KNOWLEDGE ORGANISER

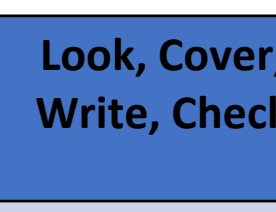
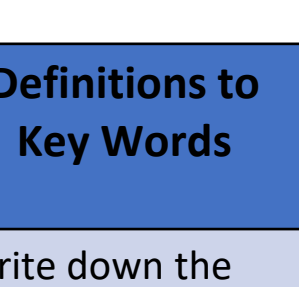
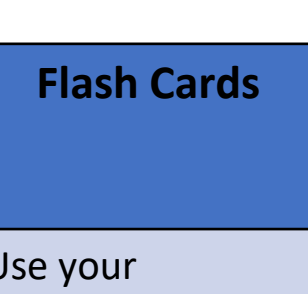
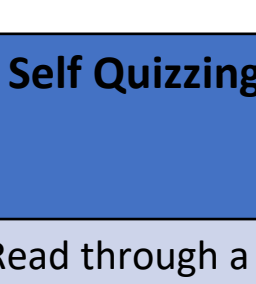
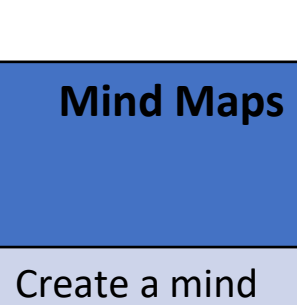
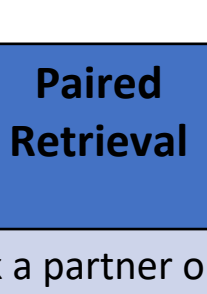
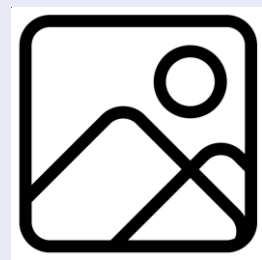
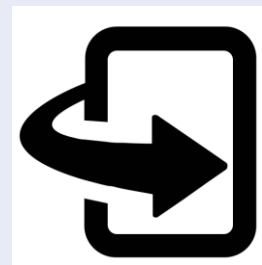
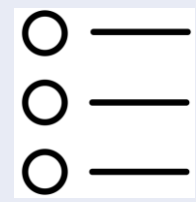
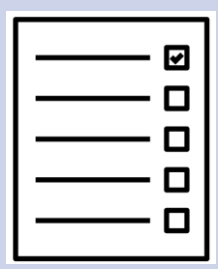
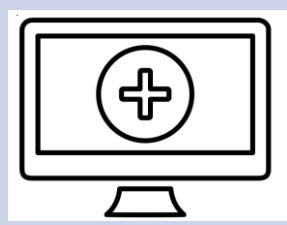
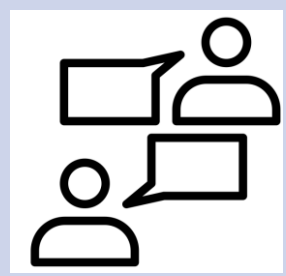
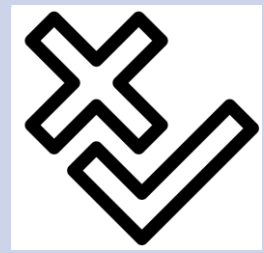
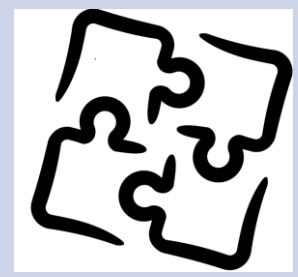
Year 8
Half Term 4

Name:	
Tutor Group:	
Academic Year:	

How to use your Knowledge Organiser

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

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

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


CORE

YEAR 8 - DEVELOPING GEOMETRY...

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Angles in parallel lines and polygons

What do I need to be able to do?

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

- Identify alternate angles
- Identify corresponding angles
- Identify co-interior angles
- Find the sum of interior angles in polygons
- Find the sum of exterior angles in polygons
- Find interior angles in regular polygons

Keywords

Parallel: Straight lines that never meet
Angle: The figure formed by two straight lines meeting (measured in degrees)
Transversal: A line that cuts across two or more other (normally parallel) lines
Isosceles: Two equal size lines and equal size angles (in a triangle or trapezium)
Polygon: A 2D shape made with straight lines
Sum: Addition (total of all the interior angles added together)
Regular polygon: All the sides have equal length, all the interior angles have equal size.

Basic angle rules and notation (R)

Acute Angles
0° < angle < 90°

Right Angles
90°

Obtuse
90° < angle < 180°

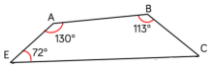
Right angle notation

Reflex
180° < angle < 360°

Straight Line
180°

Vertically opposite angles
Equal
Angles around a point
360°

The letter in the middle is the angle
The arc represents the part of the angle



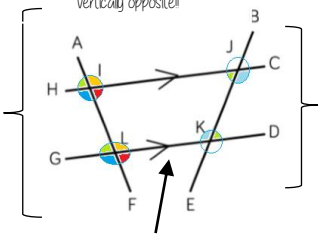
Angle Notation: three letters **ABC**
This is the angle at B = 113°
Line Notation: two letters **EC**
The line that joins E to C

Parallel lines

Still remember to look for angles on straight lines, around a point and vertically opposite!

Lines OF and BE are **transversals** (lines that bisect the parallel lines)

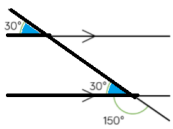
Corresponding angles often identified by their **"F shape"** in position



Alternate angles often identified by their **"Z shape"** in position

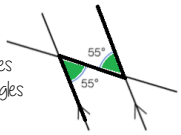
This notation identifies parallel lines

Alternate/ Corresponding angles

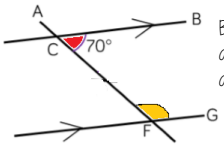


Because alternate angles are equal the highlighted angles are the same size

Because corresponding angles are equal the highlighted angles are the same size



Co-interior angles



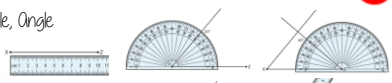
Because co-interior angles have a sum of 180° the highlighted angle is 110°

As angles on a line add up to 180° co-interior angles can also be calculated from applying alternate/ corresponding rules first

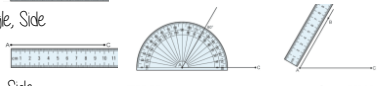
Triangles & Quadrilaterals

Link to steps (R)

Side, Angle, Angle



Side, Angle, Side



Side, Side, Side

Properties of Quadrilaterals

Square
All sides equal size
All angles 90°
Opposite sides are parallel

Rectangle
All angles 90°
Opposite sides are parallel

Rhombus
All sides equal size
Opposite angles are equal

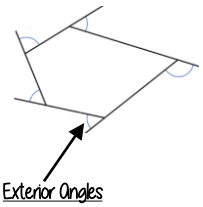
Parallelogram
Opposite sides are parallel
Opposite angles are equal
Co-interior angles

Trapezium
One pair of parallel lines

Kite
No parallel lines
Equal lengths on top sides
Equal lengths on bottom sides
One pair of equal angles

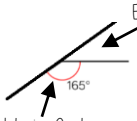
Sum of exterior angles

Exterior angles all add up to 360°



Exterior Angles
Are the angle formed from the straight-line extension at the side of the shape

Using exterior angles



Exterior Angle

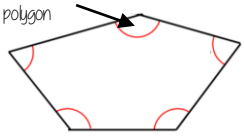
Interior Angle

Interior angle + Exterior angle = straight line = 180°
Exterior angle = 180 − 165 = 15°

Number of sides = 360° ÷ exterior angle
Number of sides = 360 ÷ 15 = 24 sides

Sum of interior angles

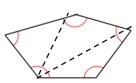
Interior Angles
The angles enclosed by the polygon



This is an **irregular** polygon – the sides and angles are different sizes

(number of sides − 2) x 180

Sum of the interior angles = (5 − 2) x 180

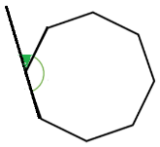


This shape can be made from three triangles
Each triangle has 180°

Sum of the interior angles = 3 x 180
= 540°

Remember this is **all** of the interior angles added together

Missing angles in regular polygons



Exterior angle = 360 ÷ 8 = 45°

Interior angle = $\frac{(8-2) \times 180}{8} = \frac{6 \times 180}{8} = 135°$

Exterior angles in regular polygons = 360° ÷ number of sides

Interior angles in regular polygons = $\frac{(\text{number of sides} - 2) \times 180}{\text{number of sides}}$

YEAR 8 - DEVELOPING GEOMETRY...

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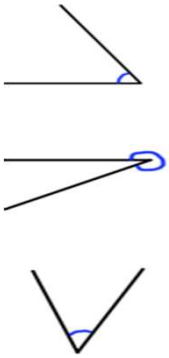
Angles in parallel lines and polygons

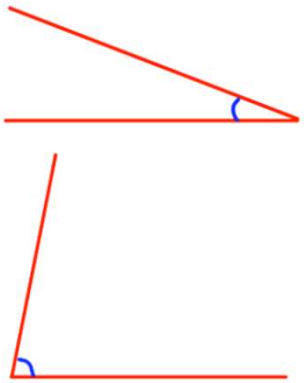
Classify Angles

Name the type of angle



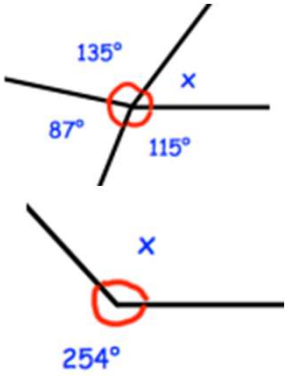
Measure angles

Measure the angles



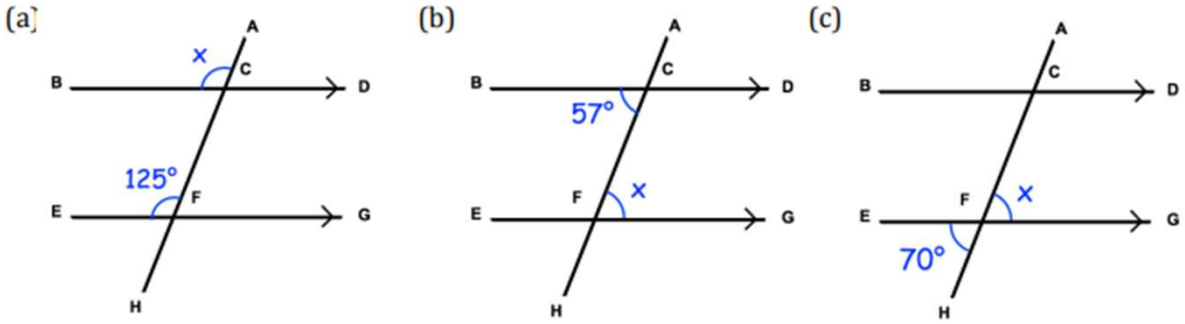
Angles round a point

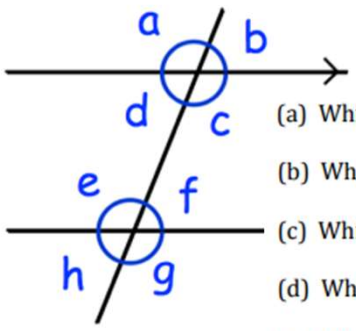
Find the missing angles



Angles in parallel lines

Find the missing angles





(a) Which angle is corresponding to angle c?

(b) Which angle is alternate to angle d?

(c) Which angle is corresponding to angle h?

(d) Which angle is vertically opposite to angle a?

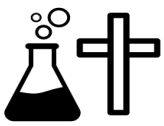
(e) Which angle is alternate to angle e?

(f) Which angle is co-interior with angle c?

Essential knowledge

Write a summary of the essential knowledge for this unit.

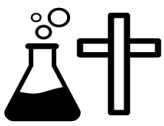
The Gothic- Portrayal of Victorian Monsters – Y8- Unit 2

Context	
The Gothic Genre 	Gothic Genre : Gothic fiction, which is largely known by the subgenre of Gothic horror, is a genre or mode of literature and film that combines fiction and horror, death, and at times romance. Its origin is attributed to English author Horace Walpole, with his 1764 novel The Castle of Otranto, subtitled (in its second edition) "A Gothic Story." It originated in England in the second half of the 18th century and had much success in the 19th, as witnessed by Mary Shelley's Frankenstein and the works of Edgar Allan Poe. The name Gothic refers to the (pseudo)-medieval buildings, emulating Gothic architecture, in which many of these stories take place. Vocabulary linked to Gothic genre: macabre, supernatural, eerie, uncanny, curse, entrapment, grotesque, terror, reverent, introspective, deduction, scandal, enlighten, context, mythology, judicious, intention, ornithological, psychological, societal, commentary, detective, archetypal
Science and Religion 	Throughout the Victorian age, religion was a dominant force in the lives of many. However, there was a growing seam of doubt. Social life for ordinary people revolved around choir and Sunday School outings. Many employers insisted that their employees go to church. The Victorian era is famous for being prim and proper, even though there was a seedy 'underworld' of prostitution, drugs and crime in the 'wrong' parts of town. Karl Marx, who wrote the Communist Manifesto described religion as "the opiate of the masses" i.e., a trick to keep the poor in their place. Charles Darwin's On the Origin of Species (1859) seemed to disprove creation (the belief that God created the world and that it had started with Adam and Eve), and substituted the new idea of 'evolution'.
Industrialisation 	In 1837, Britain was still a rural nation with 80% of the population living in the countryside. Most people were farmers or spun wool and cotton to weave into cloth. Soon new machines were invented that could do these jobs in a fraction of the time. This left many people out of work, so they flocked to the towns in search of jobs in new industries. By the middle of the nineteenth century over 50% of the population lived in towns and cities. Despite the growing wealth due to trade and commerce, many of the working people, who actually produced the wealth, lived, worked and died in very poor conditions.

Key tropes of Gothic writing	
Nature	Whereas Romantic writers tended to look at the beauty of nature, during the Gothic period writers began to explore the darker side of nature. Gothic literature often includes settings like dark forests, unnerving mountain regions, ominous climatic conditions, threatening storms or creepy graveyards. Writers used these settings to explore the power and mystery of nature and to highlight the fears of their characters.
The Supernatural	The theme of the supernatural occurs regularly in gothic fiction. This can be in the form of supernatural creatures/ beings as well as unusual themes and events. Gothic writers would often include inexplainable events in their stories such as inanimate objects coming to life, ghosts, spirits, and vampires like that of Bram Stoker's 1897 Gothic fantasy, Dracula.
The Duality of Man	Gothic literature often explores how human beings have the capacity for both good and evil. Gothic stories like Poe's The Tell Tale Heart and Stephenson's Strange Case of Doctor Jekyll and Mr Hyde highlight how behind closed doors people who are seemingly good, may do bad things. Gothic Literature also often encourages us to think about the difference between write and wrong and who decides what is 'morally good'.
Mystery and Fear	Gothic writing often evokes feelings of suspense and fear.. Many Gothic works contain scenes, events and objects such as burials, flickering candles, evil potions, and other frightful concepts. Many believe this is because the conflict between Science and Religion during the Victorian period led to a lot of people being confused and fearful.
Damsel in Distress	Gothic works often include a woman who suffers at the expense of a villain. These women often carry feelings of sadness, oppression, and loneliness, and many were depicted as virginal in early Gothic pieces. The damsel's character is often held captive and presented as weak and helpless, reinforcing some of the patriarchal views of the period. An example of a damsel in distress can be found in Horace Walpole's character Matilda, whose unwavering loyalty to her father ultimately makes her weak and powerless.

Transferable Knowledge		
Trope	A significant or recurring theme that is typical of a genre.	A trope of gothic fiction is the supernatural.
Symbol	A thing that represents or stands for something else.	The blood that Dracula drinks from his victims symbolises life and youth.
Narrative Poetry	Narrative poetry is a form of poetry that tells a story, often making the voices of a narrator and characters as well; the entire story is usually written in metered verse.	The Raven by Edgar Allan Poe is an example of narrative poetry.

The Gothic- Portrayal of Victorian Monsters – Y8- Unit 2

The Gothic Genre 	List 8 features of the gothic genre. Use this video to support you: https://www.youtube.com/watch?v=fUNuFLHvVng Write a short story in which you include features of the gothic genre. Use the Gothic Literature booklet on Google Classroom to support you. Watch this video and produce a page of Cornell Notes: https://www.youtube.com/watch?v=gNohDegnaOQ
Science and Religion 	Research and record 5 key facts about Karl Marx's communist manifesto- must be in full sentences. Use this video to support you: https://www.youtube.com/watch?v=SDHsJC2q-W8 Research and record 5 key facts about Darwinism- must be in full sentences. Use this video to support me: https://www.youtube.com/watch?v=BcpB_986wyk Produce a paragraph in response to this question: Why do you think people began to question religion during the Victorian era? Use this resource to support you https://www.bbc.co.uk/bitesize/guides/z22x6sg/revision/2
Industrialisation 	Research and find 10 additional facts about the industrial revolution in the Victorian era. Use this section of BBC Bitesize to support you: https://www.bbc.co.uk/bitesize/topics/zm7qtfr Create a dual coding poster summarising industrialisation Write the opening to a short story. The protagonist should be a child, living in poverty during the Victorian era.

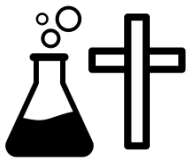
Key tropes of Gothic writing	
Nature	Write a story set in an abandoned forest. Ensure you use natural imagery and build setting. Use the Gothic Literature booklet on Google Classroom to support you.
The Supernatural	Produce a page of Cornell notes around how the supernatural is used in Gothic Literature. Use this link to support you. https://www.bartleby.com/essay/The-Purpose-Of-The-Supernatural-In-Literary-PK8TVE936ZZA
The Duality of Man	Respond to the following question in your knowledge organiser: What is meant by 'The duality of man'? https://www.slanglang.net/slang/duality-of-man/
Mystery and Fear	Write a story set that build mystery and fear. Ensure you raise clues in the reader's mind. Use the Gothic Literature booklet on Google Classroom to support you.
Damsel in Distress	Write a page of Cornell notes based on the following information: https://www.dictionary.com/e/pop-culture/damsel-in-distress/

Transferable Knowledge		
Trope		
Symbol		
Narrative Poetry		

Define these key terms and use each of them in a paragraph discussing the texts we have studied so far this term. For example, In Edgar Allan Poe's narrative poem the Raven we see many tropes of Gothic Literature. To begin with we see…

The Gothic- Portrayal of Victorian Monsters – Y8- Unit 2

Context

The Gothic Genre 	1. List 8 features of the gothic genre 2. Write a short story in which you include features of the gothic genre. 3. Find, record the titles of and summarise, three other texts that are classed as 'gothic'
Science and Religion 	
Industrialisation 	7. Research and find 10 additional facts about the industrial revolution in the Victorian era. 8. Create a dual coding poster summarising industrialisation 9. Write the opening to a short story. The protagonist should be a child, living in poverty during the Victorian era.

Key Ideas

Narrative Poetry	10. Research narrative poetry, find an example, and write a summary of what the poem is about.
The Supernatural	11. Design a supernatural character. Write at least two paragraphs (show don't tell) exploring who your character is and what makes them supernatural.

Transferable Knowledge

Pathetic Fallacy	Five at a time, define the key term and use it in a sentence.
Imagery	
Trope	
Genre	
Symbol	
Motif	
Gothic	
Narrative Chronicle	
Archetype	
Convention	

Forces- KS3 Knowledge organiser (part 1)

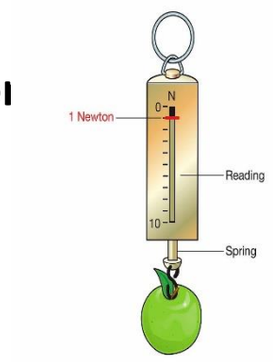
Forces

A **force** can be a **push** or a **pull**. You cannot see a force but often you can see what it does. When a force is exerted on an object, it can change the object's:

- **speed**
- **direction of movement**
- **shape (for example, an elastic band gets longer if you pull it)**

The unit of force is called the **newton** and it has the symbol **N**.

Forces can be measured using a newton meter..



Contact and non-contact forces

Forces can either be contact or non-contact.

Contact forces	The objects are physically touching	e.g friction, air resistance, tension and normal contact force
Non-contact forces	The objects are physically separated	e.g gravitational force, electrostatic force and magnetic force.

Scalar and vector quantities

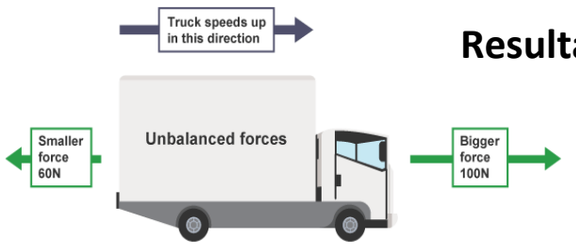
Scalar	Have magnitude (size) only	e.g Speed, distance, temperature, mass, energy
Vector	Have magnitude(size) and a given direction	e.g. Velocity, displacement, force, acceleration

Resultant force

When two forces acting on an object are not equal in size, we say that they are unbalanced forces.

The overall force acting on the object is called the resultant force.

If the forces are balanced, the resultant force is zero.



Resultant force = bigger force- smaller force

=100N – 60N

=40N Right

Friction

Friction is a **contact force** that opposes (works against) the forward force.

It can results in wasted energy being transferred to the surroundings.

We use **lubrication** to reduce friction.

Forces- KS3 Knowledge organiser (part 1)

Forces

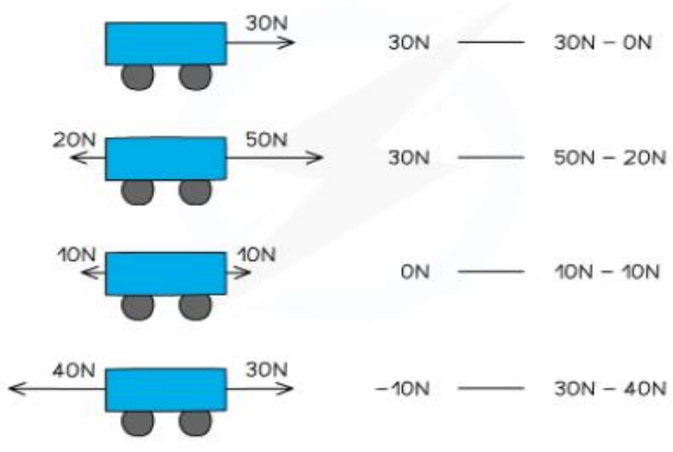
1. What is a force?
2. Name 2 things that a force can do to an object?
3. What is the unit and the unit symbol for force?
4. What piece of equipment can we use to measure force?

Contact and non-contact forces

1. What are contact forces between?
2. What are non-contact forces between?
3. Give 3 examples of contact forces
4. Give 2 examples of non-contact forces?

Resultant force

1. Define resultant force.
2. Calculate the resultant force of each of the below vehicles. Don't forget to include the direction!



Scalar and vector quantities

1. What is the difference between scalar and vector quantities?
2. Give 3 examples of scalar quantities.
3. Give 3 examples of vector quantities

Friction

1. Is friction a contact or a non-contact force?
2. Why can friction be negative?
3. How can we reduce friction?

Further Opportunities

1.Research when friction can be useful and write a paragraph to explain this.

2.Complete the Seneca topic –KS3 Science- Forces and Motion.

Forces KS3 Knowledge organiser (part 2)

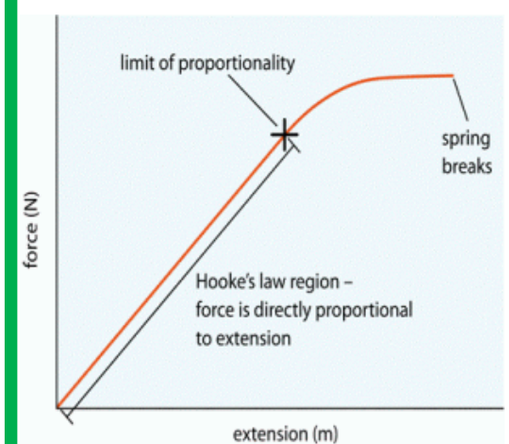
Forces and elasticity

Elastic materials, and objects such as springs, change shape when a force is exerted on them:

Stretching happens when the material or object is pulled
Compression happens when the material or object is squashed

A change in shape like this is called **deformation.**

Hooke's Law says that the extension of an elastic object is **directly proportional** to the force applied to it. In other words:
If the force applied is doubled, the extension doubles
if no force is applied, there is no extension



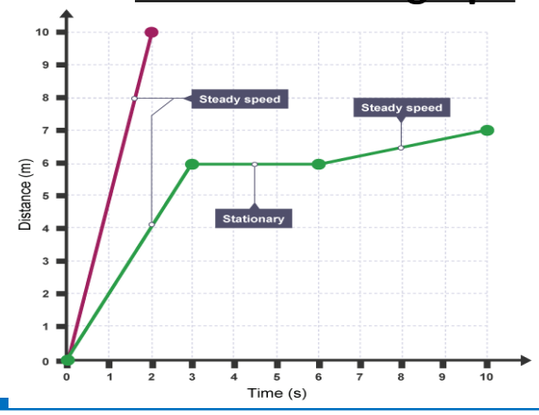
This happens until you pull or squeeze to hard and the object may then not return to its original size. We say it has reached **limit of proportionality**.

Speed and distance-time graphs

Distance travelled (m) = speed (m/s) x time (s)

Average speeds
Walking – 1.5m/s
Running – 3m/s
Cycling – 6m/s

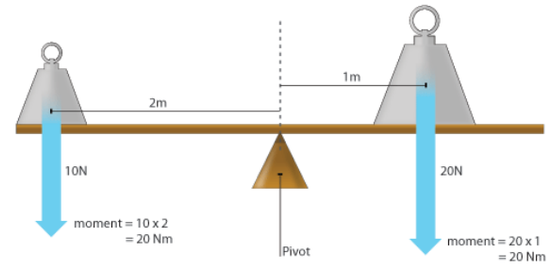
Distance-time graph



Moments

A moment is the turning effect of a force.
Moment (Nm) = force (N) x distance (m)

If an object is balanced the
Clockwise moment = anticlockwise moment



Weight, mass and gravity

Weight(N) = mass (kg) x gravitational field strength (N/kg)

Weight: The force of gravity on an object (N).
Mass: The amount of 'stuff' in an object (kg).
Gravitational field strength on Earth is approximately 10N/kg

Forces KS3 Knowledge organiser (part 2)

Forces and elasticity

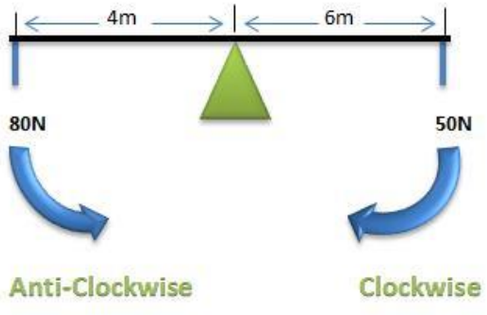
1. What is an elastic object?
2. Give an example of an elastic object.
3. When does compression happen?
4. What is meant by the word deformation?
5. Hooke's law says force and extension are directly proportional – what does this mean?
6. When an elastic object is pulled/squeezed too hard and it doesn't go back to its original shape, what do we say it has reached?

Speed and speed-time graphs

1. What is the equation to calculate distance travelled?
2. What is the unit for speed?
3. What is the unit for time?
4. Give the average speed of a person running.
5. Give the average speed a a person walking.
6. On a distance- time graph what does a horizontal line (line going across) mean?
7. On a distance-time graph, what does a higher gradient (steeper line) mean?

Moments

1. Define moment.
2. When an object is balanced, what can be said about the clockwise and the anticlockwise moment?
3. Is the seesaw in the image on the right balanced? Use moments to explain why/why not.



Weight, mass and gravity

1. What is the equation that links weight, mass and gravitational field strength?

2. Calculate the weight of an object on Earth (g= 10N/kg) when ;

a) Mass= 5kg
b) Mass=-0.1kg
c) Mass = 250g
d) Mass = 400mg

Further Opportunities

1.Research how we use moments in everyday life to help us.

2. Find out what is meant by stopping distance, thinking distance and braking distance. What factors affect these? How are they linked to forces?

Computer Science
8.3 Representations

Overview

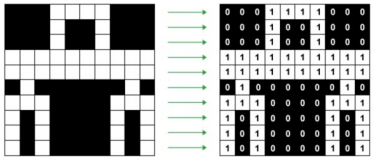
This unit conveys essential knowledge relating to **representations**, which can be used to store, communicate and process information.

The activities gradually introduce you to **binary digits** and how they can be used to represent text and numbers. The concepts are linked to practical applications and problems that you will be familiar with.

Digital images

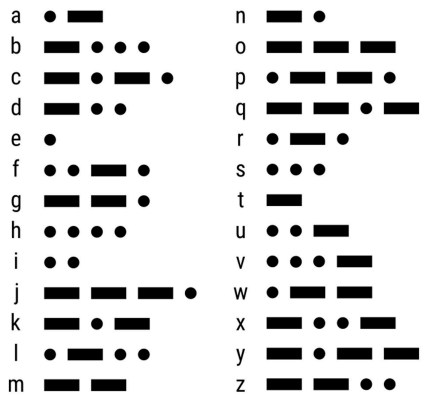
Computers work in **binary**. All data must be converted into binary in order for a computer to process it. Images are no exception.

Consider a simple black and white image. If **1 is black** (or on) and **0 is white** (or off), then a simple black and white picture can be created using binary. To create the picture, a grid can be set out and the squares, known as pixels, coloured (0 - black and 1 - white).



Morse code

Morse code is a method used in telecommunication to encode text characters as standardized sequences of two different signal durations, called dots and dashes (or dits and dahs) which are used to **represent** the letters of the alphabet.



What is a bit?

A **bit** is a **binary digit**, the smallest increment of data on a computer. A bit can hold only one of two values: 0 or 1, corresponding to the electrical values of off or on, respectively.

Because bits are so small, you rarely work with information one bit at a time. Bits are usually assembled into a group of eight to form a **byte**. A byte contains enough information to store one ASCII character, e.g. "h".

A **kilobyte** (KB) is 1,024 bytes, not one thousand bytes as might be expected, because computers use binary (base two) maths, instead of a decimal (base ten) system.

SCAN ME

The alphabet in binary

a	1100001	n	1101110
b	1100010	o	1101110
c	1100011	p	1110000
d	1100100	q	1110001
e	1100101	r	1110010
f	1100110	s	1110011
g	1100111	t	1110100
h	1101000	u	1110101
i	1101001	v	1110110
j	1101010	w	1110111
k	1101011	x	1111000
l	1101100	y	1111001
m	1101101	z	1111010

Computer memory units

- Bit 1 or a 0
- Nibble 4 bits
- Byte 8 bits, 2 Nibbles
- Kilobyte (KB) 1 KB = 1024 Bytes
- Megabyte (MB) 1 MB = 1024 KB
- GigaByte (GB) 1 GB = 1024 MB
- TeraByte (TB) 1 TB = 1024 GB
- PetaByte (PB) 1 PB = 1024 TB

What is Binary?

Binary is a number system that only uses two digits: 1 and 0. All information that is processed by a computer is in the form of a sequence of 1s and 0s. Therefore, all data that we want a computer to process needs to be converted into binary.

The binary system is known as a 'base 2' system. This is because there are only two digits to select from (1 and 0) and, when using the binary system, data is converted using the power of two.

Convert denary (decimal) to binary

Decimal Number	Binary equivalent	Decimal Number	Binary Equivalent
0	0000	8	1000
1	0001	9	1001
2	0010	10	1010
3	0011	11	1011
4	0100	12	1100
5	0101	13	1101
6	0110	14	1110
7	0111	15	1111

Computer Science - 8.3 Representations

What I need to know:

Representations (features and facts)
What is a bit?
Spell your name in morse code.
What is binary?
Why is binary known as a ‘base 2’ system?
How do you write the number 11 in binary?
Using the ‘convert denary to binary’ table, how do you think you would write the number 16 in binary?
What is an ASCII character?
Why is a kilobyte 1,024 bytes rather than 1000 bytes?
Explain the prefixes, kilo-, mega-, giga- and tera-.
How many bits in a byte?
How many bytes in a kilobyte?
How many kilobytes in a megabyte?
How many megabytes in a gigabyte?
How many bits in a megabyte? (clue: there are lots)
How many kilobytes in a terabyte? (clue: there are lots)
Spell your name in binary.
Using just 1 and 0 in binary, how many colours can you represent in a digital image?
If binary numbers are base 2, which base are denary numbers?

Do some research and then write a summary of each of the following keywords

Representation
Symbol
Storage
Communication
Processing
Character
Coding scheme
Binary digit
Decimal numbers
Binary numbers
Conversion (between number systems)
Terabyte
Petabyte

1. What is binary?
   - A sequence of 1s and 0s
   - The way a computer speaks
   - A useless code that is no longer used
2. What kind of 'base' system is binary known as?
   - Base 10
   - Base 2
   - Base 16
3. What kind of number system is used in everyday life?
   - Denary
   - Binary
   - A simple number system
4. What would the denary number 199 be in binary?
   - 11000110
   - 10100111
   - 11000111
5. What would the denary number 55 be in binary?
   - 00110111
   - 00101111
   - 01010111
6. What would the denary number 222 be in binary?
   - 11010110
   - 10111110
   - 11011110
7. What would 10110010 be as a denary number?
   - 168
   - 178
   - 188
8. What would 00101110 be as a denary number?
   - 46
   - 36
   - 56
9. What would 00100101 + 01000100 be as a binary number?
   - 10101001
   - 01101001
   - 01101011
10. What is an overflow error?
    - When the result of a binary calculation is too long for a computer to process
    - When something is spelt incorrectly when programming
    - When the computer program has been given the wrong command

SCAN ME

1. What is a byte?
   - 4 bits
   - 8 bits
   - 1,000 bits
2. What is sampling?
   - Sound recorded at regular intervals
   - Colour picked from a photograph
   - Sound represented digitally
3. What is denary 55 in 8-bit binary?
   - 10010011
   - 00110111
   - 00110110
4. What is denary 55 in hexadecimal?
   - 37
   - 58
   - 42
5. What is hex 22 in 8-bit binary?
   - 00100011
   - 00100010
   - 00100110
6. In 8-bit binary, what is 00001111 + 00000010?
   - 00001111
   - 00011101
   - 00010001
7. In 8-bit binary, what is 11111011 + 00000101?
   - 11111111
   - 000000000
   - 00000000 and generates an overflow error
8. What is the purpose of a binary shift?
   - To multiply/divide binary numbers
   - To add/subtract binary numbers
   - To convert binary numbers to hexadecimal
9. What is a check digit?
   - An extra value transmitted to help determine if the message is authorised
   - An extra value transmitted to indicate the packet number
   - An extra value transmitted to help determine if the data received is correct or incorrect
10. What is metadata?
    - Data about data
    - Colour data
    - Sound data

SCAN ME


EBACC

French Knowledge Organiser
Key information

Year 8/Term 2
T'es branché

Prior Knowledge

Subject Pronouns

Je	I
Tu	You (sing/fam)
Il	He
Elle	She
On	We
Nous	We (pl/polite)
Vous	You
Ils	They (male)
Elles	They (female)

Frequently used adjectives

super	super
fantastique	fantastic
génial	great
interessant	interesting
amusant	fun
marrant	funny
drôle	funny
bon(ne)	good
bien	well/good
nul	rubbish
ennuyeux	boring
barbant	awful

Definite/Indefinite articles and the gender of nouns

All nouns in French have a gender. This is either
M - masculine
F - feminine

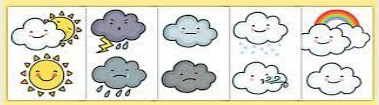
Definite articles -The

le (m) la (fem) les (plural)

Indefinite articles a/some

un (m) une (fem) des (pl)

E.g **le** train (masculine noun) est arrivé



La Météo

Il fait beau	It's fine
Il fait chaud	It's hot
Il fait du vent	It's windy
Il fait gris	It's grey
Il fait froid	It's cold
Il pleut	It's raining
Il neige	It's snowing

Mes passe-temps

Je joue	I play
Je fais	I do
au basket	basketball
au foot	football
au rugby	rugby
au tennis	tennis
du sport	sport
du skate	skateboarding
du velo	cycling
du roller	rollerskating
de la danse	dance

Les médias

Describing TV shows, films and books.

Qu'est-ce que tu regardes/lis?

les séries	series
les émissions	shows
les documentaires	documentaries
Les infos	the news
La météo	the weather
Les jeux télévisés	game shows
Les dessins animés	cartoons
Les films	films
Les comédies	comedies
un livre	a book
un roman	a novel
un magazine	a magazine
une bande dessiné	a comic book

Les verbes importantes

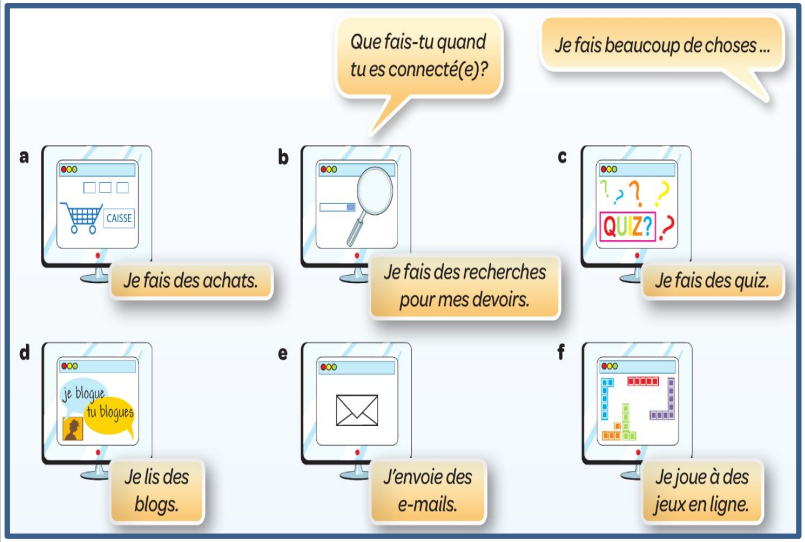
Regarder - to watch (regular er verb)

Je regarde	Nous regardons
Tu regardes	Vous regardez
il/Elle/On regarde	Ils/Elles regardent

Lire - to read (irregular re verb)

Je lis	Nous lisons
Tu lis	Vous lisez
Il/Elle/On lit	Ils/Elles lisent

L'internaute



French Knowledge Organiser
Key information

Year 8/Term 2
T'es branché

Write a short paragraph describing what you like or don't like to watch on the television.
Use your vocabulary booklet to help you.
Try to also include conjunctions, opinions and reasons.
e.g. Je regarde les émissions de sport parce qu'ils sont bons, mais je deteste les émissions de télé-réalité parce qu'ils sont ennuyeux.

Lis les textes. Copie et remplis le tableau.
Read the texts. Copy and fill in the grid.

	☺	☹
1 Zacharie	action films, ...	horror films

1 Zacharie

Moi, j'adore les films d'action et j'aime bien les comédies, mais je ne regarde pas les films d'horreur. Je n'aime pas ça.

2 Mélanie

Moi, j'adore les films d'arts martiaux, mais je ne suis pas fan de films fantastiques. J'aime les films de science-fiction. Mon film préféré, c'est *La Guerre des étoiles*. Un classique!

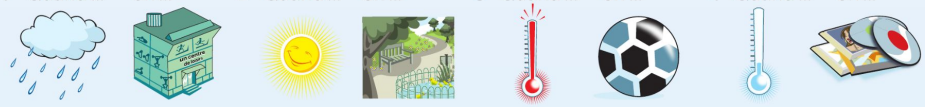
3 Fouad

Moi, j'adore les dessins animés, mais je ne suis pas fan de westerns. J'aime les films d'horreur. Mon film préféré, c'est *L'Enfant du cauchemar*. Génial!

Écris les phrases.
Write the sentences.

E.g. Quand il pleut, je regarde un film.

1 Quand ... on ... 2 Quand ... on ... 3 Quand ... on ... 4 Quand ... on ...



a

Mon émission de télé préférée s'appelle *Glee*. C'est une série et je trouve que c'est passionnant.
L'action se passe aux États-Unis dans un collège. Mon personnage préféré, c'est Rachel parce qu'elle est jolie et intelligente.
Je pense que le scénario est super. À mon avis, c'est cool. Je recommande cette émission à tout le monde.
Virginie

b

Mon film préféré s'appelle *Tonnerre sous les tropiques*. C'est une comédie et je trouve que c'est très amusant.
L'action se passe dans la jungle. Mon personnage préféré, c'est Kirk Lazarus parce qu'il est stupide!
Je pense que le scénario est très drôle. À mon avis, c'est génial. Je recommande ce film à tout le monde.
Akim

c

Mon livre préféré s'appelle *Bilbo le hobbit*. C'est un roman fantastique et je trouve que c'est très bien.
L'action se passe dans la «Terre du Milieu». Mon personnage préféré, c'est Bilbo parce qu'il est gentil et très amusant.
Dans ce livre, j'aime les créatures fantastiques, les dragons, les elfes et les gobelins. À mon avis, c'est passionnant. Je recommande ce livre à tout le monde.
Frank

Copie et remplis le tableau en anglais pour chaque revue.
Copy and fill in the grid in English for each review.

title	genre	takes place	favourite character	opinion

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

History Knowledge Organiser
The Industrial Revolution

Public Health

The growth of the towns led to problems with water supply, sewage disposal and the cleanliness of the streets. Cholera was a waterborne disease that spread in the towns. It killed thousands until Dr John Snow made the connection. In 1858 London was known as the Great Stink as the river was so dirty. Joseph Bazalgette was given the job of cleaning up London by building the sewers. He earned the name the Sewer King for this.


A COURT FOR KING CHOLERA.

How did the railways change Britain?

By 1900 22,000 miles of railway had been built changing Britain forever. They changed the landscape, the food we ate, the way we speak, how we travelled, how we spent our free time and how we measure the time. As a result of the railways Blackpool developed as a seaside town with fish and chips as a national dish.

Changes in the industrial revolution

Factory conditions

Many people in the North West worked in cotton mills. There were no rules to protect the workers but there were fines and physical punishments. Women and children were paid less than the men who were often the overseers. Some mill owners such as Samuel Greg, Titus Salt and Richard Arkwright treated their workers better. In the 1800's parliament investigated the conditions leading to the Factory Acts. 1833 - aimed a children, their hours and schooling. 1844 - women. 1847 - Ten hours act.

Population explosion

The population of Britain grew from c.7 million in 1750 to 37 million in 1900. People moved from the countryside so that by 1900 9/10 lived and worked in towns. People got married younger and had more babies. This along with better food, midwives, soap, cleaner cities, improved medical knowledge and vaccinations all helped the population grow faster than before.


The Cow Pock ... or ... the Wonderful Effects of the New Inoculation!

KEY VOCABULARY/ TERMS

Public Health, Cholera, waterborne, sewer, railway, landscape, overseer, population, vaccination, midwife, power.

IN UNITY WE SUCCEED
ACADEMY BLACKPOOL

History Knowledge Organiser
Year 8 - The Industrial Revolution

Quiz questions

1	What proportion of people lived in towns by 1900?	
2	What was the population of Britain in 1900?	
3	Why did the population explode?	
4	How many miles of railway had been built in Britain by 1900?	
5	How did railways help Blackpool develop?	
6	How did railways change Britain?	
7	What problems did the growth of towns cause in term of public health?	
8	What did John Snow discover about Cholera?	
9	What was the Great Stink?	
10	What was Joseph Bazalgette's nickname?	
11	What did Joseph Bazalgette build to improve public health?	
12	Where were Cotton Mills common?	
13	How were mill workers treated?	
14	Which mill owners treated workers better?	
15	What was the 1833 Factory Act?	
16	Who was the 1844 Factory Act aimed at?	
17	When was the Ten Hours Act?	
18	What was the national dish?	

RE Knowledge Organiser
Peaceful World

What is the true meaning of Peace?

For many people around the world the word peace may mean a different thing. For some, it may mean an end to conflict that exists around them. For others, it may mean calmness and contentment in their lives. There are many ways to define peace, but one of the main definitions is *freedom from disturbance; tranquillity.* This encompasses many aspects of society for some people, but for others it does not. Therefore, it is important to examine what the true meaning of peace is and if there is a way to achieve it. In religion peace may be symbolised as a Dove carrying an olive branch. This is representative of the Dove from the story of Noah's ark, that returned to the Ark with an olive branch to let Noah know that there was land.

How does religion promote peace?

There are numerous ways in which religious organisations work to ensure peace. Some highlight conflict around the world and the effect it has on the people involved. They also organise protests in relation to conflict and form charities in order to send aid to those that have been affected. Religious organisations also strive to ensure justice is correctly carried out in countries around the world, so that people can live without oppression. This focuses around human rights and improving the standard of living for many people around the world. Organisations of certain religions also meet with groups from other religions. This is so that they can work together to promote world peace as they accept that one of the causes of conflict is disagreements over religion.

Religious attitudes to peace

Peace is one of the key teachings in all religions. Each religion has different ideas and beliefs surrounding peace, however, there are a lot of similarities to how peace is taught across all religions.
In Christianity, Christians are taught to Love thy neighbour as you love yourself. This comes from the parable of the good Samaritan, which is one of many parables taught by Jesus. In the Gospel of Matthew, Christians are taught that "If anyone strikes you on the right cheek, turn to him the other also.". This tells Christians that if someone is violent to them that they should not respond back.

The idea of never using violence is called Pacifism. The idea of Pacifism is that violence is wrong in any circumstance and therefore people should not be violent at all. This is a view shared by Buddhists, who have a pacifist approach to conflict. Buddhists do believe that, out of compassion, a person's rights to freedom and speech should be upheld and will challenge anyone who does not abide by this. They also believe that justice must be found through negotiation and not through further conflict. Buddhists teach compassion is essential to everyday life and that violence only leads to retaliation.

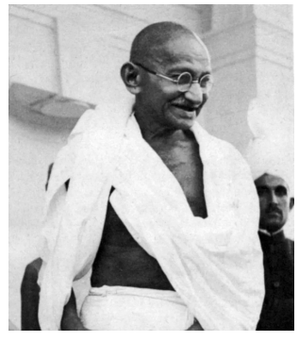
Other religions such as Hinduism, Islam, Judaism and Sikhism do say that conflict is permissible in order to maintain peace and prevent further conflict. They believe that self-defence is justifiable and therefore allow retaliation. These religions believe only necessary force should be used to defend oneself and never anything excessive.

Gandhi

Mahatma Gandhi was a Hindu religious activist that fought against oppression in South Africa and Indian under the rule of the British Empire. Gandhi was a lawyer in London, but when he heard about the oppression that had taken place in different parts of the British Empire he gave up his job to go and tackle these issues. He first went to South Africa where he tackled the issue of migrants being treated poorly by their employers and aimed to improve their rights. Then he went to India, where he had accumulated a great deal of fame for his stand against oppression. He continued to fight for the people of India against the rule of the British Empire.

When Gandhi was young his family practiced a kind of Vaishnavism, one of the major traditions within Hinduism. This promoted non-violence, which is why he aimed to protest peacefully throughout his life. However, as he became older he educated himself in different religions such as Christianity and Islam and adopted some of the ideas for himself.

There are some people who believe that Gandhi's actions were a front, and that he was more ambitious and self-centred than he appeared in public. However, regardless of the opposing views on Gandhi, he still remains a hugely influential figure in Hinduism and the world.



KEY VOCABULARY/ TERMS

Tranquility, Conflict, Permissible, Gospels, Pacifism, Retaliation, Freedom, Oppression, Migration, Mahatma Gandhi, Empire, Justice, Vaishnavism, Noah's Ark, Encompass, Ceasefire

RE Knowledge Organiser
Peaceful World

Quiz questions

What is the definition of Peace?	
Which Gospel teaches Christians to ‘turn the other cheek’?	
What was Gandhi’s original job?	
What is one example of a peace symbol?	
Which religion promotes Pacifism?	
List three things that people may associate with peace	
What rights do Buddhists believe are important?	
What parable teaches ‘Love thy neighbour as your love yourself’?	
Where did Gandhi travel to when he left London?	
How do Buddhists believe justice should be achieved?	
Why might religious organisations work together?	
Which religions say conflict is permissable in the case of self-defence?	
Why might a religious organisation protest?	
Which branch of Hinduism did Gandhi follow?	
What is the definition of Pacifism?	
How much force do some religions allow in self-defence?	
How do religious organisation help to improve human rights around the world?	
Which other religions influenced Gandhi during his life?	

Geography 8.2.2 – Africa

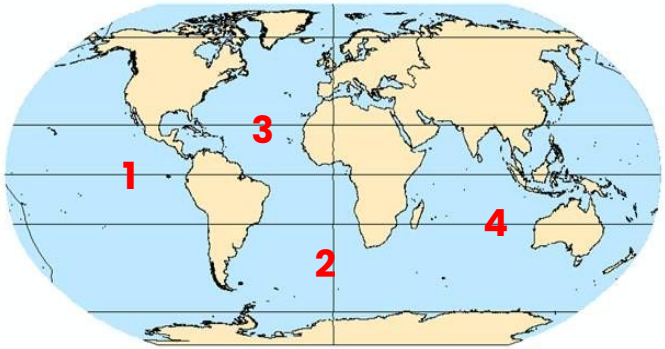
1 - Location

Africa is one of the seven continents and is the only one to have land in all four hemispheres.

Location:

Latitude: between 37° N and 35° S

Longitude: between 17° W and 50° E



Lines of latitude and longitude:

1. The Equator: 0° latitude - separates the Northern and Southern Hemispheres
2. The Prime Meridian: 0° longitude - separates the Eastern and Western Hemispheres
3. The Tropic of Cancer: 23.5° N
4. The Tropic of Capricorn: 23.5° S

3 - Physical features

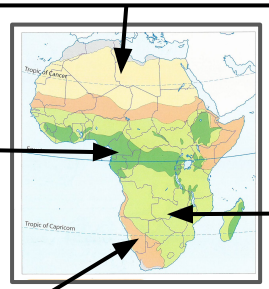
Examples of physical features:

Rivers - Nile, Congo, Niger
Waterfall - Victoria Falls
Deltas - Nile, Niger
Lakes - Victoria, Tanganyika, Nyasa
Mountain range - Atlas Mountains
Mountains - Kilimanjaro, Mt. Kenya
Deserts - Sahara, Namib, Kalahari
Islands - Madagascar, Zanzibar

There are four main biomes:

Hot desert - little rain, strong winds, very hot days and cold nights

Rainforest - warm and wet all year



Savanna - warm all year, short wet season and long dry season

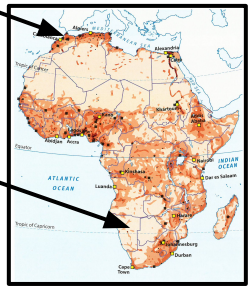
Semi-desert - Always hot or warm, very dry except for a short unreliable wet season

4 - Human features

Population density is shown on this thematic map. The deeper the shade the more people there are in that area,

Densely populated: near coast for trade, areas with higher rainfall for agriculture, near rivers for trade and irrigation.

Sparsely populated: areas of desert and semi-desert which lack rain for agriculture.



Key statistics:

Megacities: Cairo in Egypt, Kinshasa in the DRC and Lagos in Nigeria.

Wealthiest country in 2023: Egypt with a GDP per capita of $3 770.

Most developed country in 2023: Mauritius with an HDI of 0.8 (very high).

Fastest growing economies in 2023: Kenya, Côte d'Ivoire, and Rwanda.

5- Key terms

Hemisphere half of a sphere

Delta wetlands that form as rivers empty their water and sediment into another body of water

Latitude the angular distance of a place north or south of the equator

Longitude the angular distance of a place east or west of the Prime Meridian

Biome a large area characterized by its vegetation, soil, climate, and wildlife

Population density the number of people in an area usually per km^2

Questions

1 - Location

How many continents are there?

What makes Africa different to all the other continents?

What lines of latitude does the continent of Africa lie between?

What lines of longitude does the continent of Africa lie between?

What is the line of 0° latitude called?

What is the line of 0° longitude called?

What is the line of latitude at 23.5° N called?

What is the line of latitude at 23.5°S called?

Which line of latitude separates the Northern and Southern hemispheres?

Which line of latitude separates the Western and Eastern Hemispheres?

What are the names of the other continents?

3 - Physical features

How many major biomes are there in Africa?

Name the major biomes found in Africa.

Describe the climate of each biome found in Africa.

Which two biomes have a wet season?

Which biome is found in the very north of Africa?

Which biome is found in the very south of Africa?

Which biome forms a band almost completely across the centre of Africa from west to east?

List three rivers, two lakes and one waterfall.

List three deserts, two mountains and one mountain range

What do the rivers Niger and Nile have in common? (apart from starting with the same letter!)

4 - Human features

What type of map shows population density?

What does the shading on the map show?

What word is used to describe a low population density?

What word is used to describe a high population density?

What type pf places tend to be densely populated?

What type of places tend to be sparsely populated?

How many megacities are located in Africa?

Which cities in Africa are megacities?

Which country was the richest in 2023?

Which country was the most developed in 2023?

Which countries had the fastest growing economies in 2023?

5- Key terms

What does the word hemisphere mean?

What are deltas?

Where are deltas found?

What is latitude?

What is longitude?

How are both latitude and longitude measured?

What is population density?

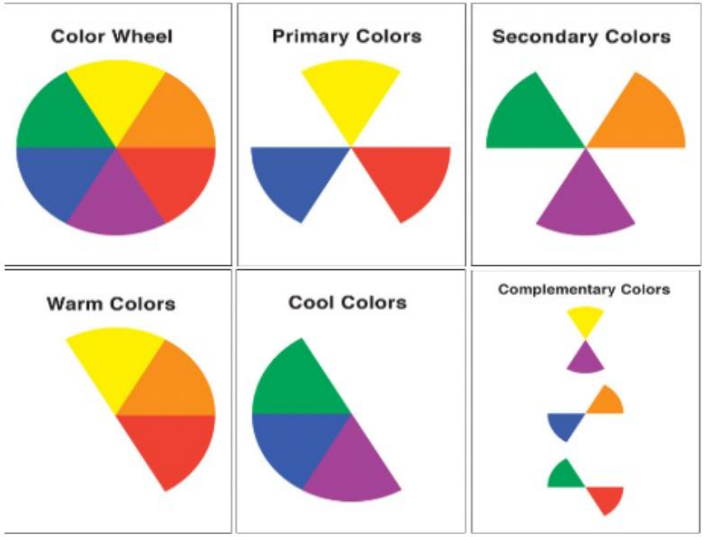
What unit is population density measured in?

What is a biome?

INNOVATION

ART Knowledge Organiser
Year 8 : Half Term 4

Key Vocabulary	
Primary Colours	Red, blue and yellow. These can be mixed to make all other colours.
Observe	To look at something closely.
Artist	A person who creates works of art.
Shadow	When light hits of an object, it creates a shadow.
Shade	Applying different pressures to the pencil will create shade.
Texture	When you touch something, you are feeling its texture. It could be bumpy, hard, soft etc.
Warmth	The tone of the colour.



Look Closely

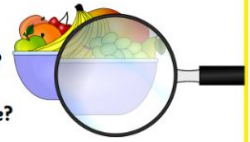
Take a close look at what you are drawing to see the detail.

Is it shiny or dull?

Is it dark or light in colour?

What markings can you see?

Think about which details you need to include in your drawing.



detail

Touch and Feel

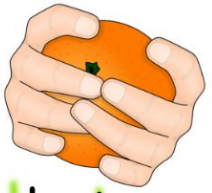
If you can, carefully feel the object(s) you want to draw.

What are the textures like?

Rough or smooth?

Hard or soft?

Think about how you might draw the textures.

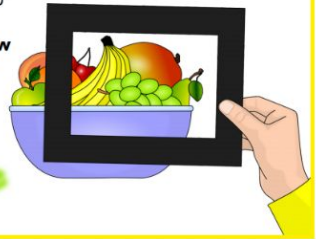


texture

Use a Frame

Sometimes it is helpful to use a frame to decide what to include in your drawing.

Do you want to draw the whole object or just one part?



frame

Light and Shade

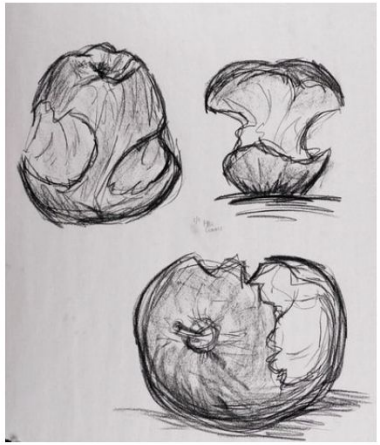
Look at the shadows on the object(s).

Where is the light coming from?

What shadows can you see?

Which are the light areas and which areas are dark?

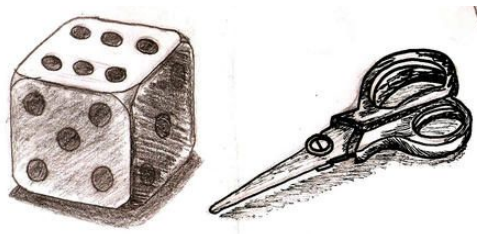
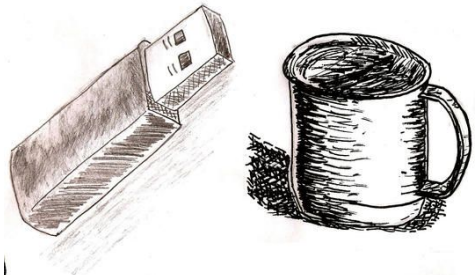
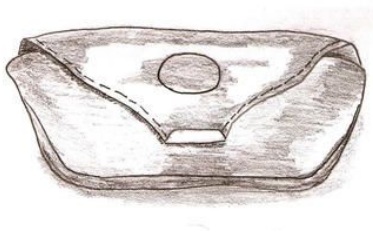
light and shade



ART Knowledge Organiser
Year 8 : Half Term 4

Please write out the questions and answer them in full sentences in your reflection logs.

1. What is the definition of *'shadow'*?
2. What does it mean to observe something?
3. Complete a 15 minute observational drawing of something in your house that you can fit in the palm of your hand.
4. What is the difference between a highlight and a shadow?
5. Give me examples of warm colours and what might you associate them with?
6. What do you notice about complimentary colours and where they are positioned in the colour wheel?
7. Write me 8 examples of different textures?

Graphic Design Knowledge Organiser
Year 8

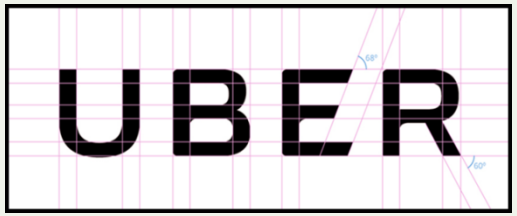
Components of Graphic design

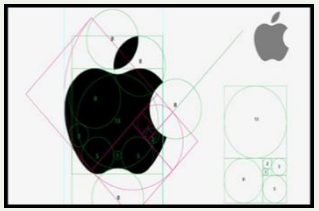
What is Typography?

When looking at almost any magazine it is obvious that there are a wide and varied number of letter **styles / fonts** available for everyday use. There is a style of writing for almost every occasion from celebrations to formal events. More modern styles of writing are often named after the designer whereas many can be dated back hundreds of years. The different styles of writing are called **fonts** and they fall into four different categories .

Using a Logo Grid

A **logo grid** or construction guide is a popular starting point for many designers looking to create a logo. The use of a grid system, especially for a design that might often have to be adapted to **different sizes**– very large or small – can help you create something that has **visual harmony**, an **organized aesthetic** and **professional presentation.**

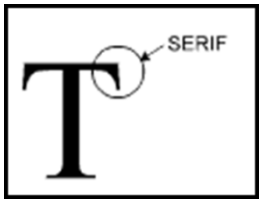




KEY VOCABULARY

Font, Grid, Serif, Script, Decorative, kerning

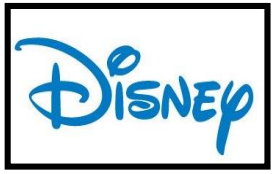
Four main font styles



Serif – Serifs are the small lines tailing from the edges of letters and symbols. Serifs are easier to read in printed works like books and magazines and are often used in the logos of old, established and successful companies.

Sans-serif – is a typeface that does not have the small projecting features called 'serifs' at the end of the letters or symbols. Sans-serif is easier to read on a screen and are often used in the logos of modern and popular companies.

Script (Script) – is a typeface that represents hand written words and letters. It is difficult to read on paper and on screen however it is often used in invitations and is used in the logos of companies that product hand crafted traditional products.



Decorative (Decorative) – this typeface uses serif and sans-serif fonts and adapts them to make them look more interesting and original. Decorative is a very artistic style, it is often very popular with younger people because it is modern and creative.

ASSESSMENT CRITERIA

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

Technical ability – experiment with all of the different components of graphic designing explaining every aspect in detail.

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Graphic design Knowledge Organiser
Year 8

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Components of graphic design

Why is typography important in graphic design?

……

……

……

How does a logo grid help create a successful logo?

……

……

……

What font style is the easiest to read in print form?

•

What font style is used to reflect tradition and is difficult to read?

•

Why is kerning important in typography?

……

……

What does the 'sans' in sans serif mean?

•

Give three examples of logos that use decorative text.

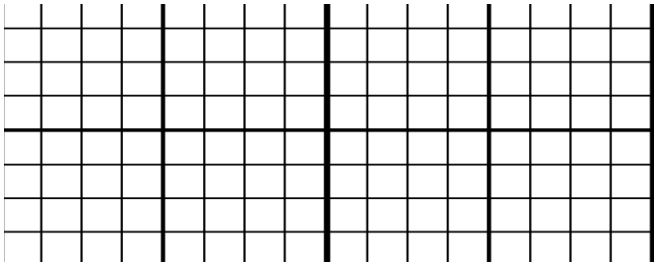
•

•

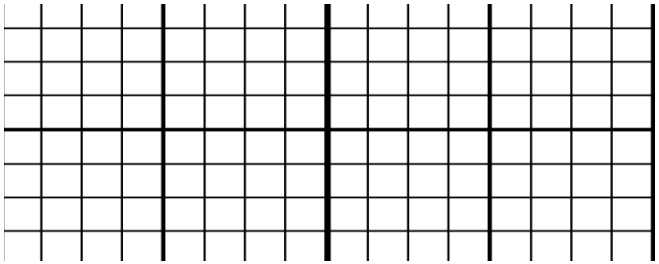
•

Using the logo grids below use three of the font styles to experiment with the FCAT logo.

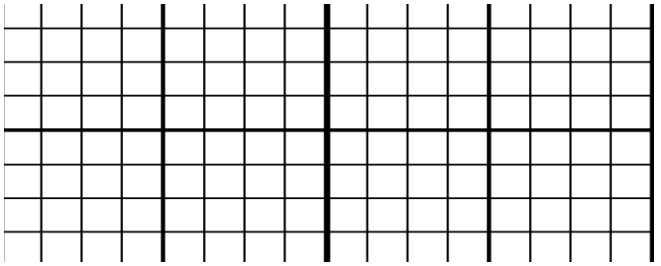
Serif



Sans serif



Decorative



Year 8 Food – Knowledge Organiser 1.1 Nutrients

What are Nutrients?

Nutrients are the building blocks that make up food and have specific and important roles to play in the body. Some nutrients provide energy while others are essential for growth and maintenance of the body.

Macro Nutrient	Role in the body	Food Example
Carbohydrate	The main source of energy for the body.	Bread, rice, pasta, potatoes
Protein	Provides the body with growth and repair.	Meat, poultry, beans, eggs, lentils, tofu, fish
Fat	Provides the body with insulation and a small amount protects vital organs. Provides essential fatty acids for the body.	Butter, oil, cheese, cream, nuts, oily fish, crisps

Wider thinking / further reading:
www.foodafactoflife.org.uk **www.grainchain.com**

Vitamin	Role in the body	Food examples
A	Helps to keep the eyes healthy and strengthen the immune system.	Dark green leafy vegetables, carrots, liver
B	Helps to release the energy from the food we eat.	Bread, milk, cereals, fish, meat
C	Help with skin healing and healthy skin. Help with the absorption of Iron.	Fresh fruit, broccoli, tomatoes
D	Important for absorbing calcium and help with healthy bone structure.	Oily fish, eggs, butter, Action of sunlight on the skin. (Sunshine)

Vitamins -Help to keep our immune system up and help our body to stay healthy – they are important for body maintenance.

Mineral	Role in the body	Food Examples
Calcium	Important for strong teeth and bones. It also helps with blood clotting.	Milk, yoghurt, soya, dark green leafy vegetables
Iron	Needed for red blood cells which help to transport oxygen around the body.	Nuts, whole grains, dark green leafy vegetables, meat, liver

Minerals- Help to keep our immune system high and help our body to stay healthy. Vitamins and minerals are Micronutrients.

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Year 8 Food Knowledge Organiser

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

1. What are nutrients?
2. What is the role of carbohydrate in the body?
3. What food provide the body with carbohydrate?
4. What is the role of protein in the diet?
5. What foods provide protein?
6. What nutrient provides essential fatty acids to the body?
7. What nutrient is provided by butter, oil, cheese, cream, nuts, oily fish and crisps?
8. Which mineral is needed for red blood cells and helps transport oxygen around the body.
9. Which vitamin can the body get from the action of sunlight on the skin?
10. What foods need to be eaten to get vitamin C?

Wider thinking / further reading:
www.foodafactoflife.org.uk
www.grainchain.com

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

Nutrient	Micronutrient	Macronutrient	Vitamin
Mineral	Protein	Carbohydrate	Fat
Calcium	Iron	Energy	Obesity

Textiles Knowledge Organiser
Year 8 – Tie dye cushion project

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Inspirational theme: Mexican Day of the Dead

The Day of the Dead is not Halloween. The Day of the Dead and Halloween are celebrated at the same time of year, but they are very different.

The Day of the Dead is celebrated on November 1st and 2nd.

The Day of the Dead is not a sad tradition. It is a festive time to remember and honour family and friends who have died.

The Day of the Dead is a Mexican celebration. The Day of the Dead originated in Mexico. It is also celebrated in parts of Latin America and the United States.

As a part of the Day of the Dead celebration, families build altars in their homes for loved ones who have died.

Day of the Dead altars have many traditional elements. A few the essential elements are candles, marigolds, a photo, sugar skulls, water, food and cut paper decorations.

Brightly coloured skulls are used to decorate Day of the Dead altars. They are made of sugar or pottery.

The Day of the Dead is sometimes celebrated in graveyards. In some areas, families decorate the graves of their loved ones. They stay up all night celebrating and telling stories about the people who have died.

Tie Dye

Resist patterns

Random

Circles

Tied in objects

Lines

KEY VOCABULARY/ TERMS

Learn the spelling of each word and look up any you do not know.

Transfer paint – a special paint that is used to paint a design onto paper and then transferred onto fabric using the heat press.

Tie dye – fabric is tied up using elastic bands and then placed in a bucket of dye. When untied it will have produced a pattern.

Cotton – a natural fibre grown on a cotton plant is woven to produce cotton fabric. It absorbs dye very well.

Resist pattern – patterns that are created using a barrier such as elastic bands or wax to form a shield from the dye.

Heat press – used instead of an iron to transfer the design from paper to fabric.

Polyester – a synthetic (manmade) fabric that is used for transfer printing. Produces bright colours when used for transfer printing.

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Textiles Knowledge Organiser
Year 8 – Tie dye cushion project

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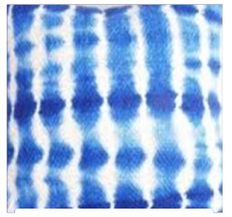
List some interesting facts about the Mexican Day of the Dead Festival.

Name the four patterns of tie dye

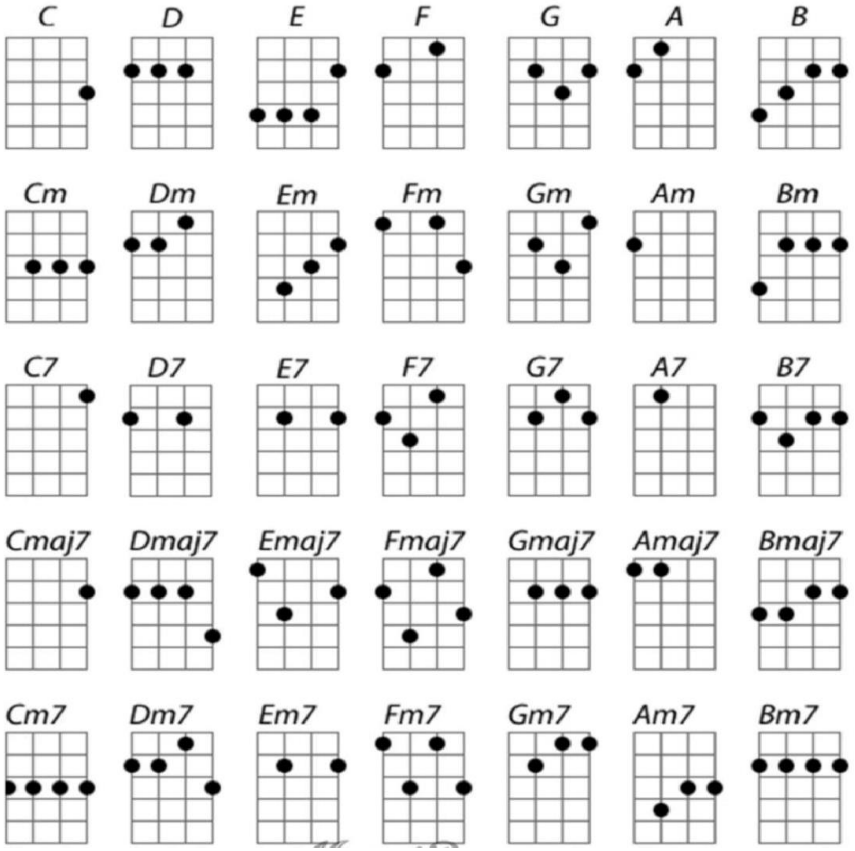
Resist patterns



KEY VOCABULARY/ TERMS Explain the definition. Learn the spelling of each word and look up any you do not know.
Transfer paint
Tie dye
Cotton
Resist pattern
Heat press
Polyester

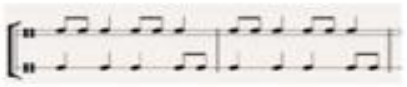
Music Knowledge Organiser
Year 8: Ukulele

Ukulele Chords



Melody and Accompaniment

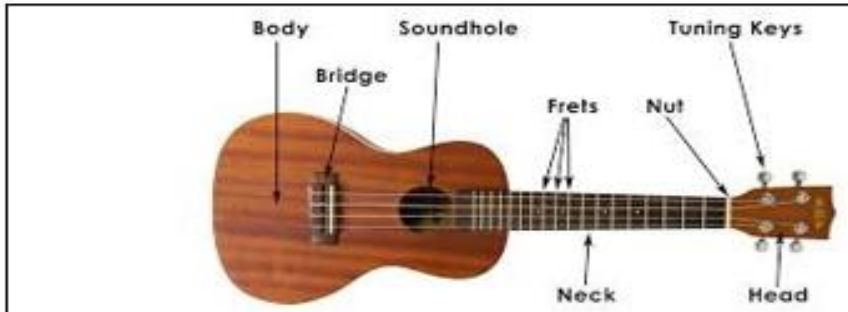
Add simple percussion rhythms to spoken lyrics to give energy

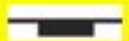


Add chords, bass line, ostinato to spoken lyrics

Use the rhythm of the lyrics to create a melody

Use step wise and repeated notes over accompaniment



Quaver rest - 1/2 beat		Minim rest - 2 beats	
Crotchet rest - 1 beat		Semibreve rest - 4 beats	

VOCABULARY

MELODY ACCOMPANIMENT CHORD HOMOPHICALLY PICKED STRUMMED ARGEGGIO MAJOR MINOR

Music Knowledge Organiser
Year 8: Ukulele

KNOWLEDGE TASKS

1. Describe the texture melody with accompaniment.

2. Describe the texture homophonic.

3. What is picking?

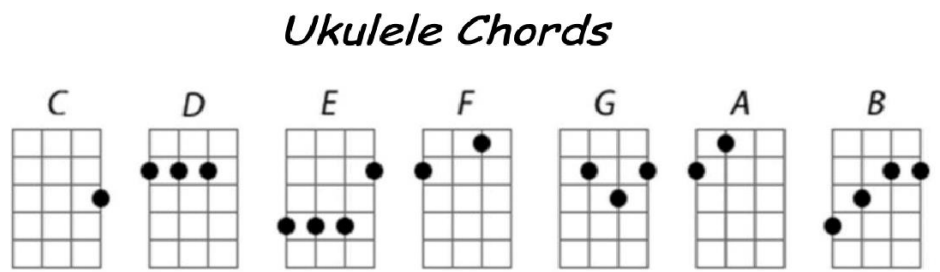
4. What's the verb used for the action of playing the rhythm with the right hand?

COMPOSE

Compose your own strumming pattern;
Label Up with U and Down with D.

D U D U D U D U

ACTIVITY



Draw the following ukulele chords into you book.
Try to memorise them.

RESEARCH

Find an example of a cover song you like, by an Youtuber.

RESEARCH

Research which song writers/performers use the 32 bar song form.
What is the structure of a 32 bar song?

VOCABULARY

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

MELODY ACCOMPANIMENT CHORD HOMOPHICALLY PICKED STRUMMED ARGEGGIO MAJOR MINOR

KS3 | TAG RUGBY HEAD/HANDS

Big picture: Demonstrate more complex movements with fluidity, timing and control in different activities

Basic Rules

Overview

TAG rugby is an invasion game in which two teams play against each other. In tag rugby Players carry the ball using their hands. To score points the aim is to ground the ball in goal areas. This is called a try.

Dodging - move passed the opponents with the ball

Handling - 2 hands on the ball at all times

Scoring - A try is scored when the ball is placed over the try line with both hands pushing the ball down.

Team: Teams of 6 players.

The pitch

A tag rugby pitch can be between 35 and 70 metre long depending on the format.

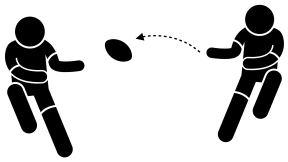
Attacking

Passing

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

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

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



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

Attacking

Outwitting an Oponent

It is important to run on a diagonal or sidestepping when attacking to outwit the opposition.

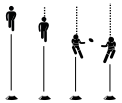
Creating Space

It is important to draw the defender in by running in to a space to create a diversion whilst handling the ball, Once the defenders are drawn in, use this opportunity to pass into the space to give the rest of the team a line to run.

Tagging

You can only tag a player if they have the ball in their hand. This is the same as a non contact tackle. Once tagged, the player in possession of the ball must attempt to stop as soon as possible and pass the ball within the 3 seconds of being tagged.

Controlled Practice



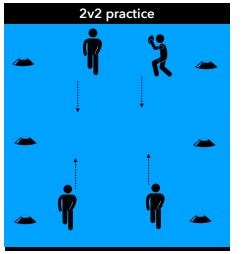
Unopposed

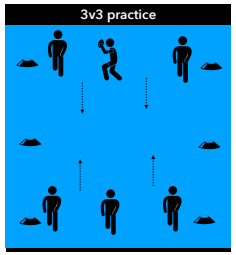
Unopposed activities include practices with no pressure (line passing drill).

Opposed

Opposed activities include practices with pressure (1v1).

Linking Skills





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

HOMEWORK | SUPPORT | UNDERSTANDING

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

Key Questions

1. What is the object of the game of tag rugby?
2. How can a try be scored by a player?
3. Draw a tag rugby pitch with the markings.
4. What are the rules with passing the ball?
5. Why is a lateral/basic pass important?
6. What are the teaching points of a basic/lateral pass?
7. What does offside mean?
8. What does creating space mean?
9. What does a forward pass result in?
10. What does outwitting an opponent mean?

Key Terms

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

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

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

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

Tag - *noun*
a label attached to someone or something for the purpose of identification or to give other information.

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

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

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

Youtube Links

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

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

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

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

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

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

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

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

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

TAG Rugby Explained
https://www.youtube.com/watch?v=v7e8Y8g3sGY

KS3 | FOOTBALL SKILLS/TACTICS

Big picture: To develop knowledge and understanding of attacking and defending play in Football

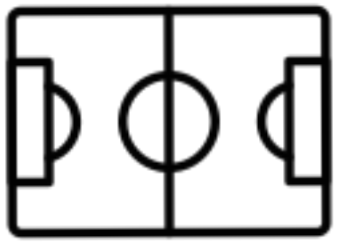
Defensive Team Tactics

Why is defending important in football?

It prevents the (initial) attacking team from keeping possession and, therefore, from attempting to create a goal-scoring chance and enables the (initial) defending team to attempt to create a goal-scoring chance instead.

Defending 1v1

- Close down space and be 1-2 steps away from the attacker.
- Jockey, be patient and don't dive in.
- Force the attacker onto their weak foot.
- Be on your toes.
- Keep your feet moving, don't stand like a statue
- Keep your eye on the ball!



Defensive strategies in football

- Defending as a unit
- Holding the line in terms of high and low defence
- Man-to-man marking and Zonal marking
- Condensing play, Doubling up Defensive partnerships

What are tactics in football?

Tactics create a playing system that links a team's formation to a particular style of play (such as attacking or counterattacking, slow or quick tempo, short or long passing, teamwork or individualistic play).

Tactics

Positioning is key – **Don't let your opposite number get goal side**. With good positional sense, you can mark the opposing team out the game and limit their options. Don't turn your back on your opponent or the ball, try to keep both in sight whenever possible.

Attacking Team Tactics

Why is attacking important in football?

Attacking is the term used to describe **the movement of the team in possession of the ball**. It is not simply the act of shooting on goal or the play of the team in front of the net; it is more complex than that; it is the movement of the players and the ball for the team who has possession.

4 Ways to Beat a Defender

- Put the defender off balance
- Keep the ball close to you so you can cut in either direction.
- Tempt the defender to try to win the ball and then accelerate into space.
- Know when it is the right time to dribble.

Attacking strategies in football

The attacking principles provide you with a framework of how you will play in possession, allowing for you to build tactics/strategies around these to help you with the desired outcome. The five attacking principles are:

- **Dispersal**
- **Penetration**
- **Movement**
- **Support**
- **Inovation/Creativity**.

Tactics

Positioning is key – **Don't let your opposite number get goal side**. With good positional sense, you can mark the opposing team out the game and limit their options. Don't turn your back on your opponent or the ball, try to keep both in sight whenever possible.

HOMEWORK | SUPPORT | UNDERSTANDING

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

Key Questions

1. How many players are on a football team?

2. Explain the rule around pitch dimensions.

3. Explain free kicks and penalties.

4. Explain the object of the game.

5. Why is attacking important in football.

6. Why is defending important in football?

8. Explain 1v1 defending?

9. What are the shooting teaching points?

10. Can you list all of the cross over rules and skills that are in football, basketball, netball and handball?

Key Terms

Rules - one of a set of explicit or understood regulations or principles governing conduct or procedure within a particular area of activity.

Pitch - A pitch is an area of ground that is marked out and used for playing a game such as football, cricket, or hockey.

Defending - A defender is an outfield position whose primary role is to stop attacks during the game and prevent the opposition from scoring.

Tactics -a kick that is made without being stopped or slowed by an opponent and that is allowed because of a foul by an opponent.

Offside- in a position in a game on the opponent's part of the field where you are not allowed to be : not onside

Penalty- a disadvantage given for breaking a rule in a sport.

Attacking - Attacking is the term used to describe the movement of the team in possession of the ball.

Skills - the ability to do something well; expertise.

Shooting - hitting the ball in an attempt to score a goal

Youtube Links

The Rules of Football - EXPLAINED! - https://www.youtube.com/watch?v=5Yo23e0hB48

Dribbling | Football https://www.youtube.com/watch?v=OiBQwlT2_cE

Shooting | Football - https://www.youtube.com/watch?v=Xp_5sW5KF3I

Passing | Football - https://www.youtube.com/watch?v=Z2Es_o-Rmh8

Offside Rule | Football https://www.youtube.com/watch?v=0-nvjtx3i7E

Defensive strategise | Football https://www.youtube.com/watchv=5DkFpmCrCWY

Tactics | Football https://www.youtube.com/watch?v=j-70s6zWTPY

KS3 | FITNESS - METHODS OF TRAINING

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

Methods of Training

Health and Fitness testing

A fitness test, also known as a fitness assessment, is comprised of a series of exercises that help evaluate your overall health and physical status.

Strength - Hand grip dynamometer

The purpose of the handgrip strength test is to measure the maximum strength of the hand and forearm muscles.

Flexibility - Sit and reach test

The sit and reach test is a common measure of flexibility, and specifically measures the flexibility of the lower back and hamstring muscles.

Reaction time - Ruler drop test

This test aims to measure reaction time, hand-eye quickness and attentiveness using only a ruler.

Power - Vertical jump test

The vertical jump test is a test of lower body power and is used for directly measuring the vertical jump height jumped.

Cardiovascular endurance - Multi-stage fitness test

The 20m multistage fitness test (MSFT) is a commonly used maximal running aerobic fitness test.

Coordination – Alternate hand wall toss test

The Alternate-Hand Wall-Toss Test is a test of hand-eye coordination, where the participant throw a ball against a wall from one hand in an underarm action, and attempt to catch it with the opposite hand.

Balance - Standing stork test

The stork balance test requires the person to stand on one leg, up on the ball of the foot, for as long as possible.

Speed - 30 metre sprint test

This test requires participants to sprint as fast as they can over a set distance.

Fartlek Training

Fartlek (Swedish for 'speed play') essentially, it's a form of unstructured speed work. It involves a continuous run in which periods of faster running are mixed with periods of easy- or moderate-paced running (not complete rest, as with interval training).

Interval Training

Interval training consists of a series of repeated rounds of exercise, ranging from several minutes to just a few seconds. During each interval you work at a set intensity for a specific period of time or distance (work interval) and follow this with a low intensity recovery period (recovery interval). You can vary the speed, duration and rest period in order to achieve differing goals from your training session.

SAQ Training

SAQ training aids in the performance of any sport, but it is especially useful for those that are quick-paced and require fast movement.

Recording results

The initial fitness testing session can give you an idea of where your fitness levels are at the start of a program, so that future testing can be compared to this and any changes can be noted resulting in progress being monitored.

HOMEWORK | SUPPORT | UNDERSTANDING

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

Key Questions

What are the components of fitness?

Why do we test these components of fitness?

What does progress look like?

What is fartlek training?

What is interval training?

What is SAQ training?

What is the difference between speed, agility and quickness?

What are the different types of training?

What are you improving in these types of training?

How can you improve your fitness as a team?

What specific fitness component can be improved from training?

Key Terms

Fitness - the condition of being physically fit and healthy.

Component - a part or element of a larger whole.

Health - the state of being free from illness or injury.

Fartlek - the state of being free from illness or injury.

Interval - physical training consisting of alternating periods of high- and low-intensity activity.

SAQ - Speed/Agility/Quickness

Cardiovascular - relating to the heart and blood vessels.

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

Youtube Links

Strength - Hand grip dynamometer

Cardiovascular endurance - Multi-stage fitness test

Flexibility - Sit and reach test

Coordination – Alternate hand wall toss test

Balance - Standing stork test

Reaction time - Ruler drop test

Speed - 30 metre sprint test

Power - Vertical jump test

Fartlek Training

Interval Training

SAQ Training

KS3 | BADMINTON BASIC SKILLS

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

Types of Shots

Low Forehand Serve
The low serve is an extremely effective way to start the game. It prevents the opponent from playing an attacking shot and forces him to hit upward. The forehand low serve is not used as often as the backhand low serve. The three key steps are the the preparation, the shot and the recovery.

Serving and Returns
To execute this badminton serve return properly, you'll first need to hold your racket strings parallel to the net. Then, hit the shuttle towards the top of the net without letting it drop too low. When done correctly, this strategy will send the shuttle spiralling out of control after it rolls over the top of the net!

Underarm Clear (lob)
The underhand clear, also known as a lob, is an effective shot to drive the opponent into the rear court. It is played from the forecourt to the opponent's rear court. The underarm clear is a defensive shot and it is generally used to counter a drop shot.

Forehand Smash and Block
The smash shot is hit with power and speed downward into the opponent's court. The angle and the steepness of the shuttlecock's trajectory make it hard for the opponent to retrieve and return.

Forehand Drive
The forehand drive is an attacking shot that is usually played from the sides of the court when the shuttlecock has fallen too low for it to be returned with a smash.

Singles/Doubles

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

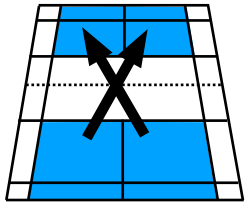
Differences

Singles	Doubles
2 players on the court	4 players on the court
Service (back lines)	Service (back lines)
Open play (no side lines)	Open play (all in)

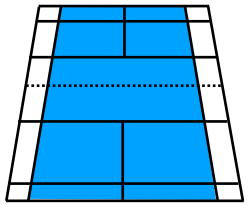
Similarities
- Played to 21 points
- Equipment
- Behind the service line
- Hitting the shuttle once

Singles

During serve

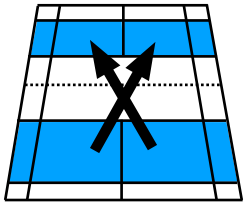


After serve

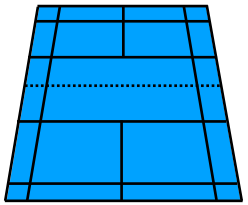


Doubles

During serve

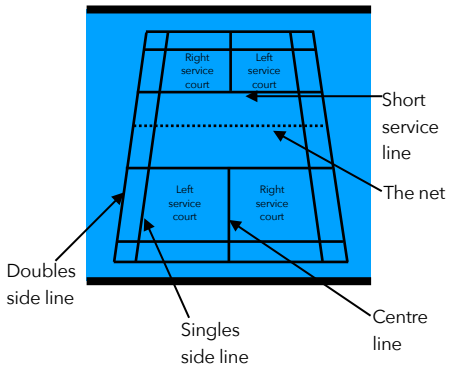


After serve



The court

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

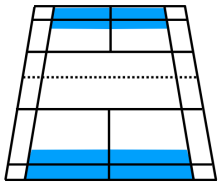


Shot Areas

The clear
1. Move into position and get behind the shuttle.
2. Raise your Racket Arm and Non-Racket Arm.
3. Your body should face sideways with your feet pointing slightly sideways.
4. Commence your Forehand Stroke.
5. Take the shuttle at the Highest Point possible.
6. Complete a Full Arm Swing.

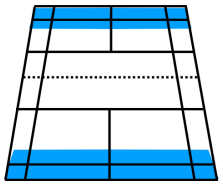
Singles

High Clear Landing Area



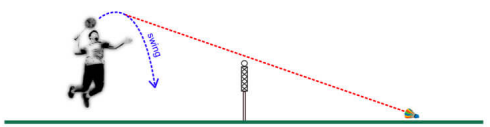
Doubles

High Clear Landing Area



The Smash
1. Move into position and get behind the shuttle.
2. Raise your Racket Arm and Non-Racket Arm.
3. Your body should face sideways with your feet pointing slightly sideways.
4. Commence your Forehand Stroke.
5. Take the shuttle at the Highest Point possible.
6. Complete a Full Arm Swing with a downwards trajectory.

Smash



The Drive
1. Move into position and get behind the shuttle.
2. Raise your Racket Arm and Non-Racket Arm.
3. Your body should face sideways with your feet pointing slightly sideways.
4. Commence your Forehand Stroke.
5. Take the shuttle at the Highest Point possible.
6. Complete a Full Arm Swing with a flat trajectory.
7. The shuttle should be aimed at the opponents body.

HOMEWORK | SUPPORT | UNDERSTANDING

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

Key Questions

1. What area of the court should the low forehand serve be aimed at?
2. What are the key teaching points for the low forehand serve?
3. What sort of the court should you look to return the shuttle too?
4. What area of the court should you aim for with the underarm clear?
5. Describe the key teaching points for the underarm clear.
6. What does trajectory mean?
7. What are the key teaching points for the smash shot?
8. Explain why the smash shot is an attacking shot.
9. What area of the court should the smash shot be aimed at?
10. Describe why the drive shot can be used as an attacking and defensive shot.
11. Describe how to perform the drive shot explaining the key teaching points.
12. What different ways can you perform the short serve?
13. Why is the short serve used more in doubles than singles?
14. What are the rules for serving (making contact with the shuttle)?
15. Why is a high clear effective?

Key Terms

Forehand - *noun*
a stroke played with the palm of the hand facing in the direction of the stroke.

Service - *noun*
the shot that starts a play or rally.

Smash shot - *noun*
offensive shot shot fired from a high point and travels down steeply towards your opponent.

Attacking shot - *noun*
Attacking shots or offensive shots take the game to the opponent and put them under pressure or win points.

Drive shot - *noun*
hit hard on a horizontal or slightly downward path, usually played down the sidelines of the court.

High clear - *noun*
a defensive shot, while the flatter attacking clear is used offensively.

Youtube Links

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

Serving and returning -
https://www.youtube.com/watch?v=n1oDoTLV3rY

Low Forehand Serve-
https://www.youtube.com/watch?v=oQuVFhnYHtI&t=15s

Underarm Clear (lob)-
https://www.youtube.com/watch?v=in24YZmG9ys

The Smash Shot -
https://www.youtube.com/watch?v=vfi4HlxgpQU

Forehand Drive -
https://www.youtube.com/watch?v=SoRIxfSVQpk

Returning the Serve-
https://www.youtube.com/watch?v=SHBT4C4bSng

Returning the Serve-
https://www.youtube.com/watch?v=SHBT4C4bSng

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