

Year 8 Knowledge Organisers

SPRING
TERM
2024


Ofsted
Good
Provider



Potential
into
Reality



Name: _____
Tutor Group: 8

Homework Principles 2023-2024

Our Homework Principles are based on current, influential research:

At John Willmott School we set homework which supports students' understanding of their carefully sequenced curriculum as well as developing their committed and self-disciplined approach to their own academic studies. We know that homework has an impact by enabling pupils to undertake independent learning to practice and consolidate skills, learn key vocabulary, prepare for lessons, or revise for exams.

The Education Endowment Fund suggests that setting homework at Secondary School can accelerate learning by up to 5 months, however it is the quality of tasks set rather than quantity which enhances progress, which is why we are clear in our principles when planning homework against our curriculum implementation.

ACCESSIBLE

- A new Knowledge Organiser will be issued to all students at the start of each term. This will form the basis for most homework so that students have the resources at hand
- Homework tasks should be short and focused ensuring accessibility for all students
- Students will be set homework weekly for most subjects with adequate time for completion
- Students will be taught independent learning strategies as well as explicit teaching of our virtues and school routines to build learning habits

ACCESSIBLE

PRECISE

- Tasks have a defined and exact outcome
- Students will be directed to practise or retrieval or embedding the curriculum
- The way this will be assessed is communicated to students, as well as when this will happen
- Homework is designed to link to classroom learning, with clear signposting to prior, current or future knowledge
- Teachers are asked to plan homework tasks for the term in line with long term plans and summative assessments- this will be shared with students and parents

PRECISE

INFORMATIVE

- Teachers use homework as part of their formative assessment to adapt teaching to better respond to student need in terms of what students know and what they don't know yet
- Teachers will gather data through a variety of quality first teaching routine techniques which may include: Do Now Activities, Exit Tickets, Deliberate Practice; Questioning, Mini Whiteboards
- Student engagement is monitored as well as progress and attainment

INFORMATIVE



Year 8

Knowledge Organisers

Contents

Year 8 Subjects

Art and Design

Drama

English

Food

Geography

History

Information Technology

Modern Foreign Languages

Music

Physical Education

Religious Education

Science

Technology

Mathematics



Art & Design: Mexican Culture

1. Day of the dead

Spanish: Día de los Muertos

The Day of the Dead Festival is celebrated as a way of marking respect for deceased family members. Throughout Mexico people dress up, wear makeup and costumes and hold parades and parties, making offerings to lost loved ones.

The Day of the Dead originated a long time ago with the belief that mourning the dead was disrespectful; for pre-Hispanic cultures, death was a natural phase and the dead were still members of the community, kept alive in memory and spirit.



2. Symbolism in Mexican Art. Research.

Here are six important symbols of Día de los Muertos.

- Remembering the family: The ofrenda.
- A doorway to the dead: Marigolds.
- A sweet treat: Sugar skulls.
- Colourful banners: Punched paper.
- Home baked comforts: Bread of the dead.
- A dancing icon: La Catrina.



Artist Thaneeya McArdle creates intricate sugar skull designs considering symmetry and pattern in her work.

3. WOW WORDS

The Formal Elements are the parts used to make a piece of artwork.

Line

Shape

Space

Form

Tone

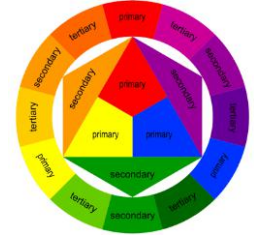
Texture

Pattern

Colour

Composition

They are often used together, and how they are organised in a piece of art determines what the finished piece will look like.



4. Mexico

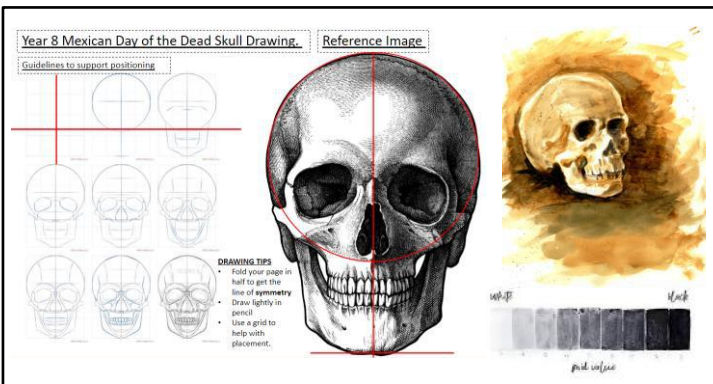
Mexico is located in the southern part of North America, between the United States and Central America. Mexico is bordered by the U.S. to the north and Guatemala and Belize to the south.



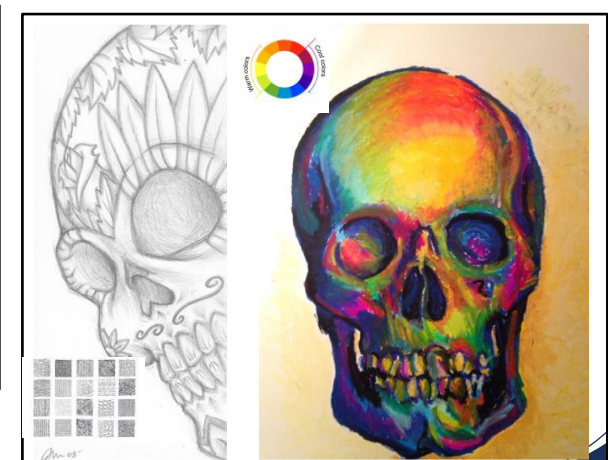
MEXICAN FLAG



5. Reference Imagery



6. Reference Imagery





KNOW IT

The Formal Elements are the parts used to make a piece of artwork. They are often used together, and how they are organised in a piece of art determines what the finished piece will look like.

Line: is a mark made on a surface that joins different points. Lines can vary in length, width, direction and shape.

Shape: Shape is a two-dimensional area. Shapes have height and width but not depth.

Space: Space can refer to objects and to the area around them.

Form: Forms have three dimensions, height, width and depth.

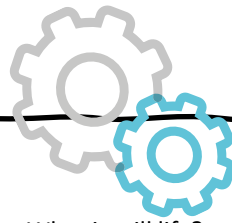
Tone: Tone is the lightness or darkness of a colour. This can be used to show shadows or highlights.

Texture: Texture means how something feels. There are two types of texture: actual texture and visual texture.

Pattern: Pattern is a design in which lines, shapes, forms or colours are repeated.

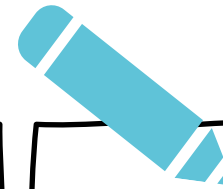
Colour: There are three primary colours. Red, Yellow and Blue. Secondary Colours are made by mixing two primary colours together. Complementary colours are colour opposite each other on the colour wheel.

Composition: Composition is the way in which different elements of an artwork are combined or arranged.



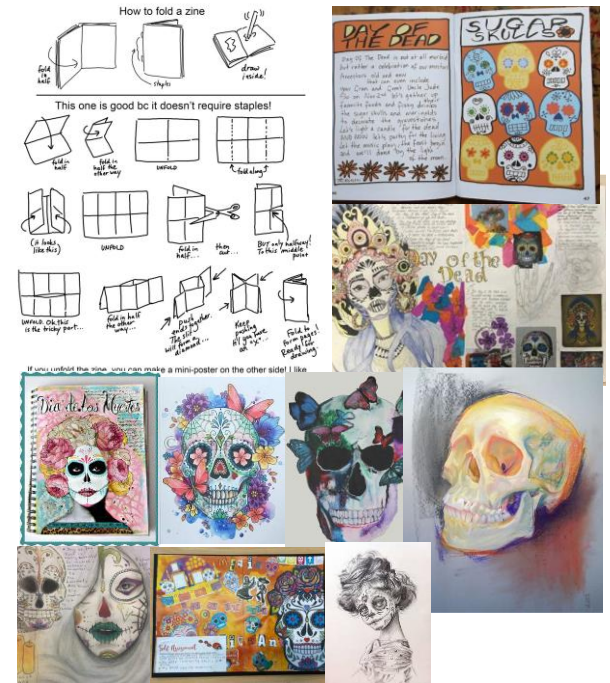
THINK IT

- What is still life?
- What is Primary Observation?
- What is Secondary Observation?
- How have line, shape and pattern been considered in the drawing of the sugar skull below. Do you think Symmetry has played a large part in the success of this design? Explain your answer.
- What does the skull in Mexican Culture represent?
- What imagery is used within Day of the Dead? List three.
- What does the word "Calavera" mean?
- List three items that are placed on the altar?
- What date does the Day of the Dead Festival take place?
- Name the flowers often seen in Day of the Dead Celebrations.
- Think of the colour wheel. Write down the three complimentary pairs
- List 3 warm colours and 3 cold colours.
- Look at the skull in oil pastel (below). Where do warm colours need to be applied? Where do colder colours need to be applied?
- Why is colour important in creating 3D form?
- What colours can be used to create shade?
- Why is using colour to create shadow often more successful than just using black?



GRASP IT

- Combining both knowledge of the Art Formal Elements and of the Mexican Day of The Dead Festival create an engaging, colourful and informative Zine to present information and drawings about the Festival. Demonstrate skills across all the Formal Elements.
- A Zine is like a mini comic.



Drama: Horror & Tension



1. Mime (Still VERY useful this term)

Mime is a genre of silent performance. It requires an actor to use:

- Clear facial expressions to show emotion
- Clear, simple gestures to explain the action and to set the scene
- Posture that shows a clear character
- Movement that is simple and suits the scene and character created



4. Set the scene

Creating any performance can be hard, but a mimed performance is really challenging because your communication is limited.

You need to show the audience WHERE you are and who you are. This term will have the added challenge of showing how you FEEL, if you don't look worried, your audience won't be!

2. Tension

We set tension using a number of different elements of a performance.

A lot of them start with 'S' just to make life easy.

Silence.
Stillness.
Slowness.
Suspense. (Expecting something to happen)

5. Music – How does it fit?

A nice easy way to explore how music can impact the level of tension and suspense is to watch a scene in a film with, and then without any music.

Music can impact how we feel, which can change how the scene and acting impacts us.

You could try playing some different music over the top of a tense or emotional scene that you understand well to see if it would change the mood and atmosphere.

3. Key words & phrases

Mime
Gesture
Facial Expression
Posture
Movement
Exaggeration
Clear
Silent
Clowning
Mirroring
Sculpting
Stillness
Suspense



6. “Yes, and...”

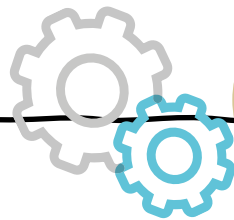
This is an activity where you need to look to grow and develop a scene, looking for a funny thing to happen. See if you can create a funny idea from these starters

- 1) A couple are getting married
- 2) A man is making a cake
- 3) A lady loses her shoe
- 4) Someone walks into a library
- 5) A fisherman is fishing
- 6) Two friends are jogging



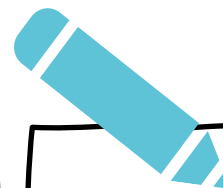
KNOW IT

1. Mime can be used to create a scene or character
2. Posture, Gesture, Facial Expression and movement are important elements of mime
3. Clowning is a rehearsal strategy where we look to exaggerate our physical
4. Mirroring is a rehearsal strategy where we copy our partners to help our understanding of our physicality
5. Action Narration is a rehearsal strategy where we speak out loud our characters gestures and movement, giving reasons for them. It helps us develop out understanding and reasoning behind gestures and movements.
6. Suspense, silence, stillness and slowness all play a key role in the development of tension.



THINK IT

1. Do I know how Mime can be used?
2. What elements of a character are really important in Mime?
3. What is clowning?
4. What is mirroring?
5. What is Action Narration?
6. What four words do we need to know that begin with 'S' to help create tension?



GRASP IT

Challenge

Hold an item from somewhere in your house. Carefully study where your fingers are placed on it, how the weight changes how you move your arm or body.

Put the item down, but try to recreate the exact POSTURE, GESTURE, FACIAL EXPRESSION and MOVEMENT whilst miming the object is there.

Challenge

Try to make picking up an item at home tense. You could pretend that it's going to explode or that it could change in some way.

Let the tension of that made up scenario impact how slowly you move, how often you pause and how worried or nervous you look and feel.

See if you can extend the length of tension that is felt.



English: The Tempest

3. Plot Summary

Year

8

1. Character List

Prospero: the rightful Duke of Milan
Miranda: Prospero's daughter
Ariel: an airy spirit
Caliban: a savage and deformed slave
Master: of the king's ship
Boatswain: second in command on the king's ship
Alonso: King of Naples
Sebastian: Alonso's brother
Ferdinand: Alonso's son
Antonio: Prospero's brother
Gonzalo: a councillor
Trinculo: a jester
Stephano: a drunken butler

2. Key Words

Characterisation
Prologue
Epilogue
Comedy
Protagonist
Antagonist
Context
Monologue
Tyranny
Usurp
Colonisation
Enslave
Tempest
Treason
Callous
Nurture
Pathos

4. Social & Historical Context

- People did not understand science. Many thought it was magic.
- Many writers used magical ideas in their work to find some rationale/explanation for all the misfortune in the world (plague, war, death, disease).
- Italian city states - an area that is ruled by a major city. During the Elizabethan and Jacobean era, Italy wasn't one unified country, but a number of small independent city-states.
 - Sea exploration was also popular as people 'discovered' new parts of the world. Queen Elizabeth I was obsessed with their discoveries and was happy to pay for their travels.

5. Themes

Magic
Loyalty & Betrayal
Revenge & Forgiveness
Power & Control
Nature & Nurture
Freedom & Confinement

Act one: The Tempest

Alonso, the King of Naples, is on a ship with his son Ferdinand and his companions Sebastian, Antonio, Stephano and Trinculo. They are struck by a tempest. They abandon ship and are washed ashore in different places on an island that seems to be abandoned.

After the Storm

From the island, Miranda watches the tempest. Prospero tells her that he was the Duke of Milan twelve years ago. He was studying magic and did not realise his brother Antonio was usurping his place. Antonio got soldiers to put Prospero and Miranda on a boat to their death. Luckily, they found this island to live on. He has created the storm to bring his brother to him.

Ariel and Caliban

Prospero is a powerful magician. He controls the spirit Ariel who completes tasks for him. Prospero has agreed to release Ariel after this last mission. Caliban is a deformed savage slave who is also under Prospero's control. He is a native of the island. Prospero taught Caliban how to speak but Caliban resents the control Prospero has over him.

Act two: King Alonso

King Alonso, his brother Sebastian, Antonio (Prospero's brother) and Gonzalo wander the island. Alonso believes his son Ferdinand is dead. Sebastian and Antonio plot to kill Alonso so that Sebastian can be king. They are stopped by Ariel's magical intervention.

Caliban, Stephano and Trinculo

Caliban is found by Stephano and Trinculo. They give him alcohol and he gets drunk. Caliban thinks Stephano is a god because of the heavenly drink! Caliban tells them how Prospero has treated him and promises to serve them if they kill Prospero. Ariel hears and tells Prospero.

Act three: Ferdinand and Miranda

Ferdinand has survived the storm and is found by Miranda. They fall instantly in love. Prospero wants to test that the love is real so he makes Ferdinand work. Miranda pities Ferdinand and wants to marry him. Prospero blesses their marriage.

Act four & Five: The End

Ferdinand and Miranda celebrate with Prospero but he then recalls the threat from Caliban so he asks Ariel to send spirit dogs to scare them away. The king's group meet Prospero. He explains the events on the island and reveals that Ferdinand is alive. King Alonso is filled with regret and asks for forgiveness from Prospero which he grants.

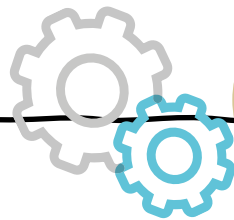
Epilogue

Prospero decides to give up magic. Ariel is released from his service. The party travel back to Milan. We do not know what has happened to Caliban.



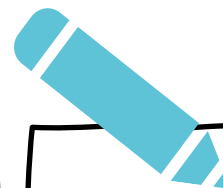
KNOW IT

1. Give a definition of each key word.
2. List all the characters in the text.
3. List all the figurative language techniques that you can recall.
4. How are the characters related to each other?
5. Can you summarise the plot in 50 words?
6. Can you list the 10 most important plot points?
7. Can you put the main plot points into chronological order?
8. Which 5 words best describe the protagonist?
9. Which 5 words would you use to describe other key characters?
10. What are the main themes in the text?
11. What are the social and historical links to the text?



THINK IT

1. Why is the context of a play/novel important?
2. How do the main themes link to the protagonist?
3. How do the main themes link to other characters in the text?
4. Is the author challenging, endorsing, or simply reflecting the dominant ideas and assumptions of the time and place in which they are writing?



GRASP IT

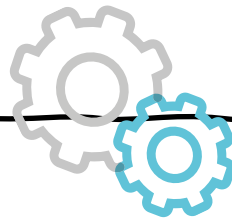
1. What is the impact of the opening of the text?
2. What is the impact of figurative language use within the text?
3. Why are the key themes important for the reader/audience to understand?
4. How does colonialism link to the text?
5. Why might a modern-day audience or contemporary reader criticise the author's intended message?





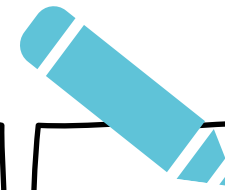
KNOW IT

1. Why is the Eatwell Guide important?
2. What are the 5 nutrients linked to the Eatwell Guide?
3. What are the functions of these 5 nutrients?
4. What are the two classifications that nutrients come under?
5. Explain why water is important in our daily diet?
6. Explain why fibre is important in our daily diet?
7. Explain why we need fibre in our diet.
8. Why is kneading important when making bread?



THINK IT

1. Why do you think the Eatwell Guide was introduced by the government?
2. Explain the importance of following the Eatwell Guide?
3. Why do you think preparing food safely is important?
4. What are the health implications if you are obese?
5. Bread is a staple food, why is this?
6. Find the origin of different breads and recipe to compare with traditional bread making.



GRASP IT

1. Draw your favourite meal, label the nutrients to see if it is a balanced meal?
2. How can you improve your meal, think about the Eatwell Guide and what you can add to your drawing?
3. Key spelling, associated with the colours on the Eatwell Guide. Can you use in your own written explanations?
Carbohydrates
Protein
Fats
Vitamins
Minerals
4. Breakfast is the most important meal of the day, why is this and what foods should you avoid for breakfast?
5. Make A list of a variety of foods that are healthy for breakfast.

Geography: Sustainable World

1. Water demand in the UK

A growing demand

The average water used per household has risen by 70%. This growing demand is predicted to increase by 5% by 2020. This is due to:

- A growing UK population.
- Water-intensive appliances.
- Showers and baths taken.
- Industrial and leisure use.
- Watering greenhouses.

2. Water quality and pollution

Cause and effects include:

Chemical run-off from farmland can destroy habitats and kills animals.

Oil from boats and ships poisons wildlife. Untreated waste from industries creates unsafe drinking water.

Sewage containing bacteria spreads infectious diseases.



3. Key Concepts

Climate Change – A large-scale, long-term shift in the planet's weather pattern.

Carbon Dioxide - Accounts for 60% of the enhanced greenhouse gases. It is produced by burning fossil fuels through producing electricity, industry, cars and deforestation.

Emissions - Waste gases that go into the air, eg from car exhausts

Methane - A colourless, odourless flammable gas which is the main constituent of natural gas. Produced from landfills, rice and farm animals.

4. Impacts of climate change

1. **Extreme Rainfall** – An increase in heavy rainfall
2. **Flooding** - Vulnerable low-lying areas could flood homes and infrastructure.
3. **Water shortages** and drought - Farmers will find it difficult to irrigate land.
4. **Water restrictions**, with London being worst affected.
5. **Extreme Heat** – Warmer weather in the summer leading to heat waves.

5. Positive impacts of climate change

1. **Tourism** - More people likely to take holidays within the UK. The economy could be boosted: helping to create new jobs.
2. **Farming** - Agriculture productivity may increase under warmer conditions. Farmers could potentially grow new foods used to warmer climates.



6. Who is responsible ?

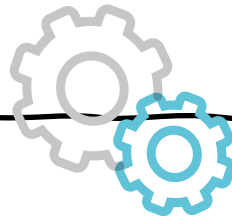
LICs - Countries in Africa, such as Kenya, emit low levels of carbon dioxide. This is due to these countries not being industrialized or having a population wealthy enough to consume lots of energy.

NEE - Countries such as China and India are increasingly more industrialized and therefore are emitting more carbon dioxide. These increasing population sizes and steadily increasing wealth mean more energy is being consumed.



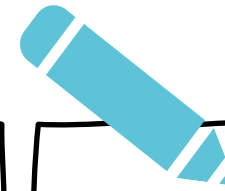
KNOW IT

1. Name the main greenhouse gases
2. What are the impacts of water pollution on wildlife ?
3. Why is demand for water increasing ?
4. What is agriculture ?
5. Name one water borne disease.
6. What is a drought ?
7. Why will tourism increase in the UK due to climate change ?
8. What is polluting the UK's rivers ?
9. Name five LICs from around the world
10. BRIC and MINT are acronyms for which NEEs.



THINK IT

1. Why is there a growing demand for more water in the south-east of England ?
2. What are the effects of water pollution on the environment ?
3. What will be the likely negative impacts of climate change ?
4. What are the potential positive impacts of climate change for the UK ?



GRASP IT

1. In your opinion, who is responsible for causing climate change ? Justify your answer.
2. How far do you agree that climate change will have both positive and negative impacts on the UK ?
3. Write a newspaper article explaining the impacts of water pollution on people living in LICs.
4. How far do you agree that carbon dioxide is the main cause of climate change ? Explain your answer.



History: The First World War

1. Significance of WWI



ALLIANCES
A union or association
formed for mutual benefit,
especially between countries
or organisations.

Triple Entente



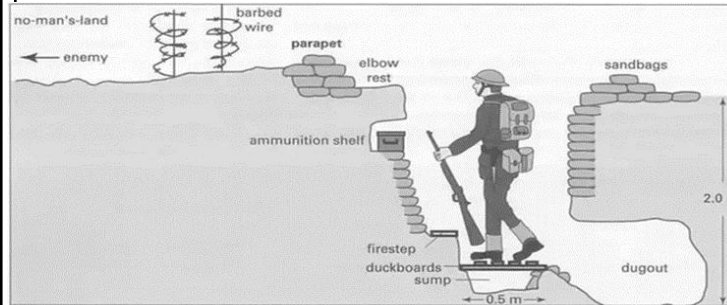
Great Britain France Russia

Triple Alliance



Germany Italy Austro-Hungary

2. Life in a WWI Trench



A Cross section of a British WWI trench. Key areas: parapet, sandbags, duckboards, dugout, no mans land.

3. Key Events

Triple Alliance formed 1882



Moroccan Crisis 1905



Triple Entente formed 1907



Assassination of Franz Ferdinand



Britain declare war on Germany – the start of WW1



German U-boat blockades start 1915



The Battle of the Somme 1916



Conscription begins 1916

British & French start using tanks 1917



Americans join the Great War 1917



Germany surrender WW1 ends 1918



4. WOW Words

Conscription: the compulsory enlistment of people in a national service, most often a military service.

Ration: A fixed amount of a commodity officially allowed to each person.

Propaganda: Information, of a biased or misleading nature, used to promote a political cause.

5. Problems with living in a trench



RATS



TRENCH FOOT



LICE

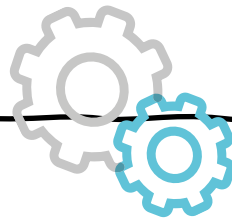


SHELLSHOCK



KNOW IT

1. What is an alliance?
2. Who were the member countries of the Triple Entente?
3. Who were the member countries of the Triple Alliance?
4. What was the term given to the race to build bigger and better armies?
5. Why did 'nationalism' contribute to the start of WW1?
6. Who was assassinated in Sarajevo in June 1914?
7. Why were duckboards placed on the ground inside a trench?
8. What was placed in 'no man's land' to make crossing it more difficult?
9. Define the three terms:
 - i. Conscription
 - ii. Ration
 - iii. Propaganda
10. In what year did the American join WW1?

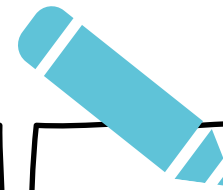


THINK IT

A First World War anti-Haig poster:
'Your country needs me. Like a hole in the head. Which is what most of you are going to get.'



1. What does the poster tell you about the public's opinion of Field Marshall Haig following the Battle of the Somme?
2. Using your own knowledge was this opinion fair?



GRASP IT

You are a Times newspaper journalist. In the winter of 1915, you have visited a British trench in Belgium.

Write a newspaper report documenting the appalling conditions that the brave young British soldiers were experiencing in their trenches everyday.



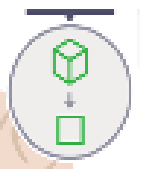
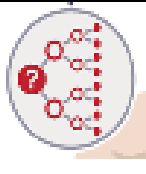
IT: Data Representation/Programming

1: Character Encoding

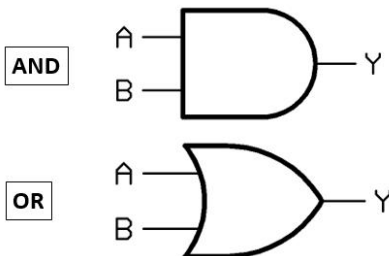
- Character set
 - Definition
 - ASCII
 - Unicode
 - Purpose of Unicode and advantages over ASCII
- We can encode text using the ASCII Standard to represent different characters.
 - ASCII code is the numerical representation of characters e.g. a to z.

Letter	ASCII code	
	Decimal	Binary
A	65	0100 0001
B	66	0100 0010
C	67	0100 0011

2: Keywords

Algorithm	A sequence of instructions to be followed (usually by a computer,) to carry out a task.	
Computational thinking	A method of solving a problem logically, using abstraction, decomposition, pattern recognition and algorithms.	
Abstraction		Focusing on what is important, ignoring the unnecessary.
Decomposition		Breaking something into smaller parts, in order to solve the smaller parts first.
Pseudocode	A notation resembling a simplified programming language, used to create a program design.	
Flow Chart	A visual representation of an algorithm, using shapes and arrows to show a clear sequence of instructions.	

5: Logic Gates & Tables



Input (A)	Input (B)	Output (A AND B)	Output (A OR B)
0	0		
0	1		
1	0		
1	1		

3: Binary Addition

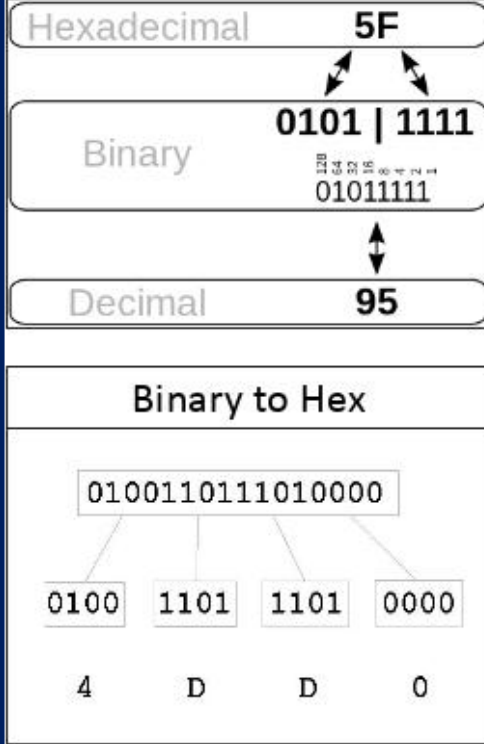
Binary arithmetic

Addition of up to 3 binary numbers

1 = 1
2 = 10
3 = 11
4 = 100
5 = 101

$$\begin{array}{r} \text{1} \\ \text{1 0 1} \\ \text{00111} \\ \text{01110} \\ + \text{11100} \\ \hline \text{110001} \end{array}$$

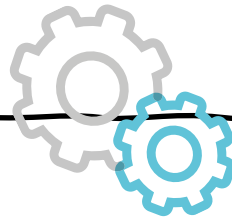
4: Hexadecimal Conversion





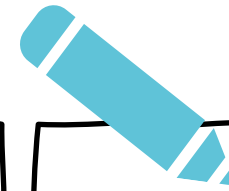
KNOW IT

1. What is an algorithm ?
2. How is data represented?
3. What is a logic gate?
4. What is input?
5. What is output?
6. State what ASCII code is ?



THINK IT

1. Convert 1001 0011 to decimal
2. Convert 1110 1111 to decimal
3. Convert 0011 1101 to decimal
4. Convert 245 to binary
5. Convert 102 to binary



GRASP IT

1. Using your knowledge of algorithms can you create an algorithm for baking a cake.
2. Explain how the bit depth affects an image
3. Complete the following table :

Bit	Converts to	Single unit or 1
8 bits		
bytes		1KB
1000 KB		
MB		1 GB
1000 GB		



Modern Foreign Languages: On vit en France!

1. Time

Le collège commence à

Le collège finit à

3.00 - trois heures

9.15 - neuf heures quinze

10.30 dix heures trente

11.45 - onze heures quarante-cinq

5 – cinq, 10- dix, 20 – vingt, 25 – vingt-cinq

35 – trente-cinq, 40- quarante, 50 – cinquante, 55 – cinquante-cinq

2. Key Phonics



qu/q



eu



in



i/y



oi



r



s/ç



un



on/an



ou



è



é/et

5. 2 tenses

Present tense

je mange à la cantine – I eat in the canteen

je joue au foot – I play football

je mange à la maison – I eat at home

Imperfect tense "used to"

je mangeais à la cantine – I used to eat in the canteen

je jouais au basket – I used to play basketball

on mangeait le fastfood – we used to eat fast food

3. Adjectives

Adjectives agree with noun

Un tee-shirt gris

Un pantalon noir

Feminine noun

Une jupe grise – a grey skirt

Une veste noire – a black blazer

Des chaussures noires - black shoes

4. Modal Verbs

On doit/il faut – you must

On peut – you can

On **ne** doit **pas**/ il **ne** faut **pas** – you must **not**

On **ne** peut **pas** – you cannot

On peut porter ses propres vêtements

You can wear your own clothes

6. Star Words

C'est **chouette**! - it's great

C'est **mortel**! - it's amazing/ wicked!

C'est **affreux**! - it's awful!

Quel casse-pieds! - what a pain!

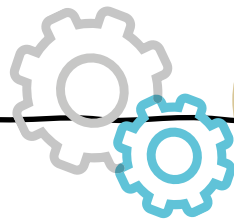
Ne ... que – only

La pause déjeuner ne dure que trente minutes
– lunch only lasts thirty minutes



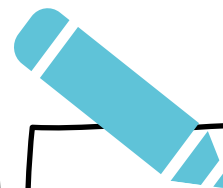
KNOW IT

1. Translate:
En France la journée scolaire est plus longue qu'en Angleterre.
2. Translate:
Mais en France, il n'y a pas d'uniforme, c'est chouette!
3. Translate:
Aujourd'hui à neuf heures, j'ai les sciences.
4. Translate:
Ma matière préférée est l'histoire parce que c'est vraiment intéressant, mais en Angleterre c'était l'EPS.



THINK IT

1. Adapt sentence 1 to write:
In England you must eat lunch in the canteen but in France you can eat at home.
2. Adapt sentence 2 to write:
In England there is a uniform, it's awful.
3. Adapt sentence 3 to write:
On Wednesdays I study history at 11am and then I have English at 12pm.
4. Adapt sentence 4 to write:
Now my favourite subject is English because it is easy but in England I didn't used to like it because it was boring.



GRASP IT

1. Use the structures in sentence 1 to write a sentence about some differences between French and English schools.
2. Use the structures in sentence 2 to write a sentence about you think about uniform / no uniform.
3. Use the structures in sentence 3 to write about your school timetable.
4. Use the structures in sentence 4 to give your opinion about a subject in the past and present



Music: Computer and Video Game Music

1. HOW COMPUTER AND VIDEO GAME MUSIC IS USED

Music within a computer or video game is often used for **cues** (when something is about to happen). Video game music is often heard over the title screen (**ground theme**) as well as the gameplay. Music can be used to increase tension and suspense e.g. during battles and chases, and can change depending on a player's actions or situation.

Characters often have their own **character themes or motifs** (like **leitmotifs** in film music). These can be changed using the elements of music e.g. **pitch, tempo, dynamics, timbre** and **texture** depending on the character's situation or different places they travel to in the game.

4. KEYWORDS

CHARACTER THEME	Motif to represent a character
DISJUNCT MOVEMENT	Wide intervals between notes
STACCATO ARTICULATION	Notes are spiky and detached
CHROMATIC MOVEMENT	Melodies move in semitones
SYNCOPIATION	An offbeat rhythm, with emphasis on a weak beat
SYNTHESISER	An electronic musical instrument that produces sounds
STRUCTURE	How the music is organised
TONALITY	The key, major or minor
TIMBRE	Tone quality of the instrument e.g. mellow or shrill
PENTATONIC	A scale with 5 notes



2. MUSICAL FEATURES

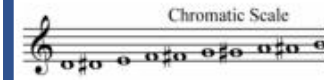
JUMPING BASS LINE

Where the bass line often moves by **LEAP (DISJUNCT MOVEMENT)** leaving 'gaps' between notes



CHROMATIC MOVEMENT

Melodies and bass lines that ascend or descend by semitones.



STACCATO

ARTICULATION

Performing each note sharply and detached from the others.

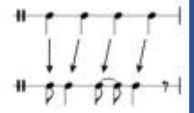
Shown by a dot.



SYNCOPIATION

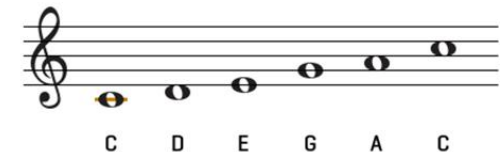
Accenting the weaker beats of the bar to give an

"offbeat" jumpy feel to the music.



3. NOTE VALUES AND PITCHES FOR COMPOSITION

Note Symbol	Rest Symbol	Note Value	Note Name
		1/2	Quaver
		1	Crotchet
		2	Minim
		4	Semibreve



5. COMPOSERS



Koji Kondo

Super Mario Bros. (1985)
The Legend of Zelda (1986)



Michael Giacchino

The Lost World: Jurassic Park (1997)
Medal of Honour (1999)
Call of Duty (2003)



Mieko Ishikawa

Dragon Slayer (1993)



Martin O'Donnell and Michael Salvatori

Halo (2002)



Daniel Rosenfield

Minecraft (2011)



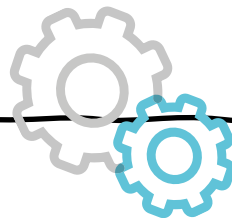
Rom Di Prisco

Fortnite (2017)



KNOW IT

1. Define ground theme.
2. Define character theme.
3. Identify three computer game characters.
4. Define pitch.
5. Define tempo.
6. Define dynamics.
7. What is the note value of a crochet?
8. What is the note value of a quaver?
9. What is the note value of a minim?
10. State the four instrumental families and identify an example for each.
11. Can you explain the term timbre?
12. What is articulation?

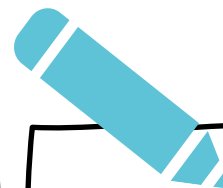


THINK IT

1. Video game music often uses the following musical features.
 - Jumping/disjunct bassline
 - Staccato articulation
 - Chromatic movement
 - Syncopation

Can you explain the term syncopation?

2. Can you explain the difference between disjunct and conjunct movement?
3. Can you explain the difference between staccato and legato articulation?
4. Can you explain the term chromatic movement?



GRASP IT

1. Listen to the following extract and identify four musical features you can hear.

[Super Mario Bros Main Theme - YouTube](#)

2. What instrument has been used to produce the sound?

3. Listen to the following extract and compare the use of instruments/timbre to Super Mario.









[The Legend of Zelda: Twilight Princess Music - Princess Zelda's Theme – YouTube](#)

4. Compare the tempo and dynamics of the extracts.

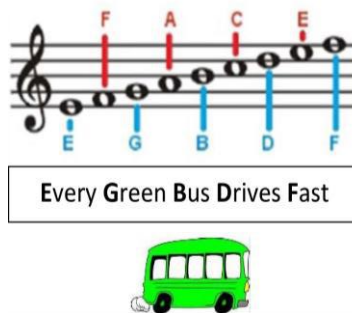


Music: Theory



1. NOTE VALUES

Note Symbol	Rest Symbol	Note Value	Note Name
		1/2	Quaver
		1	Crotchet
		2	Minim
		4	Semibreve

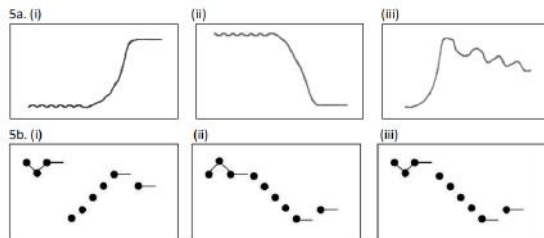
2. PITCHES



3. NOTATION SYMBOLS

Notation Symbol	Definition
	Treble clef
	Bar line

4. NOTATION EXAMPLES



Graphic scores show the length of the notes and the pitch direction

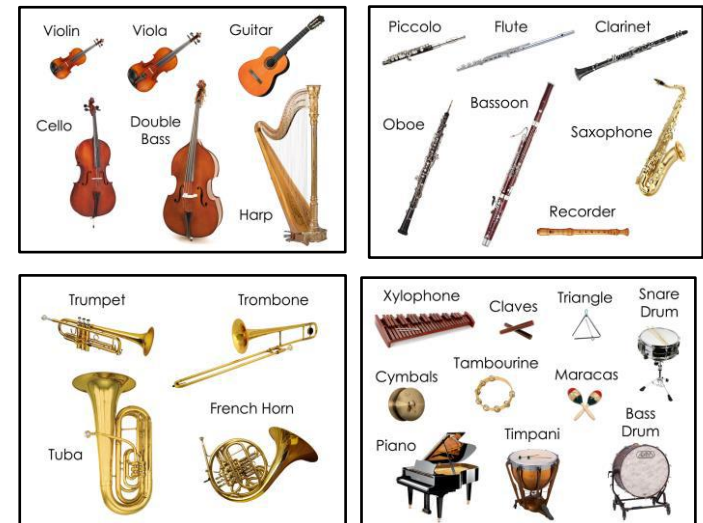


Staff notation shows precise note lengths and pitches on a staff

5. KEYWORDS

PITCH	How high or low the note is
TEMPO	Speed (how fast or slow)
DYNAMICS	Volume (how loud or soft)
RHYTHM	Different length notes in a pattern
MELODY	Different pitches in a pattern
TEXTURE	How much sound/many layers we hear (thick or thin)
TIMBRE/ SONORITY	Tone quality of the instrument e.g. mellow or shrill
ARTICULATION	How notes are played (smooth or detached)
DURATION	How long or short the note or music is
SILENCE	No sound at all

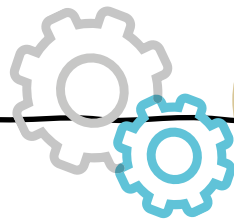
6. INSTRUMENTAL FAMILIES





KNOW IT

1. Define pitch.
2. Define tempo.
3. Define dynamics.
4. What is the note value of a crochet?
5. What is the note value of a quaver?
6. What is the note value of a minim?
7. State the four instrumental families.
8. What is a rhythm?
9. What is a melody?
10. Can you explain the term texture?
11. Can you explain the term timbre?
12. What is articulation?
13. What is a duration?

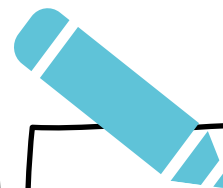
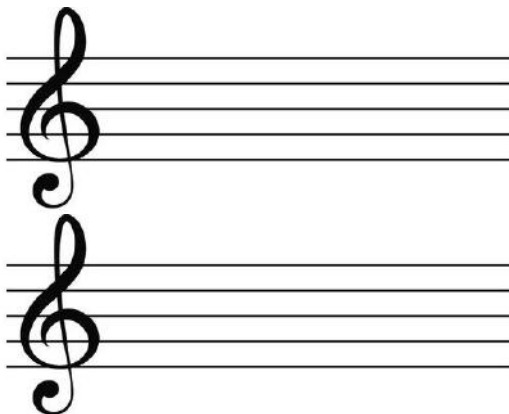


THINK IT

1. Can you explain the difference between a graphic score and staff notation?
2. Can you identify an instrument from each instrumental family and describe its timbre?

WOODWIND
BRASS
STRINGS
PERCUSSION

2. On the staff, draw and label the line and space pitches.



GRASP IT

1. Complete the table below with the note values and note names.

Note Symbol	Rest Symbol	Note Value	Note Name

2. Listen to a piece of music of your choice and describe the pitch, tempo and dynamics. What instruments can you identify and can you describe their timbres?



Physical Education: Volleyball

1. Rules

- ❑ To start a point, the server can serve from anywhere behind the end line, hitting into the opposing team's side of the court.
- ❑ Each team is allowed a maximum of three touches on their side of the court before sending the ball back over the net after the serve.
- ❑ A player is not allowed to touch the ball twice in a row. However, they could hit the ball on the first and third contact.
- ❑ The serving team scores a point when the opponents fail to return the ball over the net, hit the ball out of bounds or commit an infraction.
- ❑ Whichever team wins the point then goes on to serve.
- ❑ Every time a team wins the serve from the other team, the players rotate their position on court one place clockwise so that everyone gets a turn to serve

2. Positions



3. Scoring system

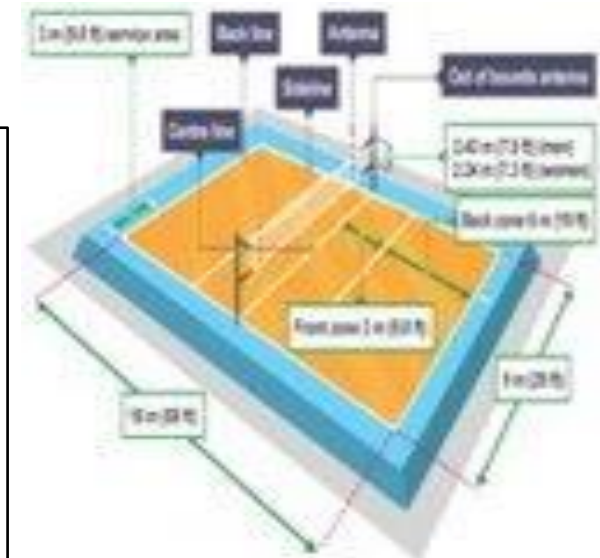
In competitive adult matches all games are played to a best of five sets.

Volleyball is very different to most sports as the first four sets are played to 25 points, but if the match goes to a fifth set this game is only played to 15 points.

In order to win a set, a team must win by two clear points

4. Regulations & Dimensions

- An official volleyball court is 18 m × 9 m.
- A first (or main) referee, second referee, a scorer and two-line judges are required to umpire an official game of volleyball. Just like most sports, the main referee upholds the rules throughout the whole game and their decision is final.
- The second referee stands opposite the main referee and is responsible for all substitutions, timeouts and the scorer's table.
- The line judges call if a ball lands in or out of bounds.





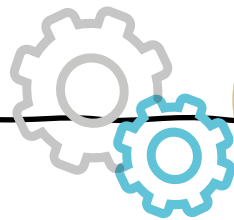
**KNOW
IT**

Technical

1. Where do I serve from?
2. How many times can I hit the ball?
3. How can I score a point?
4. What methods can I use to score a point?
5. How many players are on a side?
6. Where are the attacking and defensive players to stand?

Health, Fitness & Well-Being

7. How can exercise help my well-being?
8. Why do we warm up?
9. How can I train for this sport?
10. What are the principles of training?



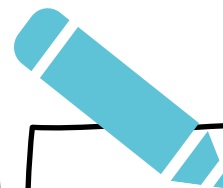
**THINK
IT**

Technical

1. What types of serve are there?
2. Describe the three main shots a player can do?
3. Why is attacking space important?
4. Where should you aim when at the net?
5. Give an example of a defensive player.

Health, Fitness & Well-Being

6. What mental benefits do you get out of playing invasion games?
7. What 3 components of a warm-up should be used?
8. How will this develop my body to give me an advantage?
9. How can they be applied to your training?



**GRASP
IT**

Technical

1. Why is it important to use the correct serve?
2. How can the set be used to receive the ball in a game situation?
3. What are your three main shots when you receive the ball?
4. Explain how to score a game as an official.
5. Who serves the ball & how do you know whose turn it is?

Health, Fitness & Well-Being

6. How do you think sport will help you at school?
7. Create a warm-up plan for you to use before a competitive match.
8. Why is muscular endurance a benefit for invasion sports?
9. What will happen to my body if I keep overloading my training?

Physical Education

Volleyball



Physical Education: Rugby

1. Basic Rules

Objective of rugby

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

Rucking

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

Offside

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

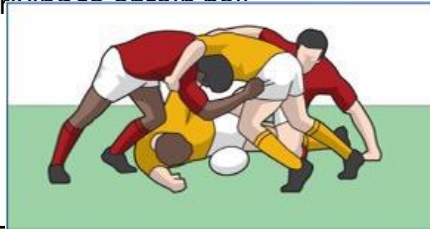
The Tackle

A tackle cannot be made above shoulder height or by tripping a player with your feet. Once a tackle is made the player must let go of the ball.

2. Rucking

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

- Place the ball on the floor
- Drive over the ball player
- Leave the ball on the ground
- Keep driving to obtain ball



3. Key Words

Knock on - noun

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

Offside - noun

An act of gaining an advantage from being too far forward.

Line-out - noun

a formation of parallel lines of opposing forwards at right angles to the touchline when the ball is thrown in.

A try-noun

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

Lateral - noun

a pass thrown either sideways or back.

4. Scrum

The scrum (scrummaging)

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

Linking skills 2v2 practice

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



5. Tackling

The Tackle

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

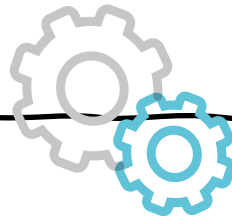
- Stay low
- Eyes on thighs
- Head behind
- Squeeze the knees
- Land on top.

There are many steps to tackling safely improve your tackling technique both in isolation and in a game.



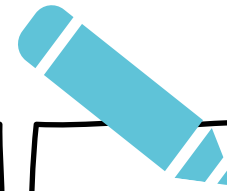
KNOW IT

1. What is the object of the game of rugby?
2. When does a knock on occur?
3. When does a lineout occur?
4. What is the objective of a ruck?
5. How can a try be scored by a player?
6. Draw a rugby pitch with the markings.



THINK IT

1. What are the rules with passing the ball?
2. Can you name all the different passing techniques?
3. Why is a lateral/basic pass important?
4. What are the teaching points of a basic/lateral pass?
5. What drill can improve your passing?
6. What are the rules with tackling?



GRASP IT

1. What are the progressions to improve tackling technique?
2. What the key points to consider when tackling front on?
3. When does a ruck occur?
4. What are the key points when rucking?
5. When does a scrum occur?
6. What are the key points during a scrum?



Physical Education: Basketball

1. Rules & Regulations

How do we Score points in the game?

A shot that goes in the basket. 3 points (from outside Three-point line). 2 points (inside Three-point line). 1 point (Free Throw).

What are Free Throws and how do we get them?

Unopposed attempts to score points by shooting from behind the Free Throw line. Generally awarded after a foul on the shooter by the opposing team ('foul in the act of shooting'). If the shooter misses the shot – 2 Free Throws (max 2 points), makes the shot – 1 Free Throw (max 3- or 4-point play)

Violations

Travelling-Taking more than 'a step and a half' without dribbling the ball. Moving the pivot foot once dribbling has stopped Double Dribble. Dribbling with both hands on the ball at the same time. Picking up the dribble and then dribbling again.

Carrying-Dribbling with a hand too far to the side or under the ball.

Backcourt-Once the offense cross the Midcourt line with the ball, they cannot go back pass the line.

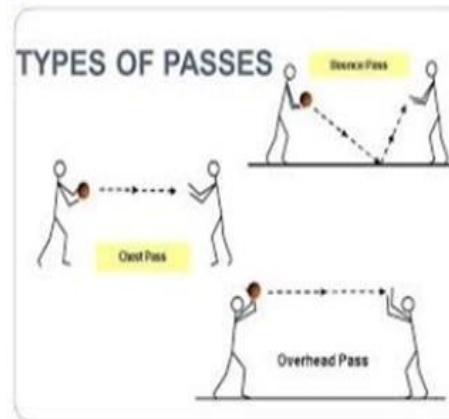
Fouls-Play stops on all fouls. Usually when a player makes illegal contact with an opponent and/or unsportsmanlike behaviour.

Personal foul - contact between two opposing players. Usually called against a defensive player but can be an offensive foul by a player in possession. (A player who commits five personal fouls over the course of a 40-minute game is fouled out of the game).

Technical foul - fouls linked to unsportsmanlike conduct or illegal gamesmanship.

Flagrant foul - violent player contact that is not a legitimate attempt to play the ball within the rules (2 leads to a player being excluded from the game).

2. Key skills



- Ball handling
- Passing
- Receiving
- Shooting using "BEEF"
- Lay ups
- Triple threat position
- Attacking the opponent
- Defending the ball
- Game play & officiating



3. Components of Fitness

Speed- move across the court quickly to move with the ball without the ball or to lose a defender

Passing- use a variety of passes to move the ball

Shooting- set shot (correct technique BEEF), Lay-ups (two-steps jump hit backboard)

Agility- change direction with and without the ball at speed

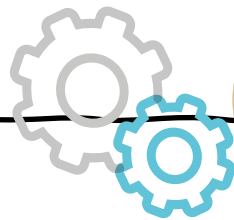
Marking- keeping close to opponents without touching them basketball is non-contact

Cardio-vascular endurance- get from one basket to the other repeatedly



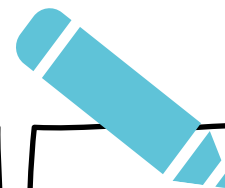
KNOW IT

1. Identify what the main lines on the court are for? Halfway line, key, free throw line, three point line.
2. How many points are awarded for a lay-up?
3. What does BEEF stand for when shooting?
4. State three different types of pass you can make.
5. What must you do whilst moving with the ball?



THINK IT

1. How long can you stand in the key for?
2. What should you see during an effective dribble?
3. How do you perform a lay-up?
4. Describe the difference between your three chosen passes.
5. What happens at each stage of a warm-up? Give examples from basketball.



GRASP IT

1. Explain why it is important to not stand in the key.
2. Explain when I should dribble and when I should pass or shoot.
3. Explain when to use a lay-up.
4. Explain how to use the set shot (BEEF) technique
5. Explain when you should perform each type of pass and why.
6. Provide 3 specific Basketball rehearsal practices.



Religious Education: The purpose of life

1. The natural world.

-The terms '**awe and wonder**' refer to all the amazing things in the natural world that make us feel like there is something more powerful behind them; it is all the things that humans think are wonderful e.g. The Northern lights, Sunsets, Vast mountain ranges etc.

-Science reveals a world filled with mystery, awe and wonder, which inspires people to investigate things and think about the purpose of life on earth. Even non-religious scientists have a sense of reverence and respect for the natural world that makes them devote their lives to its study.



4. What happens when we die?

There are lots of different beliefs about what happens when we die.

-Some religions believe in places of **reward** or **punishment** like **Heaven** and **Hell** in Christianity or **Jannah** and **Jahannam** in Islam. Whereas other religions, such as **Sikhism**, believe in **reincarnation**, which is the belief that existence is a **cycle of birth, life, death and rebirth**, and that the **soul survives physical death** and is **reborn** in a new body.



2. Creation

There are many different stories around the world about where we came from and how the world was created. A well-known creation story can be found in the biblical book of **Genesis** (in **Christianity**), where God was believed to create the world in less than a week, out of nothing!

1. **Light & Dark (Day & Night)**
2. **The Sea and the Sky**
3. **Vegetation**
4. **Sun, Moon, Stars and Seasons**
5. **Fish and Birds**
6. **Land Animals and Man**
7. **God rested**



5. Does what we do affect where we go?

Sikhs believe in **karma** or '**intentional action**'. Through good action and by living a good life and keeping God in their minds, Sikhs hope to achieve **good merit**, and hope to avoid punishment.



3. The Big Bang!

-Most astronomers believe the Universe began in a Big Bang about 14 billion years ago. At that time, the entire Universe was inside a bubble that was thousands of times smaller than a pinhead. It was hotter and denser than anything we can imagine.

-Then it suddenly exploded. The Universe that we know was born. Time, space and matter all began with the Big Bang. In a fraction of a second, the Universe grew from smaller than a single atom to bigger than a galaxy. And it kept on growing at a fantastic rate. It is still expanding today.

6. WOW WORDS

Awe: a feeling of great respect mixed with fear or wonder.

Genesis: The first book of Bible.

Ex-nihilo: Out of Nothing (Latin)

Reincarnation: The cycle of birth, life, death and rebirth.

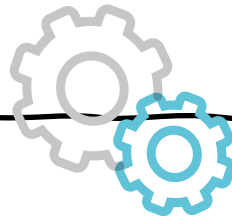
Karma: Actions, and the consequences of actions.

Merit: A beneficial influence built up through good actions (karma), capable of affecting a person's future experience in this life and the next.



**KNOW
IT**

1. What in the natural world can cause awe and wonder amongst humans, and why?
2. What do Christians believe about the creation of the World?
3. What is the Big Bang theory?
4. Can you be religious and accept the Big Bang theory?
5. What are the Muslim beliefs about Jannah and Jahannam?
6. What is the Sikh understanding of reincarnation?
7. What is Karma?

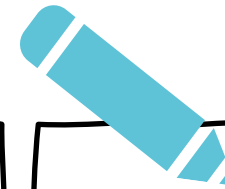


**THINK
IT**



Look at the picture above of the Northern Lights , a natural wonder of the world...

1. How does this picture make you feel?
2. What might you feel if you were to see this in real life?
3. What would this experience tell a religious person about their God and their creator?



**GRASP
IT**

In Genesis chapter one (in the Bible), you will find the first Christian creation story; where God was believed to have created the world in less than a week, out of nothing!

Creation week:

1. Light & Dark (Day & Night)
2. The Sea and the Sky
3. Vegetation
4. Sun, Moon, Stars and Seasons
5. Fish and Birds
6. Land Animals and Man
7. God rested

Draw your own story board explaining the Christian understanding, of what was created on each day.

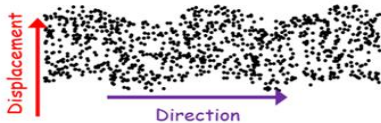


Science: Physics Waves

1.

Transverse

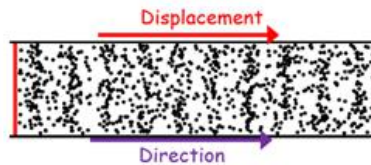
Transverse waves are where energy moves away from a source, but the particles move perpendicular (up and down) to the direction of the wave. (e.g. light)



2.

Longitudinal

Longitudinal waves are where energy moves away from the source, but the particles move parallel (left to right) to the direction of the wave. (e.g. sound)



3.

Key vocabulary

Amplitude – The maximum extent of a vibration or oscillation, and maximum displacement of matter in waves.

Frequency – The rate at which waves pass a certain point per second.

Wavelength – The distance between identical points on a wave.

Transverse – A wave in which the medium vibrates perpendicular to the direction of the wave.

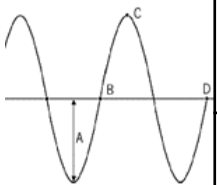
Longitudinal – A wave in which the medium vibrates parallel to the direction of the wave.

Radiation – The emission of energy as electromagnetic waves.

Black objects absorb lots of energy, whereas **shiny** objects reflect lots of radiation.

4.

Sound waves travel at 340 metres per second in air, but much quicker in solids and liquids. We can hear sound waves between 20-20,000Hz



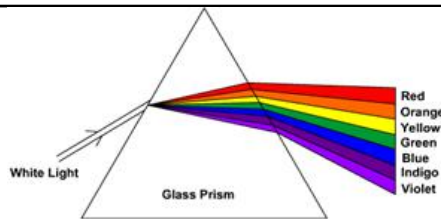
A = Amplitude. Controls the loudness of the sound.

B – D = Wavelength. Shorter wavelengths result in a high pitched sound.

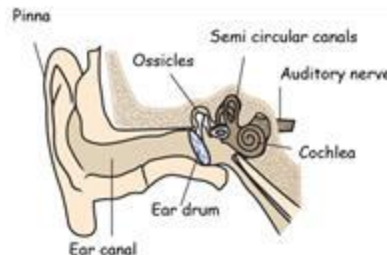
C = Peak of the wave,

5.

Refraction



The Ear





KNOW IT

Give the definition of translucent.

Give the definition of opaque.

State one difference between a transverse wave and a longitudinal wave

Give an example of a longitudinal wave

Give an example of a transverse wave.

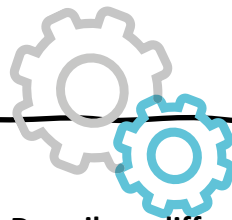
What is the speed of light?

What is the speed of sound in air?

What 7 colours make up white light?

Which objects are best at absorbing radiation?

What is the name of the nerve at the back of the eye?



THINK IT

Describe a difference between translucent and transparent.

Draw a transverse wave and label it.

Describe how amplitude can affect sound.

Give the definition of wavelength.

If sound takes 1 second to travel 340m, how long will it take to travel 1km?

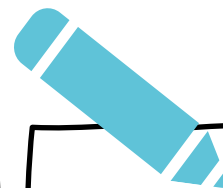
How can light travel through space but sound cannot?

Describe the function of the iris

What colour does red light and blue light make when mixed together?

Why are shiny objects best at reflecting radiation?

Describe how our eyes can see objects.



GRASP IT

Give the similarities and the differences between transverse and longitudinal waves.

Explain how our ears are used to hear sounds.

Suggest the long term effects of listening to loud music.

Suggest ways in which we can limit the damage caused by listening to loud music.

Explain how the pitch of a sound might change with frequency.

Using distance = speed x time (s), calculate the distance between the sun and earth in metres.

Suggest why sound might travel quicker in solids than in gases.

What colour does red light and cyan light make when mixed together?

Explain why people might wear light coloured clothes in the summer.

Explain why the inside of thermos flasks (used to keep drinks hot) are shiny.

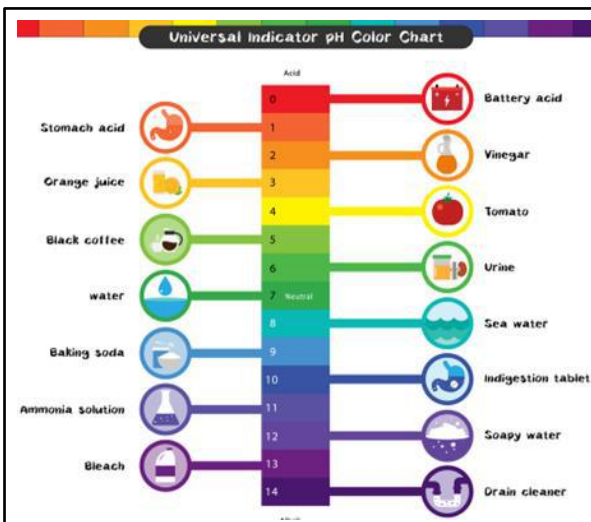


Science: Chemical reactions 2

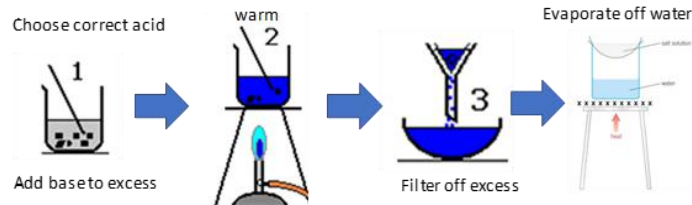
Year

8

1. Acids and alkalis



2. Making a soluble salt practical



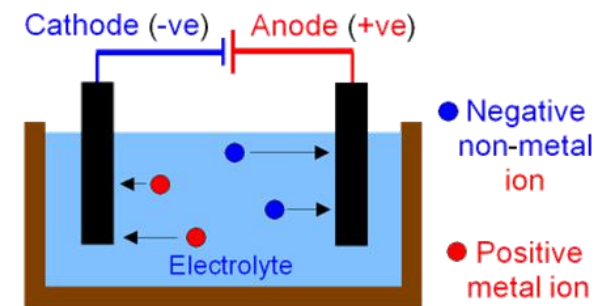
Reactions of metals

Alkali metals and water: Potassium + Water → Potassium hydroxide + Hydrogen

Metals and oxygen:

Metal + Oxygen → Metal oxide

3. Extracting metals using electrolysis



In electrolysis an electric current will cause the movement of ions. The metal ions will go to the negative electrode building up pure metal.

4. Displacement reactions

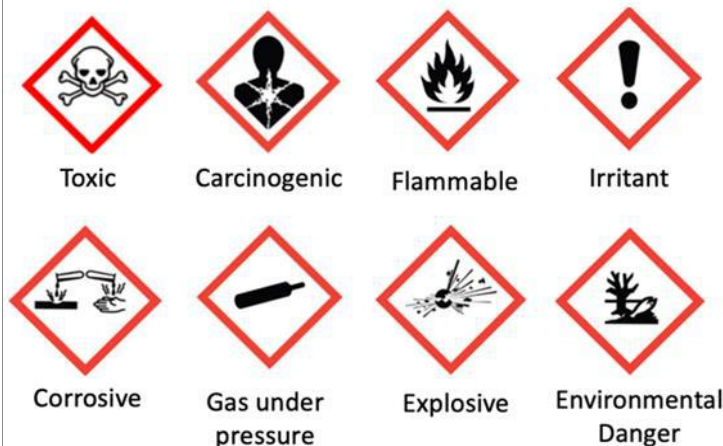


If A is more reactive than B it will take its place in the compound. We can use this to extract metals from their ores.

i.e.

Metal oxide + Carbon → Metal + Carbon Dioxide

5. Hazard symbols



6. Wow words

Displacement – A reaction where one element takes the place of another in a compound.

Electrolysis – A process of extracting very reactive metals from their ores using electricity

Reactivity – A way of describing how likely it is that a metal will react

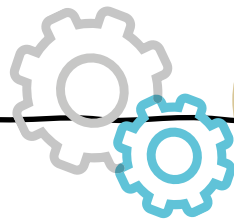
Acid – A substance with a pH below 7.

Alkali – A substance with a pH above 7



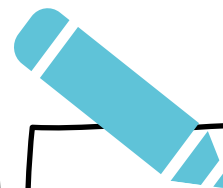
KNOW IT

1. Identify some common acids.
2. Identify some common alkalis.
3. Which hazard symbol is associated with acids?
4. Which is the most reactive metal?
5. Write a definition for the word displacement.
6. Describe what a metal ore is
7. What is an ion?
8. What must occur for a reaction to take place?
9. Define the term activation energy
10. Draw the hazard symbol for irritant



THINK IT

1. Describe what neutralisation is
2. Describe how to use an indicator to determine if a substance is acidic or alkaline
3. Which are the reactants in the equation below
Copper oxide + Sulphuric acid → Copper sulfate + water
4. Write a word equation for the reaction between sodium and water.
5. Describe when displacement can occur
6. Explain why gold doesn't form ores.
7. Describe the movement of ions in electrolysis
8. What happens to the movement of particles when you increase the temperature?
9. Explain how a catalyst speeds up a reaction
10. Describe what is meant by surface area



GRASP IT

1. Explain the properties of acids and alkalis
 2. Explain what the pH scale is
 3. Describe the steps involved in making a soluble salt.
 4. Explain how displacement can be used to extract metals with carbon.
 5. Explain how very reactive metals are extracted
 6. Write an equation for the extraction of iron from iron oxide using carbon.
 7. Explain how changing concentration can change the rate of a reaction.
 8. Explain how changing the surface area can change the rate of a reaction
 9. Describe a method you could use to measure the rate of a reaction
- Write a symbol equation for the reaction between sodium and water



Science: Nutrition

Year

8

1. Nutrients

Nutrient	Function	Source
Carbohydrates	Sugars and starch that provide energy for cells	cereals, pasta, potatoes, sweets
Proteins	Make new cells / growth and repair	meat, eggs, fish, beans, lentils
Fat	Energy store and insulation	butter, oils, nuts, margarine
Vitamins	Needed in small amounts for good health	dairy, meat, fruit, vegetables
Minerals		
Fibre	Prevent constipations – keeps food moving along	fruit, vegetables, lentils

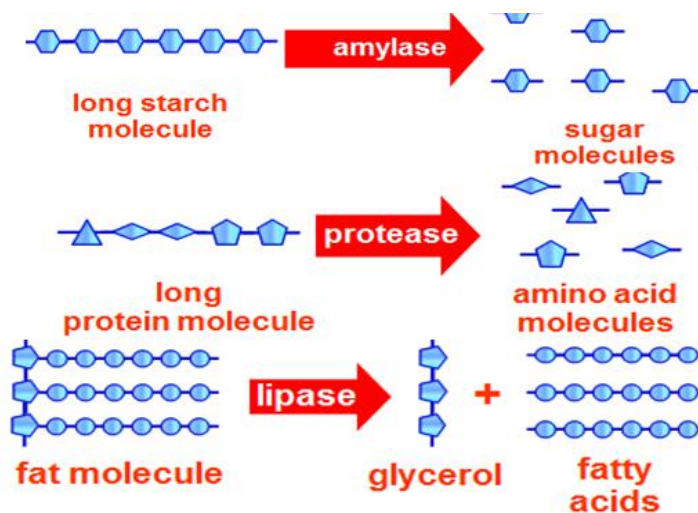
2. Energy requirements

Different people need different amounts of energy. Teenagers need more than the elderly. People in very physical jobs need more than those working at desks. Pregnant women need more than those who aren't pregnant.

3. Food tests

Starch test	Add brown iodine solution. Blue-black = contains starch.
Sugar test	Add blue benedict's solution and heat to 70°C for 15 mins. Green / yellow – a little sugar. Orange – some sugar. Brick red – lots of sugar.
Fat test	Add ethanol and a small amount of water. Shake. Cloudy colour = contains fat.
Protein test	Add blue biuret solution. Purple colour = protein.

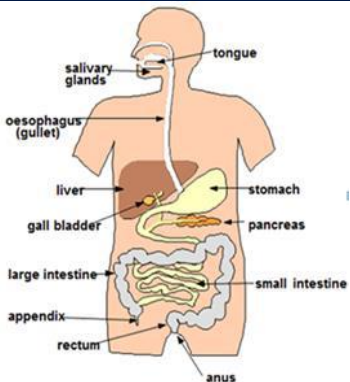
5. Enzymes



6. Wow words

Digestion - Breaking down large, insoluble molecules into smaller, soluble molecules that can be absorbed through the wall of the small intestine
Liver - Produces bile
Stomach - mixes food with acids and starts to break it down
Enzyme - A biological catalyst. They speed up the rate of chemical reactions (including the breakdown of food) in living organisms.
Bile - neutralises hydrochloric acid from the stomach and helps the breakdown of fat.
Amino acids - the building blocks of proteins
Large intestine - Water absorption occurs here
Oesophagus - joins the mouth to the stomach
Small intestine - Food is broken down and absorbed here

4. The digestive system

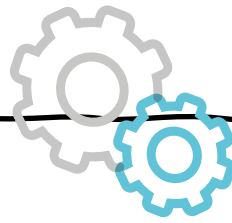


The **salivary glands** make saliva which contains amylase. The **pancreas** makes amylase, protease and lipase. Food is digested in the **small intestine** and the small molecules are absorbed into the blood.



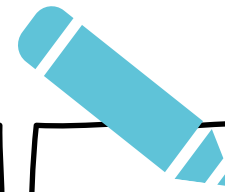
KNOW IT

1. Define a nutrient
2. Where can you find carbohydrates, lipids and proteins in food?
3. What are carbohydrates used for in the body?
4. What are proteins used for in the body?
5. What are lipids used for in the body?
6. Which part of the digestive system releases saliva?
7. Which part of the digestive system churns to digest food?
8. Where is the digestion does food absorption take place?
9. What is an enzyme?
10. What is a drug?



THINK IT

1. Explain why bacteria are important in the gut
2. Explain how enzymes work using lock and key theory.
3. Describe what amylase, protease and lipase break down.
4. Describe the food test for fats.
5. Describe the food test for starch.
6. Describe the food test for proteins.
7. Describe the food test for glucose
8. How many calories are in 1 kilocalorie?
9. Describe the function of the digestive system.
10. Compare the two main categories of drugs.



GRASP IT

1. Design a diet plan for a body builder.
2. Explain how the small intestine is adapted for food absorption.
3. Explain how enzymes can become denatured
4. Explain how iodine can be used to test for starch in leaves.
5. Using ideas about surface area, explain the role of bile in digestion
6. What is Gastroenterology?
7. Research one disease of the digestive system and explain how it affects digestion.
8. Explain why sperm might require a large store of lipids.
9. Explain the effect of temperature on enzyme activity.
10. Explain why some people may take recreational drugs.



Technology: Graphic Design

1. Graphic Design

The role of a graphic designer is to **design** the **aesthetics** (the **printed** or **drawn** elements) of a product by **combining images, words, and ideas** to **convey information** to an **audience**.

Designing a product involves **analysing existing** products, studying what is **successful** and what could be **improved** to **develop** a product which is **marketable** (able to be sold).

Designers collaboration: Designers work together to combine **expertise** and **specialisms**.

2. ACCESS FM

Aesthetics- the look and **visual appeal** of the product e.g. colour, line, texture, pattern, theme.

Cost- which materials have been chosen in order to meet the clients budget?

Client- who is the product aimed at, who is the target market?

Environment- where will the product be used? does it need to be waterproof/weatherproof?

Size- What are the dimensions of the product?

What sizes do you need to consider e.g. hand size?

Safety- How has the designer made it safe to use?

Function- What is the intended purpose of the product?

Materials- What materials is it made out of? Why were those materials chosen?

Manufacture- How was the product made? Using hand tools? CAD/CAM?

3. WOW Words

ACCESS FM = the acronym used in DT to analyse and evaluate products to ensure we have looked at all the aspects of a product.

GSM = grams per square meter, this is the units used to measure paper in.

Source/origin = where a material comes from.

Scored = An indented scratch to allow paper or card to fold with ease.

Crimped = Compressing a material into small folds.

Embossed = To stamp a pattern onto a surface so that it stands out.

Perforate = Pressing small holes into a material.

Prototype = The first working model of a design used for testing, development and evaluation.

4. Paper

The source of **paper** and **board** is **trees**. There are lots of different kinds of **paper** – **each designed for a particular use**. Paper is measured in **gsm** (grams per square meter).

Grid paper can have square or isometric pattern printed on it.



Tracing paper is semi-transparent and is used to copy images.



5. Board

Paper becomes classified as a **board** when it is above **200gsm**. Board is often used in packaging because of its **low cost** and **high strength-to-weight ratio**.

Corrugated cardboard is made up of fluted inner core (crimped) sandwiched between two outer layers which can be printed on.

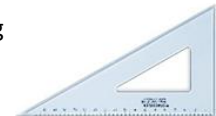


Folding boxboard is a board which has a good printing surface, can be scored, bent and creased easily.



6. Equipment

Set square - For drawing lines at 30/60/90 degrees.

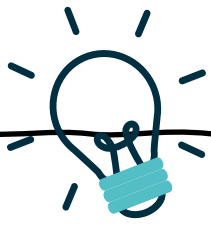


Craft knife - For cutting and scoring paper and card.



Steel rule – For cutting straight lines and measuring





KNOW IT

ACCESS FM is used to help up to analyse products. (Aesthetics, cost, client, environment, size, safety, function, materials, manufacture).

How to describe a game:

What is it made from?

Who is it for?

When would it be used?

Where is it used?

How much does it cost?

How has it been made?

What sort, type or category of product is it?

What other products are like this?

Comprehensive – Critical analysis of a game:

Do I like it? If so, why/why not?

Is it fun to play?

Are the graphics attractive to the target market?

Is it the right size, shape, pattern, colour?

Is it strong and sturdy?

Is it safe to use?

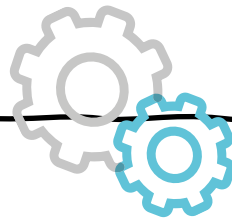
Is it value for money?

What does it cost in relation to the income of the potential users?

Demonstrate how the product is used:

Explain why this game was developed.

Explain the purpose of different features of the game.



THINK IT

How to interpret games that are new:

What is my reaction to this game?

Who might the user or owner be?

Why might they want to buy it?

Is it designed well, if so, why/why not?

Is it easy to play/ understand?

What materials and processes were used?

Does it look and feel good?

How well is it made?

Is it well finished(laminated, embossed)?

Is the cost appropriate?

How much will this product change

people's lives?

How is it promoted and packaged?

What happens at the end of its product

life? (recycled, landfill, can it be repaired/ reused)

Analysis – breaking down into parts, forms:

What is the function of this game?

Who is it for (target market)?

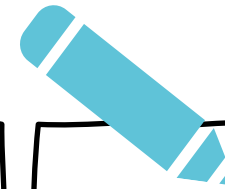
What assumptions have been made about

the people who might use it?

Whose needs or wants were possibly considered during designing and making this product?

What are the motives of the people who designed and made it?

What make this product distinct from others of its type?



GRASP IT

Synthesis – combining elements into a pattern:

Would I want to own or use it?

What would this reveal about me?

What influenced the appearance and the way it works?

How might the design have been developed?

How would you test this to see..?

Could you propose an alternative solution to the game or part of the game to improve it?

How else could you make the game?

List important features about the game?

How is this product different from one from five years ago, or another culture?

How will this product be different in ten years' time?

Evaluation – according to criteria and state:

What effect will this product have on people's lives and relationships?

What is wrong with the product?

Why is this product not a popular as other similar games?

What difficulties do users find with this product?

What difficulties would manufactures have making this product?

Why have these materials been chosen?



Mathematics

Hegarty Maths Home Support Guide

Homework Guidance

One task is set per class using www.hegartymaths.com

The homework task is always set at the start of the week and due in at the start of the following week.

Student expectations:

- Watch the video for the set task
 - Make clear notes from the video
 - Complete the task, aiming for 80% as a minimum
 - If a student is struggling with the task, use the building blocks to aid prior learning
 - When completing the quiz, use the video given for the task.
- Find the part of the video that answers a similar question and use this to help by following the methods used.

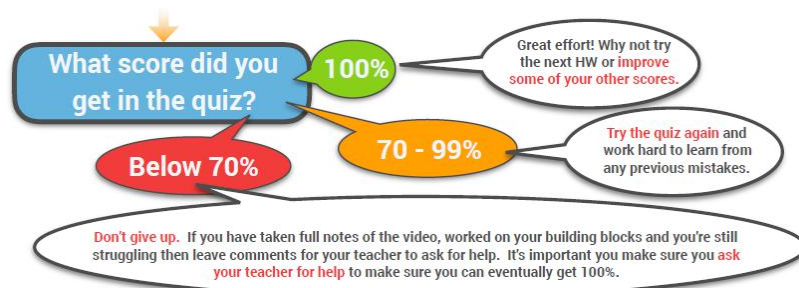
Learning maths is like learning anything. You need to practise and always put in effort. Trying your best and always putting in effort is crucial to the process. HegartyMaths is totally committed to helping students improve at maths.

I was in the bottom set in maths in my school. I started doing lots of HegartyMaths and got better at maths. My teacher saw my progress in HegartyMaths and combined with my end of term assessment I was moved up two sets!

Happy Student @ Heston Community School

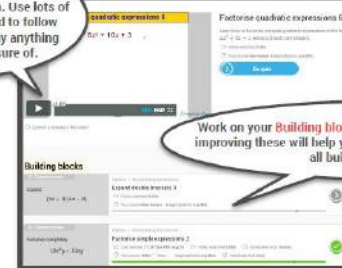
HegartyMaths is a amazing place to learn new things it shown me the best videos on how to work out the hardest questions

Happy Student @ Harris Academy Morden



Doing a task

Watch the video carefully taking the best notes you can. Use lots of colour and work hard to follow each example. Replay anything you might be unsure of.



Work on your **Building blocks**. If you struggle with the video then improving these will help you access the task better. Aim to make all building blocks 100%.

Did you understand the video?

No

Yes

Do quiz

Please refer to your student Planner for additional Maths resources.