in the cell*	gel like substance containing enzymes to catalyse the reactions
bacterial DNA	*not in nucleus floats in the cytoplasm*	controls the function of the cell
cell wall	***NOT** made of cellulose*	supports and strengthens the cell
plasmid	*small rings of DNA*	contain additional genes
cytoplasm	*semi permeable*	controls the movement of substances in and out of the cell

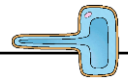
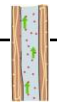
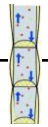
Bacterial cells are much smaller than plant and animal cells



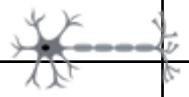
permanent vacuole	*contains cell sap*	keeps cell turgid, contains sugars and salts in solution
cell wall	*made of cellulose*	supports and strengthens the cell
chloroplast	*site of photosynthesis*	contains chlorophyll, absorbs light energy

plant cell

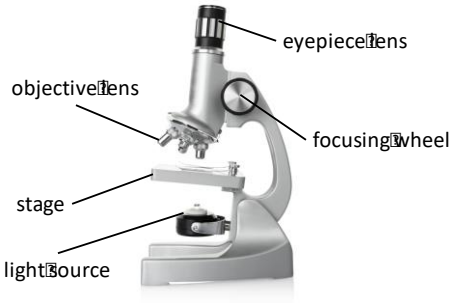
Honey I shrunk the kids (cells)

root hair		*absorb water and minerals from soil*	hair like projections to increase the surface area
xylem		*carry water and minerals*	TRANSPIRATION - dead cells cell walls toughened by lignin flows in one direction
phloem		*carry glucose*	TRANSLOCATION - living cells cells have end plates with holes flows in both directions

specialised plant cells

nerve		*carry electrical signals*	long branched connections and insulating sheath
sperm		*fertilise an egg*	streamlined with a long tail acrosome containing enzymes large number of mitochondria
muscle		*contract to allow movement*	contains a large number of mitochondria long

specialised animal cells



Feature	Light (optical) microscope	Electron microscope
Radiation used	Light rays	Electron beams
Max magnification	~ 1500 times	~ 2 000 000 times
Resolution	200nm	0.2nm
Size of microscope	Small and portable	Very large and not portable
Cost	~£100 for a school one	Several £100,000 to £1 million plus

$$\text{magnification (M)} = \frac{\text{size of image}}{\text{real size of the object}}$$

Year 8 Design and Technology

Fretsaw

Metal File

Belt Sander

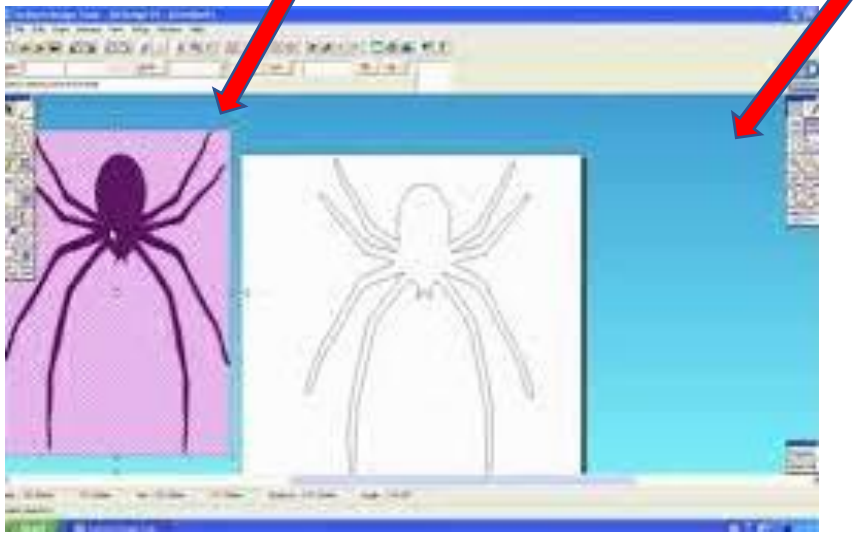
These are the key principles of design we will be looking at this term when working in the Workshop. The project is to design and make a sweet dispenser.

Key Questions?

- What is the function of a sweet dispenser? Will it have any extra practical design features?
- What key aesthetics do you need to consider when designing?
- How will accurate measuring affect the quality and function of your product?

Using 2D Design, you will transfer your hand drawn designs onto CAD.

Using CAD helps to present work professionally, and adds to your portfolio of skills working towards GCSE level.



Word Bank

Material properties Aesthetics Measurements
Template Product
Analysis Fretsaw Sander Relief

Nutrition

Nutrients

Macro nutrients – needed in large quantities in the diet. The three macro nutrients are: PROTEIN, CARHOHYDRATES, FAT
Micro nutrients – needed in small quantities in the diet. The two micro nutrients are: VITAMINS, MINERALS

Protein

Proteins are made up of amino acids, often referred to as the 'building blocks' of the body. Non-essential amino acids can be made by the body, how ever, essential amino acids cant be made by the body and we must get from the food we eat.
High biological Value (HBV) proteins contain all the essential amino acids we need and generally come from animal sources. Low biological value (LBV) proteins are missing one of more essential amino acids and generally come from plant sources.

Food sources

HBV - beef, pork, lamb, poultry (chicken, turkey, duck), fish, cheese, butter milk
LBV – beans, chickpeas, lentils, peas, nuts, seeds, found in smaller amounts in some vegetables such as spinach and broccoli.

Function

Needed for growth from childhood to adulthood and the growth of nails, hair and muscle mass, repair of muscles, tissues and organs after illness or injury and to make enzymes for digestion and antibodies to stop us getting ill.

Example exam questions:
What are the two types of fat? (2 marks)
Explain the difference between a HBV and LBV protein (6 marks)

Carbohydrates

There are two types of carbohydrates, complex and simple. They are also known as starchy (complex) and sugary (simple).

Food sources

Starchy – bread, rice, pasta, potatoes, bagels, oats, flour, cereal and some vegetables.
Simple – fruit, some vegetables, chocolate, sweets, biscuits, cakes

Function

Starchy/complex carbohydrates are digested slowly and provide long term energy.
Sugary/simple carbohydrates are digested slowly and provide short term energy

Fat

There are two types of fat, saturated and non saturated.
Saturated fats are classed as 'unhealthy fats', they are solid at room temperature and are generally animal based.
Unsaturated fats are classed as 'healthier fats' and are liquid or soft at room temperature and come from plant based sources.

Food sources

Animal –beef, chicken skin, processed meat (sausages, salami, pepperoni), bacon, butter, cheese, full fat milk
Plant – vegetable oils (sunflower, olive, rapeseed), avocado, nuts, seeds

Function

Keeps us warm (provides insulation), secondary source of energy, protects vital organs and bones.

Dietary related health problems

Too much sugar can cause:

1. Weight gain (which can lead to obesity)
2. Tooth decay
3. Diabetes (your body cannot produce enough/any insulin to regulate your blood sugar levels)

Too much salt can cause:

1. High blood pressure (this can increase your risk of heart disease and a stroke).

Too much saturated fat can cause:

1. Weight gain (which can lead to obesity)
2. High cholesterol (this narrows arteries making it harder for the blood to travel around, putting you at risk of heart disease).

The Eatwell guide

The Eatwell guide

The Eatwell guide is a government guide designed to show you the proportions of different foods groups you should eat over a day or more.

Tips on making healthy choices from the eatwell guide:

Fruit and vegetables: eat 5 portions of fruit and vegetables a day, this should make up 1/3 of your plate a day, fresh, frozen, canned, dried and fruit juice/smoothies all count, don't exceed 150ml of fruit juice/smoothie a day as it can cause tooth decay, try snacking on fruit over high sugar and fat foods,

Potatoes, bread, rice, pasta and other starchy carbohydrates: choose non-sugary cereals, leave the skin on potatoes, choose wholemeal options of foods such as bread, rice and pasta.

Oils and spreads: choose unsaturated fats such as vegetable oils and margarine over butter, use in small amounts.

Dairy and alternatives: choose lower fat options such as skimmed milk and low fat and salt cheese, choose low sugar yogurts and add fruit as a natural sweetener.

Beans, pulses, fish, eggs, meat and other proteins: eat more beans and pulses as they are high in fibre and fill you up for longer, cut the visible fat off meat, choose lower fat meat options, eat 2 portions of fish a week.

Water: drink 2-3 litres of water a day, choose lower sugar option drinks.

8 Guidelines for Healthy Eating

1. Base your meals on starchy carbohydrates	• This should make up 1/3 of your diet • Chose high fibre, whole grain options e.g. pasta, rice • Try to include one starchy food with each meal	5. Eat less salt – no more than 6g a day for adults	• Eating too much salt can raise blood pressure, this puts you at high risk of heart disease or a stroke • Most of the salt you eat is already in food, check the labels to help you choose low salt options
2. Eat lots of fruit and vegetables	• Try adding a banana to cereal or swap crisps for fruit • Always serve main meals with two vegetables • Beans and pulses can count as 1 of your 5 portions	6. Get active and be a healthy weight	• Regular exercise can reduce your risk of getting serious health conditions • Aim for 150 minutes of exercise a week
3. Eat more fish – including one portion of oily fish	• Fish is a source of protein and vitamins and minerals • It contains omega 3 (good for eyes, skin, brain heart) • Oily fish includes: salmon, herring, mackerel, sardines	7. Don't get thirsty	• 6-8 cups a day, 2-3 litres • Avoid sugary and fizzy drinks as they're bad for teeth • Remember fruit juice and smoothies is also high in sugar
4. Cut down on saturated fat and sugar	• All types of fat are high in energy and should be eaten in small amounts • Excess sugar can cause weight gain and tooth decay	8. Don't skip breakfast	• Kick starts you for the day • choose healthy low fat, sugar and salt and high fibre • Choose low sugar cereals and granola

Macaroni Cheese

Ingredients

100g macaroni
100g Cheddar cheese
25g soft margarine
25g plain flour
250ml semi-skimmed milk
Black pepper

Equipment

Saucepan
Weighing scales
Grater
Chopping board
Measuring jug
Wooden spoon
Whisk
Ovenproof dish

Skills

Grating
Mixing
Weighing
Seasoning
making a roux sauce
slicing

1. pre-heat the oven to 180C. Grate the cheese, slice the tomato and measure the milk.

2. Melt the butter and flour until mixed into a paste.

3. **Switch the heat off**. Add the milk a tiny bit at a time, only adding more once its all mixed in.

4. **Switch the heat on**. Bring the sauce to a simmer, whisking it all the time until it has thickened. Stir through $\frac{3}{4}$ of the cheese.

5. Mix in the pasta and season with salt and pepper. Pour into an oven proof dish.

6. Cover with grated cheese and sliced tomato. Bake in the oven for 20-25 minutes until golden brown.

Next lesson you will make your own adapted macaroni cheese recipe

Chocolate Banana Pancakes

Ingredients (makes 5)
1 banana mashed with a fork
1 egg
70g self-raising flour
1tbsp light brown sugar
OR chocolate chips
60ml milk
25g melted butter

Equipment
Frying pan
Jug
Bowl
Spoon
Spatula
Fork

Skills
Weighing
Mixing
Whisking
Melting
frying

Method

1. Combine all ingredients together

2. Cook until brown on both sides in some melted butter.

Layered vegetable pasta bake

Ingredients

150g pasta

1 can chopped tomatoes

1 tbsp. tomato puree

1 courgette

1 pepper

2 garlic cloves

1 onion

2 handfuls spinach

1 ball mozzarella

Mixed herbs

Salt and pepper

oil

Equipment

Chopping board

Knife

Saucepan

Frying pan

Wooden spatula

Mixing bowl

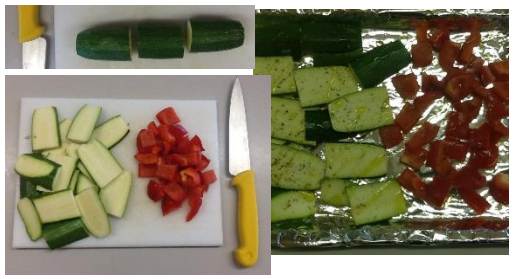
Skills

Seasoning

Boiling

Frying

1. Fill up a pan half way with hot water and put on to boil. When boiling add the pasta. Pre-heat your oven to 200C.



2. Slice your courgette and pepper into long strips. Put on a baking tray with oil and seasoning and roast in the oven for 15 minutes.

4. Finely chop your garlic and onion. Fry in a little oil, until softened.

5.Add the tomatoes and a tablespoon of tomato puree. Half fill your empty tomato can with water and add this too. Add salt, pepper and mixed herbs. Simmer for 5 minutes.

6. When the pasta is cooked, drain using a colander, then put $\frac{1}{4}$ in the oven proof dish, followed by the **roasted courgette**.

7. Ladle over 1/3 of the tomato sauce.

8. Add another $\frac{1}{4}$ layer of pasta, then add the **roasted peppers** and a layer of sauce.

9. Add another layer of pasta, then add the **spinach** and a layer of sauce.

10. Add the final layer of pasta and sauce and top with slices of mozzarella.
Bake in the oven for 20 minutes until the cheese has melted and gone golden

Year 8 Knowledge Organiser: Globalisation

Topics covered

- ✓ What is Globalisation?
- ✓ Benefits of Globalisation
- ✓ Drawbacks of Globalisation
- ✓ What are TNC's?
- ✓ TNC's – good or bad?
- ✓ What is the chain of production?
- ✓ What are 'sweatshops'?
- ✓ Measuring wealth/poverty
- ✓ Ways to reduce poverty
- ✓ Fairtrade

Key Ideas:

1. I can define the meaning of Globalisation
2. I can describe the advantages and disadvantages of Globalisation
3. I can explain how TNC's operate and exploitation through the chain of production.
4. I can measure poverty and suggest ways to reduce poverty

Skills

- ❑ To research amazing facts using ICT
- ❑ To understand different opinions and viewpoints
- ❑ To calculate levels of development using Atlas data
- ❑ To create graphs of different types (line, bar, pie)
- ❑ To write a detailed piece of extended writing

Places and Environments

- ❖ Asia
- ❖ Bangladesh
- ❖ Vietnam
- ❖ Indonesia
- ❖ Cameroon
- ❖ Norwich

Key Terms Used in this Unit

- ❑ Communications
- ❑ Trade
- ❑ Migration
- ❑ Trans-National Corporations
- ❑ Multi-National Corporations
- ❑ Inward Investment
- ❑ Head office
- ❑ Chain of production
- ❑ Consumers
- ❑ Child Labour
- ❑ Exploitation
- ❑ Sweatshops
- ❑ Gross Domestic Product
- ❑ Quality of Life
- ❑ Charity
- ❑ Fair Trade Premium
- ❑ WTO

Knowledge Organiser: Year 8 Spring Term 1 Part 1 Computational Thinking and Algorithms

Summary

An **algorithm** is a plan, a logical step-by-step process for solving a problem. Algorithms are normally written as a **flowchart** or in **pseudocode**. The key to any problem-solving task is to guide your thought process. The most useful thing to do is keep asking 'What if we did it this way?' Exploring different ways of solving a problem can help to find the best way to solve it. When designing an algorithm, consider if there is more than one way of solving the problem.

When designing an algorithm there are two main areas to look at:

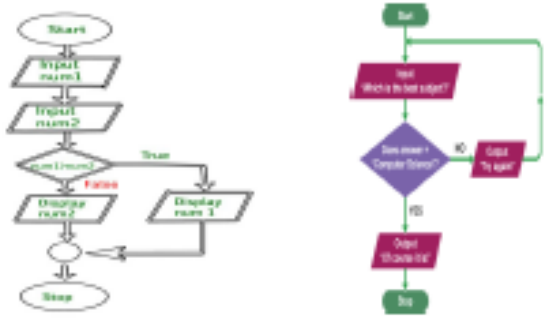
The big picture - What is the final goal?

The individual stages – What hurdles need to be overcome on the way to the goal?

Before an algorithm can be designed, it is important to check that the problem is completely understood. There are a number of basic things to know in order to really understand the problem:

What are the **inputs** into the problem?
What will be the **outputs** of the problem?
In what order do **instructions** need to be carried out? What decisions need to be made in the problem? Are any areas of the problem repeated?

Flowchart—Uses Images



Key Vocabulary

Abstraction	The process of separating and filtering out ideas and specific details that are not needed in order to concentrate on those that are needed.
Algorithm	A diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs.
Decomposition	The breaking down of a system into smaller parts that are easier to understand, program and maintain
Pattern recognition	Finding similarities and patterns in order to solve complex problems more efficiently.
Program	Sequences of instructions for a computer
Programming	The process of writing computer software.

PseudoCode—uses structured Engliah

INPUT – indicates a user will be inputting something

OUTPUT – indicates that an output will appear on the screen

WHILE – a **loop** (**iteration** that has a **condition** at the beginning)

FOR – a counting loop (iteration)

REPEAT – UNTIL – a loop (iteration) that has a condition at the end#

IF – THEN – ELSE – a decision (**selection**) in which a choice is made

http://bit.ly/37bouhy

Year 8 RS: How does Creation narratives shape what it means to be human?

Key words	
Holy	Humans have the ability to make their own choices.
Sacred	Humans have the ability to know right from wrong and can choose right or wrong behaviour.
Sanctity of Life	Actions that are caused by man that lead to suffering.
Theory of Evolution	The idea that life developed by chance through a slow process of change.
Big Bang Theory	The belief that God is all powerful.
Creation	The belief about how the world was made.
Genesis	The belief that God is all present– he is everywhere,
Stewardship	Looking after something for someone else.
Environment	The natural world that supports us.

Creation stories for Sikhism and Buddhism are not included because they don't exist. Sikhs believe that the world was created by God, but don't have a story to explain how.

Buddhists generally do not see the point in trying to explain the origins of the world, preferring to deal with the here and now. They say that if you are shot by an arrow, you don't worry about where it came from, you just worry about getting it out.

In the in the religious stories, responsibility for the planet is given to human beings. This is called stewardship.

Christian beliefs on Creation

Christians believe that the world did not appear by random chance. Instead they believe that the universe was intelligently designed by God. The Bible teaches that the world was created in a planned and organised way and that each act of creation happened because God spoke it into being.

In the beginning there was darkness and nothingness and the earth was without shape or form, but then God spoke creation into being.

First, light appeared.

Then, God separated the water of the seas from the water in the atmosphere by creating the sky.

Next God commanded the ground to appear; separating the sea from the land. After this he created plants, vegetation and trees each with seeds within them, so that they could reproduce and grow.

Following this, lights were set in place in the universe so they could mark the passing of time; the days and seasons and years. These lights were called the sun, moon and stars.

After this, God created all water creatures and birds and he gave them the ability to increase and reproduce. In the final acts of creation, God made all land, animals and human beings. According to the Bible, God gave the task of caring for the planet and the role of being responsible for looking after creation to human beings. The Christian Creation story teaches that the world was made perfect and wonderful, but that the selfish and disobedient behaviour of people spoilt the world.

Hindu beliefs about Creation

Before time began there was no Earth, no heaven, no space, nothing. The waves of a vast, dark ocean lapped on the edge of this nothingness and a giant cobra floated on the waters. Lying asleep in the snake's coils was lord Vishnu. The snake kept him safe and he slept peacefully.

Slowly, a sound started, "om".

It grew louder and filled the emptiness. It throbbed with energy and drove the emptiness away. Lord Vishnu woke up and a magnificent lotus flower grew from his navel. Right in the middle of the flower sat Brahma. Lord Vishnu told Brahma to set to work and create a world.

Still sitting in the flower, Brahma calmed the wind, stilled the waves and brought peace. Brahma spilt the lotus flower making three different parts: the heavens, the earth and the sky. To start with the earth was bare so Brahma created grass, flowers, trees and plants. He let living things evolve so that the earth became full of animals, birds and fish.

Hindus have many ways of thinking about God. They say there is one God but use different names when he does different thing. When God creates he is called Brahma. When he looks after the creation he is called Vishnu. As lord Shiva he will destroy the universe.

Aboriginal beliefs about Creation

We have been told, as our fathers were before us, then there was land, but it was a bare, flat, barren plain. No animals ran there. No birds sang overhead. No trees or bushes grew. No sound of water could be heard. Nor was there any man or woman.

Baiame, or the Maker of Many Things as some call him, brought the Dreamtime ancestors from under the ground and over the seas. With them, life came to the barren, flat plain. Some of the Dreamtime ancestors looked like men or women. Others looked like the animals or creatures which descended from them. But often the Dreamtime ancestors could change their shape. So, the swordfish ancestor could look like a swordfish, or a man or woman.

As the Dreamtime ancestors wandered over the land, many adventures befell them. They met with other ancestors. Arguments often arose and the ancestors would set out on their travels again. They met strange creatures and fought battles. Each time something happened, the very shape of the land changed. Hills arose, plants grew. Where the Barramundi-fish ancestor swam, rivers appeared. When people, ancestors or animals did what they should not, the Rainbow Snake would rush down upon them. He would either drown them, making bays and river, or swallow them. Then he would spit out their bones to form rocks and hills. But the Rainbow Snake is not just vengeful. To some peoples the Rainbow Snake is Old Woman, who in the Dreamtime taught her children – humans – to talk and understand, to dig for food, and what to eat. And the sun, moon and stars? These also came to be in the Dreamtime. For one day Emu ancestor and Eagle ancestor were fighting. Eagle took one of Emu's eggs and threw it into the air. Soaring up, it burst into flames. Baiame fed the flame with wood. So, the sun was made, and is made anew each day with fresh wood. The Dreamtime ancestors taught their groups how to perform secret ceremonies. Then the ancestors sank back into the earth or rose into the sky, but remain ever present. But Dreamtime is not over. For when ceremonies are preformed, Dreamtime comes to who celebrate, and they learn to see this land as the Dreaming sees it – alive.

Year 8 Drama Topic 2
Pantomime

Genre is from the French meaning kind, or sort and is used to categorise types of drama.

Pantomime is a genre which has developed from commedia dell'arte and tends to be humorous and farfetched. It is usually based on well-known fairy or children's stories.

Characters have a series of mishaps, or are faced with a number of challenges that they generally are able to overcome by the show's end.

The 'ingredients' of a pantomime

Stock characters such as the principal boy (who is always played by a girl) or the dame (who is always played by a boy).

Music, which normally involves a large cast singing and dancing.

Topical jokes which are relevant to the current time/place.

Slapstick comedy which is very physical and involves vigorous and usually violent action.

Audience participation where the audience are encouraged to join in by booing, singing and shouting "he's behind you".

The star of the show - where a 'celebrity' appears to showcase their skills often with very little relation to the plot.

Design elements

Costume – A set of clothes worn by an actor in a particular role. The costume will usually communicate the age, status and personality of the character as well as giving clues about when and where the play is set.

Lighting – The arrangement of theatre lights to achieve dramatic effect. This can be through the use of colour, position or intensity

Sound – The sound used to create atmosphere,

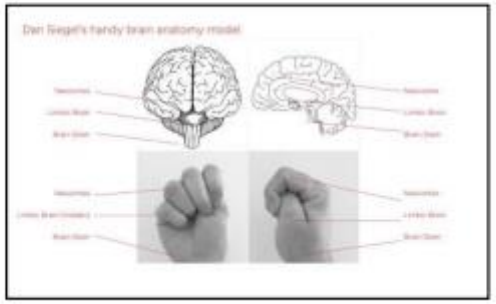
What do you know about the United Kingdom of Great Britain and Northern Ireland?

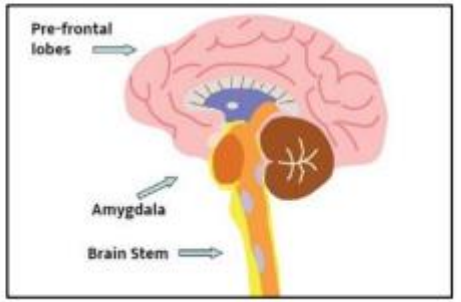
Name and flag	Patron Saint	National Flower(s)	National Animal(s)	Coat of Arms	Motto	Anthem plus de facto /alternate
United Kingdom	United Kingdom does not have a patron saint or flower. It does have Britannia as the embodiment of the nation. 		Lion  Bull dog 	Royal coat of arms of the United Kingdom 	Dieu et mon droit meaning "God and my right" The motto is said to have first been used by Richard I (1157–1199) as a battle cry and presumed to be a reference to his French ancestry (indeed he spoke French and Occitan but knew only basic English) It was adopted as the royal motto of England by King Henry V (1386–1422)	"God Save the Queen" King replaces Queen when a male is on the throne.
England	St George	Tudor Rose 	Lion 			God Save the Queen / Jerusalem
Scotland	St Andrew	Thistle 	Unicorn 		*In Defens* (Scots) "In Defence"	God save the Queen / flower of Scotland
Wales 	St David	Leek or daffodil  	Red Dragon 		*Cymru am byth* (Welsh) "Wales forever"	"Hen Wlad Fy Nhadau" (Welsh) "Land of my Fathers"
Northern Ireland (currently no flag Ulster banner removed 1973)	St Patrick 	Flax or Shamroc 	None	Many disagree with it as the body that created it is defunct. 	*Quis separabit?* "Who will separate us?"	Londonderry Air

KS3 Knowledge Organiser - The Brain

BRAIN STRUCTURE

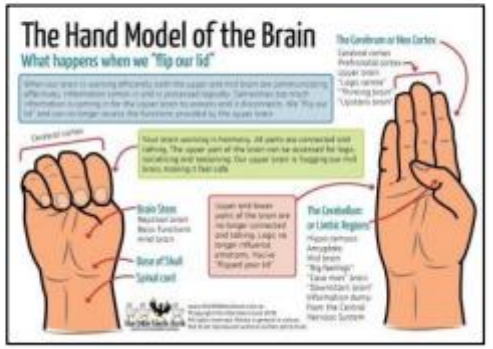
Be able to use the hand model and the upstairs/downstairs model to explain the brain.
Know the term amygdala.





WHEN OUR BODY PERCEIVES A THREAT

1. The amygdala floods our body with the hormones adrenaline and cortisol
2. This prompts us to either FIGHT, FLIGHT or FREEZE
3. Our heart rate and blood pressure increase
4. Our skin pales or flushes
5. Our ability to feel pain decreases
6. Our pupils dilate
7. Our memory might be affected
8. We might be trembling
9. Sometimes people lose control of their bladder!



WHERE TO SEEK SUPPORT IF YOU NEED IT

- Shelf help books in the library or public library
- Parent or other adult at home
- Friends
- Older student
- Tutor or achievement leader
- Learning mentor
- Wellbeing team (Miss Neal, Mrs Freds, Mrs Dobell, Mrs Crissall, Mrs Horne)
- Mrs Whitcombe or another member of the leadership team
- School nurse drop in
- School nurse referral
- Kooth
- Emotional wellbeing hub
- Dr Hope
- Samaritans

HOW TO HELP YOUR BRAIN LEARN

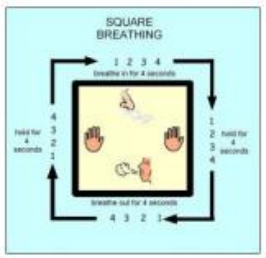
1. Challenge your brain
2. Be curious and imaginative
3. Deal with stress or anxiety first
4. Drink plenty of water
5. Eat a healthy diet
6. Get enough sleep
7. Take plenty of physical exercise
8. Break your learning into chunks
9. Take brain breaks regularly

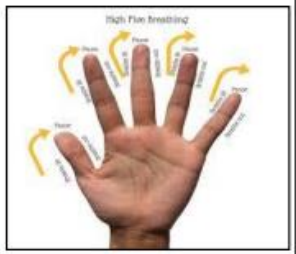
FIVE WAYS TO WELLBEING

Know the five; know what they mean; give examples

BREATHING

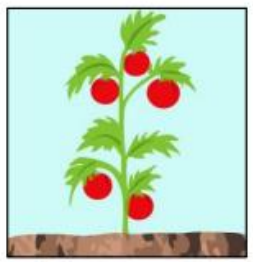
4, 5, 6 breathing
Breathe in for 4, hold for 5, breathe out for 6. Repeat as long as you need to.





WHAT TO DO WHEN YOU WORRY TOO MUCH

- Stop your worries growing by paying less attention to them
- Fight your thoughts with logical answers
- Use planned worry time
- Imagine and deal with a worry monster
- Re-set your system with exercise
- Re-set your system with relaxation techniques



GROUNDING

Keeping everybody safe at Open Academy

We aim to keep everyone in our community safe. If you feel worried about yourself or someone else, please speak to someone you trust as soon as you can. Please find your trusted adult in the academy who will be there to support you and listen.

What is abuse in safeguarding concerns?

Physical Abuse

Physical abuse is any way of intentionally causing physical harm to a person or purpose. This could result in injuries such as in bruises, broken bones, burns or scalds or bite marks.

Emotional Abuse

Emotional abuse is any type of abuse that involves the continual emotional mistreatment of a person. It's sometimes called psychological abuse. Emotional abuse can involve deliberately trying to scare, humiliate, isolate or ignore and stopping you from seeing friends or family.

Sexual Abuse

When a child or young person is sexually abused, they're forced or tricked into sexual activities without permission. This include being forced to look at images or videos. Sexual abuse can happen anywhere – and it can happen in person or online.

Neglect

Neglect can be a lot of different things. It is when you do not get enough help or care from someone who should be looking after you. This could include having a lack of food, clothing and attention and medical care.

Bullying

Bullying is behaviour that hurts someone else. It includes name calling, hitting, pushing, spreading rumours, threatening or undermining someone. It can happen anywhere – at school, at home or online. Online bullying is called Cyber-bullying. It's usually repeated over a long period of time and can hurt a child both physically and emotionally.

County Lines

County Lines is the police term for urban gangs exploiting young people into moving drugs from a hub, normally a large city, into other markets - suburban areas and market and coastal towns - using dedicated mobile phone lines or “deal lines”. Children as young as 12 years old have been exploited into carrying drugs for gangs. This can involve children being trafficked away from their home area, staying in accommodation and selling and manufacturing drugs.

Radicalisation

Someone who starts to believe in or supports extreme views linked to terrorism and forms of extremism leading to terrorism. Extremism can also be linked to this as extreme views, vocal or active opposition to fundamental British values, including democracy, the rule of law, mutual respect and tolerance of different faiths and beliefs.

Where do I go for help and advice?

Speak to any adult in school such as your Head of Year or Mr Davis, Miss Milroy, Mr Richardson or Mr Ford. Advice can be found on the NSPCC website by scanning the QR code at the top of this page. You can also go to www.childline.org.uk or call 0800 1111.