Potential Into Reality

Year 7 Knowledge Organisers

SPRING TERM 2024

Ofsted Good Provider

Name:

Tutor Group: 7

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

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

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

ACCESSIBLE PRECISE INFORMATIVE

Year 7
Knowledge Organisers
Contents

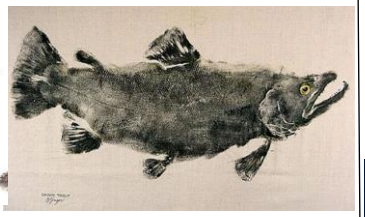
Year 7 Subjects

Art & Design: Sea Creatures

Year 7

1. Traditional Printmaking

Gyotaku is the traditional Japanese method of printing fish, a practice which dating back to the mid-1800s. This form of nature printing was used by fishermen to record their catches but has also become an art form of its own. The gyotaku method of printmaking uses fish, sea creatures, or similar subjects as its 'printing plates'. Prints were made using sumi ink and washi paper. Gyotaku, as a recording method for fishermen, is still used today, and can be seen hanging in fishing tackle shops in Japan as a way of settling competitions in fishing.



2. J Vincent Scarpace. Research.

Here are four important facts about the Artist Vincent Scarpace.

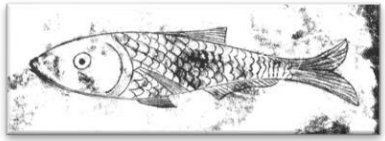
- Scarpace mainly creates colourful paintings of fish
- This artist creates 2D whimsical and abstract paintings
- Scarpace's paintings are created using line, shape and colour
- J Vincent Scarpace is a passionate artist who is a

3. WOW WORDS

Printing is the transfer of ink/or another medium from an object or plate to paper.

Gyotaku
Monoprint
Monotype
Texture
Ink
Line
Colour
Shape

Y7 Printing



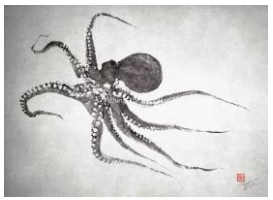
4. KEY CONTENT/DRAWING

Drawing is a way of recording our ideas.

Line	Mark making	Outlines
Tone	Hue	Observation
Texture	Composition	Proportion
Colour	Pressure	Detail

5. KEY CONTENT/EXPLORING

Gyotaku – Japanese Art



Scarpace - Artist

Katy Hoffman - Artist

Exploring ideas and collecting information in different ways to inform your own work.

Internet search, Videos, Tutorials, Reference material, Books, magazines, Galleries, Virtual Tours, Power points

6. KEY CONTENT/ ANNOTATION

Annotation

- Annotate your work to <u>describe the processes</u> used. (i.e. the printmaking process)
- Label different <u>media</u> in your sketch book.
- Annotate with <u>headings and Learning questions</u>
- Information about <u>artists, designers & cultures</u>
- Written <u>analysis</u> (i.e analyzing the work of Artisits<u>)</u>

Art & Design

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.

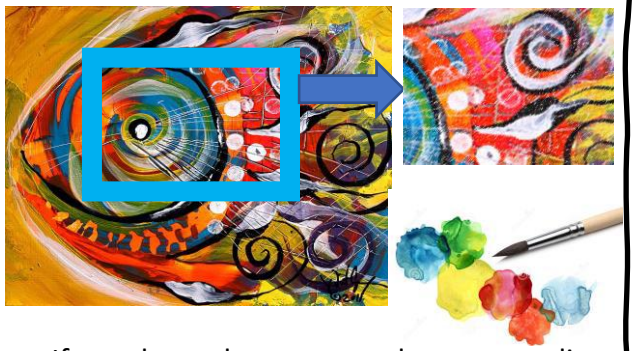
THINK IT

- What is 2D artwork?
- What is Primary Observation?
- What is Secondary Observation?
- How has annotation been considered in the drawing of the fish below? Do you think research has played a large part in the success of this design? Explain your answer.
- What does the style of fish printing in Japanese Culture represent?
- What imagery is used within Gyotaku, List three.
- What does the word “Gyotaku” mean?
- What inspires J. Vincent Scarpace in his work?
- How can exploring ideas and collecting information inspire your own work?
- Name the type of paper used in Gyotaku (Japanese printmaking from fish)
- Think of the colour wheel. Write down the three complimentary pairs

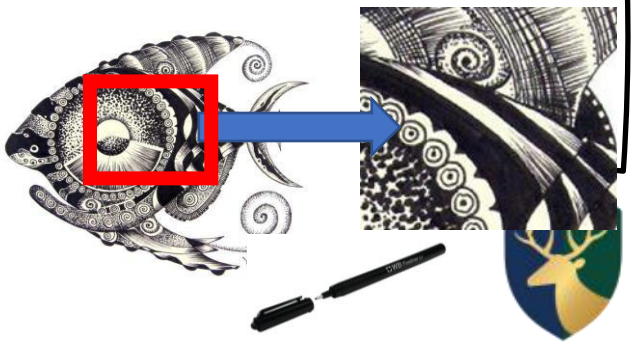
Design inspired by
J Vincent Scarpace

GRASP IT

- If you have watercolours or acrylic paints at home and using your knowledge of the formal elements listed on the left, complete a copy of the work of J Vincent Scarpace from the image below or another similar one.



- If you do not have watercolours or acrylic paints at home produce a copy of a section of one of Vincent Scarpace’s fish drawings using fine liner on paper from the image below or another similar one.



Year 7

Drama: Introduction to Drama

1. What do we do in Drama?

- When we talk about Drama, we focus on three main elements in our lessons.
- There is the Rehearsal process, where we create, devise and improve practical work.
- There is the Performance, where we perform our work to others, carefully considering impact on audiences.
- There is then reflection and analysis, where we discuss and evaluate our work and the work of others.

2. What do we need to know in our first terms?

- We need to know that POSTURE is the way you hold and use your body and that it can most easily show WHO we are.
- We need to know that GESTURE is a movement that does not take us anywhere. It can be with any of your limbs, and most easily shows WHAT we are doing.
- We need to know that FACIAL EXPRESSION is how we move our heads and face. It can most easily show our EMOTIONS.
- We need to know that MOVEMENT and VOICE are pretty obvious... But that they can show EMOTION, SITUATION or CHARACTER.
- Physical Theatre is where we use our body and the bodies of others to create items, animals, objects or ideas!

3. WOW WORDS

POSTURE
GESTURE
FACIAL EXPRESSION
MOVEMENT
VOICE
STILL IMAGE
SCULPTING
THOUGHT TRACKING
MIMING
REHEARSAL
PERFORMANCE
AUDIENCE
STAGE
POSITIONING
PHYSICAL THEATRE

4. Key rules

- Beyond the normal rules for the classroom, there are some simple rules worth considering for Drama.
- 1) Performing is hard, being in the audience is easy, do your best to support performers
- 2) Failure is a really important step for any performer, embrace it!

5. How we use REHEARSAL strategies

- Rehearsal strategies are like a coaching session in a sport. They are used to focus our attention on the elements of a performance that need improving, without the unnecessary distractions of other parts of a performance.
- Example: If someone is struggling with finding the right voice for their character, we might use the rehearsal strategy MIME to check their POSTURE, FACIAL EXPRESSION, MOVEMENT & GESTURES are correct first.

6. Rehearsal Strategy list

These are what we can use in Y7 and what they can help actors assess and improve!
Still Image – Posture, Gesture, FE, Positioning
Sculpting – Posture, Gesture, FE
Mirroring – Posture, Gesture, FE, Positioning
Thought Track – Character Understanding
Hot Seating – Character Understanding
Clowning – Larger, exaggerated character
Mime – Posture, Gesture, FE
Talking Heads – FE, Voice
Jibberish – Voice, Gesture, Facial Expression
(*FE – Facial Expression!)

KNOW IT

- Do I know what Physical Theatre is?
- Do I know how to use Physical Theatre in performance?

THINK IT

- We need to know that POSTURE is the way you hold and use your body and that it can most easily show WHO (or what) we are.
- We need to know that GESTURE is a movement that does not take us anywhere. It can be with any of your limbs, and most easily shows WHAT we are doing (or what we are.)
- We need to know that FACIAL EXPRESSION is how we move our heads and face. It can most easily show our EMOTIONS.
- We need to know that Physical theatre can involve movement, facial expression and voice, but that it can be non-naturalistic when combined with being an object or idea.

GRASP IT

Challenge:

Make a list of interesting objects that you might see in a day. See if you can do any of these!

Easy: Use your POSTURE to change your body to look like those items

Medium: Try to think creatively, if this item had a facial expression, how would it look? Try to recreate its emotions in a mirror

Hard: A wardrobe might not be able to walk, but if it could it would take big, heavy, low footsteps that were very stiff, try to move like different items would if they came to life.

Drama

Introduction to Drama

English: A Midsummer Night's Dream

Year 7

1. Character List

Theseus: Duke of Athens. A strong, strict ruler of the city.
Hippolyta: Theseus's bride. She was a fearless warrior.
Egeus: Hermia's stubborn father who wants her to marry Demetrius or be put to death.
Hermia: Egeus's daughter who is in love with Lysander.
Lysander: Loves Hermia. Runs away to the forest with her.
Demetrius: Wants to marry Hermia and is disgusted by Helena's love for him.
Helena: Hermia's friend - desperately loves Demetrius.
Oberon: King of the fairies who controls the love potion.
Titania: Fierce queen of the fairies who falls in love with Bottom when the love potion is put on her.
Bottom: A weaver and actor who has his head turned into a donkey. Titania falls in love with him when she is under the love potion's influence.
Puck: Oberon's mischievous servant who puts the potion on people's eyes.

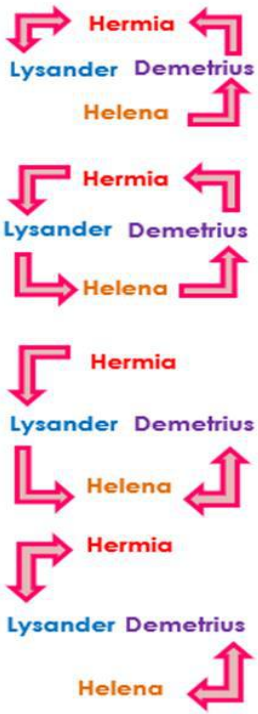
2. Key Words

Characterisation
Theme
Perspective
Genre
Comedy
Context
Soliloquy
Severe
Conflict
Unrequited
Love
Mock
Chaos
Resolve

3. Plot Summary

<u>Act 1:</u> **Hermia** and **Lysander** love each other but are not allowed to marry so decide to run away to the forest to get married in secret. **Demetrius** wants to marry **Hermia**. **Helena** loves **Demetrius**. They follow **Hermia** and **Lysander** into the forest.
<u>Act 2:</u> In the forest, Oberon and Titania are arguing. Oberon sees **Demetrius** and **Helena** arguing and commands Puck to use the potion on the Athenian man to make him fall in love with **Helena**. However, the first Athenian man Puck sees is **Lysander**, so he puts the love potion on him. **Lysander** falls madly in love with **Helena**.
<u>Act 3:</u> Puck sees Bottom in the forest and transformed his head into a donkey's head. He puts the love potion on Titania, who falls in love with Bottom. Puck puts the love potion on **Demetrius** so that he falls in love with **Helena**. As a result, both men love **Helena** so there is chaos. Puck eventually drops a herb in **Lysander's** eyes to put him back to normal.
<u>Acts 4 and 5:</u> Oberon finds Titania and Bottom and decides that he has had enough fun. Puck drops a herb in her eyes, she wakes and leaves with Oberon. The lovers return to Athens where Bottom and the other actors perform their play at the wedding of the three happy couples: Theseus and Hippolyta, **Lysander** and **Hermia** and **Demetrius** and **Helena.**

4. Who Loves Whom



The love potion is made from a flower in the forest. The flower is magical because Cupid hit it with his arrow when he was aiming at a young girl. When the potion is put on characters' eyes, they fall in love with the first person they see. It is very powerful.

5. Social & Historical Context

- Shakespeare went to a grammar school where he was taught Ancient Greek.
- The play is set in Ancient Greece and follows the rules of a comedy from Ancient Greece.
- When the play was written, Elizabeth 1st was Queen. She decided not to get married which many people disagreed with.
- Many Elizabethans believed in and feared magic.
- Cupid is the ancient god of love usually presented as a baby whose arrows make people fall in love.

6. Themes

Love
Supernatural
Dreams
Jealousy
Mischief
Transformation
Appearance/Reality
Reversal
Conflict

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 relationship between Oberon and Titania?
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 Hermia and Lysander?
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 the concept of Cupid link to the text?
5.Why might a modern day audience or contemporary reader criticise the author's intended message?

English

A Midsummer Night's Dream

Food: Healthy Eating

Year 7

1. The Eatwell Guide

The Eatwell Guide is a visual representation of how different foods and drinks can contribute towards a healthy balanced diet.

The Eatwell Guide applies to most people regardless of weight, dietary restrictions/preferences or ethnic origin. However, it doesn't apply to children under 2.

2. The Eatwell guide explained

Section	Sources	Benefits
Vitamins and minerals	Fruit & Vegetables	Builds your immune system, keeps your blood healthy and helps with your digestive system.
Carbohydrates	Pasta, Potatoes, Rice, bread	Provides you with energy Keeps you fuller for longer
Protein	Fish, Meat, bean, lentils, nuts, eggs	Needed for growth and repair
Dairy & alternatives	Milk, yogurt, soya dairy	Provides calcium, needed for strong teeth and bones Helps the body to heal
Fats	Olive oil, Margarine	Helps to protect vital organs, keep us insulated, builds healthy cells and membranes, move vitamins around the body.

3. Food Hygiene Rules

1. Wash your hands regularly.
2. Tie long hair back.
3. Wear a clean apron.
4. Cover cuts with a blue plaster.
5. Clean all equipment and surfaces properly.

4. Food Storage

1. Always store raw meat at the bottom of a fridge.
2. You can die from food poisoning-always follow the 4C's.
3. Food can only be hot held for 2 hours.

5. 4 C's

Food safety and hygiene are important when preparing food-you need to follow the following rules. You could cause someone to be ill this is known as food poisoning.

1. Cook foods properly to prevent food poisoning.
2. Chilled foods-some foods need to be chilled example milk, cheese, cheesecake.
3. Clean-wash your hands, clean work surfaces, equipment.
4. Cross-contamination-keep raw meat and cooked meat separate, use a red chopping board.

KNOW IT

1. You can follow basic food hygiene practices.
2. Define what the Eatwell Guide is.
3. You can name the 5 segments of the Eatwell Guide.
4. You can select basic equipment for a practical lesson.
5. What are the 5 nutrients linked to the Eatwell Guide?
6. What does the 4 C's mean?
7. What causes food poisoning?

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

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 spellings associated with the colours to the colours on the Eatwell Guide. Can you use these words in your own explanations?

Carbohydrates
Protein
Fats
Vitamins
Minerals

Food

Healthy Eating

Geography: Unequal World

Year 7

1. Development

Development is looked at across the world and is used to compare countries against each other. A country can be measured on their **standard of living** (this is factors such as education and employment) and **quality of life** (this is factors such as happiness and human rights).

SUSTAINABLE DEVELOPMENT GOALS

2. Causes of uneven development

Natural hazards - some countries have not been able to develop because of regular natural hazards. E.g volcanoes or earthquakes.

Physical Geography - countries natural land and location can reduce access for trade.
E.g landlocked countries.

Climate – the weather in an area can determine how well a country can grow food to support its population.

History – countries that were colonised had resources taken away from them, so they started developing from further behind other countries.

3. The Development Gap

The widening differences in development indicators (That we have previously looked at) is known as the development gap.
Development gaps can exist across different countries and within individual countries.

4. Measuring Development

Literacy rate = the % of people in a country who can read &write.

GNI per capita – Gross National I ncome is all the money a country earns in a year per person.

Birth Rate – the number of births per 1000 per year.

5. WOW Words

Social = anything that impacts/measures people
Economic = anything that impacts/measure money or jobs
Environmental = anything that impacts/measures the land, animals or atmosphere

HIC = High income countries
NEE = Newley emerging economies (middle wealth).
LIC = Low income countries

6. Consequences of uneven development

People who live in LIC's might not have good quality housing and sewage systems which can cause diseases like cholera to spread. They also don't have good healthcare so when they get ill, they can't get treatment.

Countries who aren't as developed have lower GDP's and GNI's both as a whole country and for individuals. They are less able to trade, have weaker economies therefore less jobs.

Uneven development causes people to want to migrate (move from one country to another) for a better life.

KNOW IT

1.Define standard of living
2.Define quality of life
3.State 2 ways we can measure development
4.Is literacy rate an example of a social or economic measure?
5.What 3 factors does the HDI measure?
6.Why does climate impact on development?
7.How do earthquakes and volcanoes link to development?
8.What is the geographical name for a rich and poor country?
9.What is the development gap?
10.What does migration mean?

THINK IT

•What progress to achieving this has been made?

•Which countries have directly benefitted through development from this goal?

•Which countries are helping others to develop through this goal?

•Have there been any challenges to achieving this goal?

GRASP IT

1. What are the consequences of the development gap (uneven development).

2. If you could only keep half of the goals which ones would you chose and why?

3. How often should the goals be reviewed by the United Nations? How often are they monitored?

4. Explain how do we know when countries have achieved their goal(s).

5. Do you think HIC's should be made to help LIC's and NEE's to develop to close the global development gap?

Geography

Unequal World

History: Medieval Life

Year 7

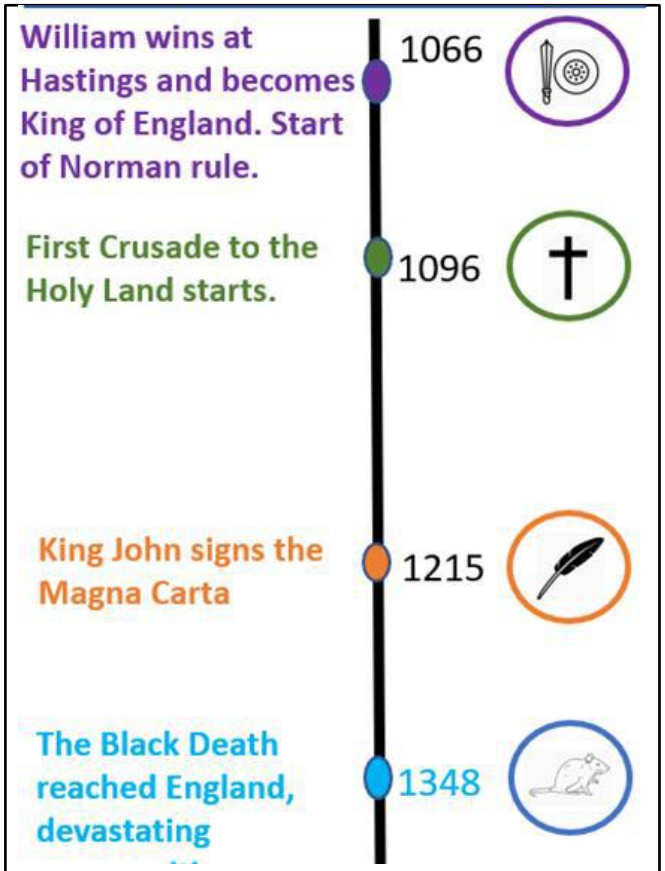
1. Living in Medieval Times

Most people who lived during the medieval period lived in small villages.
There were very few large towns and cities during this time. The largest settlement in England during the medieval times was London.
Medieval towns and villages were not great places to live. The houses were built out of wooden frames and the spaces were filled with wattle and daub.

2. What role did the Church have in life?

At this time, many people living in England took the Christian religion very seriously. There was usually a church in every village and many people had to pay a tithe to the church. This was a tax of ten per cent.
Due to Christians and Muslims arguing over the Holy Land, the Pope encouraged people to join a Crusade to fight in the Holy Land. The Holy Land was important to both religions and both wanted to be able to control it.
Many people were worried about what would happen in the afterlife. It was believed that if you had a perfect life, you would go to heaven. If you led an ordinary life, you would go to a place called Purgatory (like a waiting room before you enter heaven).

3. Key Events



4. WOW Words

Apothecary: A medieval person who makes and sells remedies.
Indulgencies: Money people paid to the Church in order to cut down the amount of time spent in Purgatory.
Magna Carta: The first document which put into writing in 1215 that the monarch and the government were not above the law.

5. Illness in Medieval Times

Theory of the Four Humours – If you were healthy, it was believed that the four humours of blood, black bile, yellow bile and phlegm were equal in the body. If you were unhealthy, you were said to have had too much of one humour in your body.
Burning Tar – Many people at this time believed in the idea of miasma. It was thought that bad smells caused disease and illness. In order to make towns and villages smell better, tar was burnt.

KNOW IT

1.Where did the majority of people live in medieval times?

2.Why were towns and cities not great places to live?

3.Describe the key features of a medieval house.

4.What did a Barber Surgeon do?

5.Describe the Theory of the Four Humours.

6.What was ‘Miasma’?

7.What were the Crusades?

8.In what year was the Magna Carta signed?

THINK IT

1.What does the above image show you?

2.What does this image tell you about what King John thought about the Magna Carta?

3.Who do you think was the happiest when Magna Carta was signed? King John or the barons? Explain your answer.

GRASP IT

Create an advert for a new barber surgeon who has recently opened in the local area explaining to people what treatments were offered. You should include:

-A brief outline of the training the barber surgeon would have had

-How the treatments offered might make you better

-Why your surgery is better than other rivals in the area

History

Medieval Life

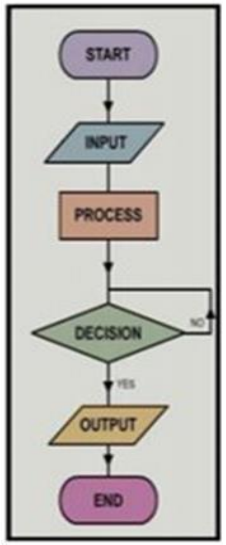
IT - Programming

Year 7

A: Flowcharts

Rules for creating flowcharts:

1. ARROWS must be used to show the flow.
2. Each stage MUST lead to another.
3. ONLY decision symbols can have more than one arrow leading from them.



D: Arithmetic Operators

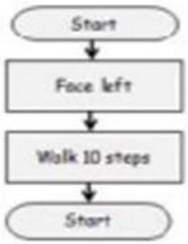
+	Addition
-	Subtraction
/	Division
*	Multiplication
#	Add comments to your code, they will not be part of the program run

: Python Translator

print('hello')	Print values on the screen(in this case 'hello)
Input('')	Inputs a value into the computer
x=input(''))	Inputs a value and stores it into the variable x
x=int(input(''))	Inputs a value into x, but converts it into a string first
print(str(x))	Prints the variable x but converts it to a string first
if name= "Fred"	Decides whether the variable 'name' has a value which is equal to 'Fred'
else	The other option in the conditions for an if statement are not met (e.g. name='Bob' when it should be Fred

Sequence

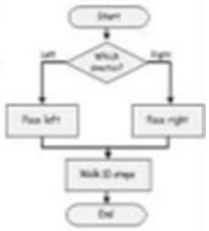
Instructions placed one after another.



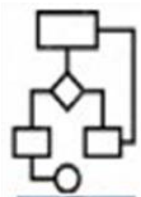
Selection

A choice or decision in an algorithm.

Gives different paths that could be followed.



C: Keywords



Algorithm: A step by step of instructions to carry out a task.

Flowchart: A visual representation of an algorithm, using key symbols.

Terminator: The start and end point of a flowchart.

Process: An action, calculation or data that is saved.

Input: data that is put into a computer.

Output: Data that is produced by a computer.

that can be re-used.

Variable: Allows us to save data that changes.

Selection: Decisions; the process of taking different paths within an algorithm.

Sequence: A set of instructions in order.

KNOW IT

- What a flowchart looks like
- What Python is used for
- What selection and sequence means within computer programming
- What Arithmetic Operators are

THINK IT

- Explain what a flowchart shows
- Explain a basic Pythion command
- Explain the meaning of Selection and Sequencing with Python
- Identify all of the different Arithmetic operators used within Python

GRASP IT

- Explain the different processes involved in a flowchart
- Construct a sequence of commands within Python
- Evaluate the difference between sequences and selection
- Apply different Arithmetic operators in Python

Information Technology

Programming

Modern Foreign Languages: En France

Year 7

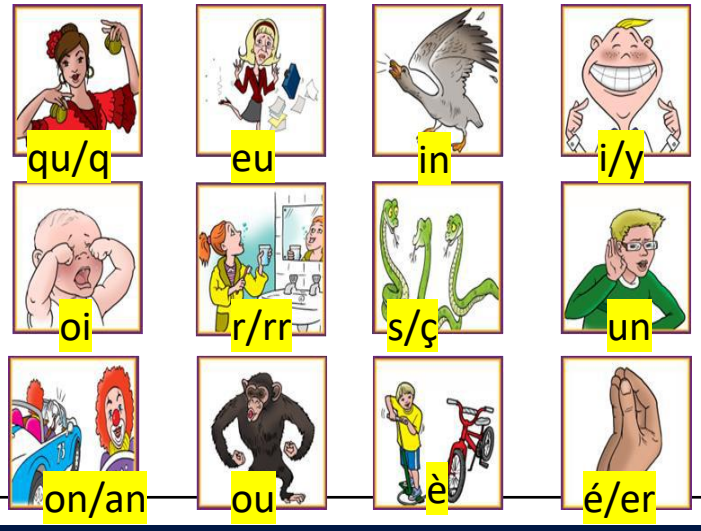
1. 2nd verb = infinitive

On peut **faire**
On peut **visiter**
1 **2**

Qu'est-ce qu'on peut faire à Boulogne?
What can you do in Boulogne?

A Boulogne on peut faire des sports nautiques et visiter le port maritime.
In Boulogne you can do water sports and visit the fishing port.

2. Key Phonics



3. Star words

mortel (deadly boring)
ennuyeux (boring)
fatigant (tiring)
difficile (difficult)
barbant (boring)
Ce n'est pas mon truc (it is not my thing)
relaxant (relaxing)
intéressant (interesting)
divertissant (entertaining)
mon truc (my thing)
rigolo (fun)
facile (easy)
C'est mon truc (it's my thing)

4. Au restaurant

Vous désirez?	What would you like?
Comme entrée?	For a starter?
Comme plat principal?	For main course?
Comme dessert?	For dessert?
Je voudrais	I would like
Je prends	I'll have
Je vais prendre	I'm going to have
J'ai besoin de	I need
Je n'ai pas de	I don't have
C'est combien?	How much is it?

5. Asking Questions

Comment t'appelles-tu?
* Je m'appelle Antoine Dupont.
Quelle est la date de ton anniversaire?
* Mon anniversaire c'est le quinze novembre.
D'accord. Pourquoi es-tu en France?
*Je vais visiter Boulogne sur Mer et faire du tourisme.
Tu es avec ta famille?
*Non, je ne suis pas avec ma famille.
Très bien! Tu as des animaux?
*Oui, j'ai deux chats et un lézard.

6. Mon temps libre

J'aime	tchatt**er** sur snapchat
I like	fai**re** des tiktoks
J'adore	jou**er** du piano
I love	jou**er** de la guitare
Je préfère	jou**er** au foot
I prefer	écout**er** de la musique
Je n'aime pas	regard**er** la télé
I don't like	fai**re** de l'équitation
Je déteste	fai**re** de la natation
I hate	

KNOW IT

1. Translate:
Pourquoi es-tu en France?
Je vais faire du tourisme à Boulogne.
2. Translate:
Qu'est-ce que tu aimes faire pendant ton temps libre?
Pendant mon temps libre, j'adore faire du cyclisme car c'est passionnant.
3. Translate:
Tu veux aller au zoo?
Non je préférerais aller à la plage parce que c'est plus amusant.
4. Translate:
Qu'est-ce qu'on peut faire à Boulogne?
A Boulogne on peut faire des sports nautiques et visiter le port maritime.
5. Translate:
Où peut-on acheter de la crème solaire?
Il faut aller au supermarché ou à la pharmacie.
6. Translate:
Vous désirez?
Je vais prendre un steak-frites.

THINK IT

1. Adapt the answer in 1 to write:
I am going to visit my friend in Paris.
2. Adapt the answer in sentence 2 to write:
In my free time I like to go horse riding because it is entertaining.
3. Adapt the answer in sentence 3 to write:
No, I would prefer to relax on the beach.
4. Adapt the answer in sentence 4 to write:
In Boulogne you can visit the old town and buy souvenirs.
5. Adapt the question and answer in sentence 5 to write:
Where can you buy a postcard?
You have to go to the souvenir shop.
6. Adapt the answer in sentence 6 to write:
I am going to have some snails.

GRASP IT

1. Use the structures in sentence 1 to write a sentence about what you are going to do in Boulogne. Boulogne.
2. Use the structures in sentence 2 to write a sentence about what you do in your free time.
3. Use the structures in sentence 3 to write what you would prefer to do.
4. Use the structures in sentence 4 to give an alternative answer about what you can do in Boulogne.
5. Use the structures in sentence 5 to create your own dialogue.
6. Use the structures in sentence 6 to develop your own dialogue in a restaurant or café

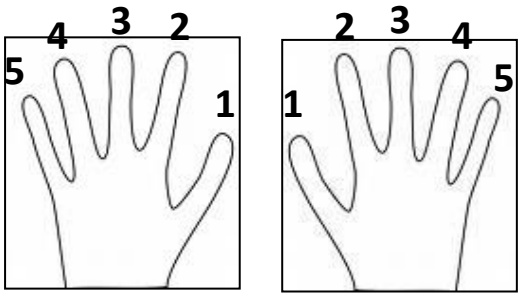
Modern Foreign Languages

En France

Music: Keyboard Skills: A minor Riff

Year 7

1. FINGER POSITIONS FOR C MAJOR SCALE



LEFT HAND

5-4-3-2-1 3-2-1

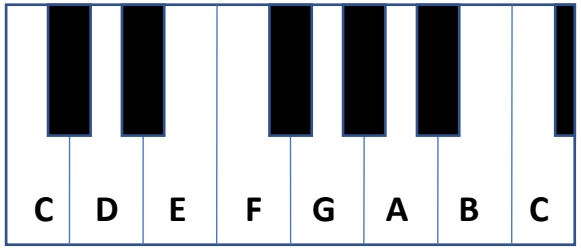
RIGHT HAND

1-2-3 1-2-3-4-5

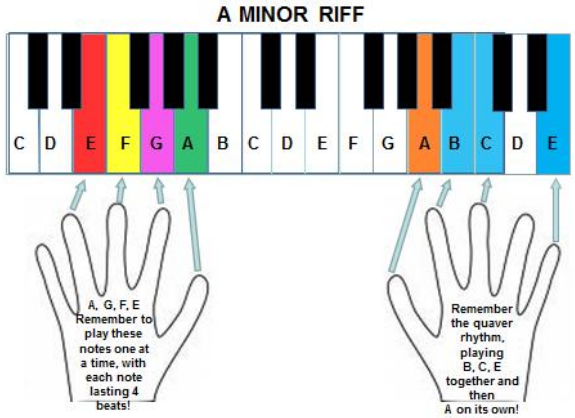
2. KEYWORD DEFINITIONS 1

RIFF: a short, repeating pattern
VARIATION: The music is repeated but slightly changed.
COUNTERMELODY: A second melody heard at the same time as the original melody.

3. KEYBOARD LETTERS



4. A MINOR RIFF

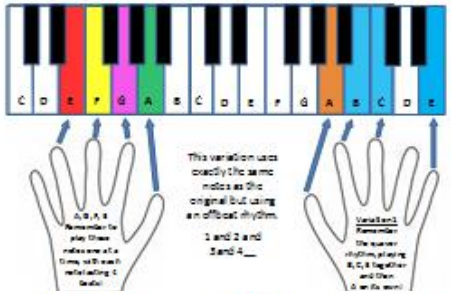


5. KEYWORD DEFINITIONS 2

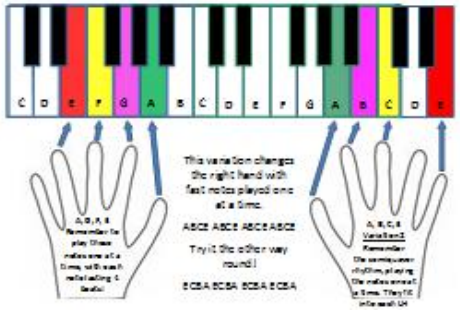
KEYWORDS	DEFINITIONS
PITCH	How high or low the note is
TEMPO	Speed
DYNAMICS	Volume
STRUCTURE	How the music is organised
MAJOR	Sounds happy
MINOR	Sounds sad
BLOCK PATTERN	Notes of a chord are played at the same time
BROKEN PATTERN	Notes of a chord are played separately

6.A MINOR RIFF VARIATIONS

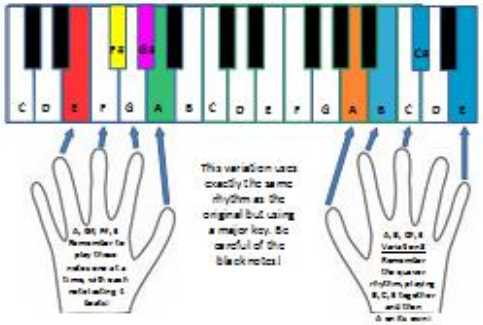
A MINOR RIFF – VARIATION 1 – SYNCOPATED



A MINOR RIFF – VARIATION 2 – DECORATED

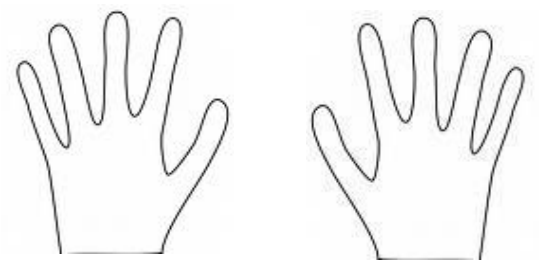


A MINOR RIFF – VARIATION 3 – MAJOR



KNOW IT

1. Where do you find a letter C on the keyboard?
2. Identify the notes (letter names) in a C major scale?
3. Label the fingers with the correct numbers.



4. Define riff.
5. How do you find a letter A on the keyboard?
6. What notes (letter names) does the right hand part of the A minor riff use?
7. On what letter should you start the left hand part of the A minor riff?
8. Define variation.
9. Can you explain the difference between major and minor?
10. What black notes does the major variation use that the original riff does not?

THINK IT

1. What are the finger positions for a C major scale?

RIGHT HAND:

LEFT HAND:

2. Can you explain the difference between a block and a broken pattern?

3. Variation 1 uses a syncopated rhythm. Can you explain what this means?

4. Variation 2 uses a broken pattern in the right hand. Can you explain what this means?

5. Variation 3 uses a major tonality. Can you explain what tonality means?

GRASP IT

1. Listen to the following extract and identify the instrument playing.

[Mozart - Twinkle Twinkle Little Star (12 variations on Ah vous dirai-je, Maman) - YouTube]

2. This piece is a theme and variations on Twinkle Twinkle Little Star. How many beats are there in a bar in the theme?

4. Can you identify five different ways in which the theme has been varied? For example, changing the tempo.

Music

Keyboard Skills: Piano Duet

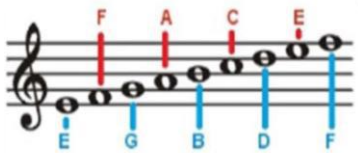
Music: Theory

Year 7

1. NOTE VALUES

Note Symbol	Rest Symbol	Note Value	Note Name
𝅘𝅥𝅮	𝄾	1/2	Quaver
𝅘𝅥	𝄿	1	Crotchet
𝅗𝅥	𝄼	2	Minim
𝅝	𝄻	4	Semibreve

2. PITCHES

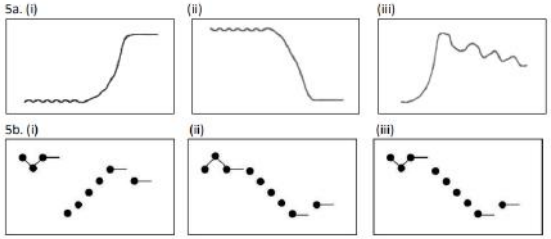


Every Green Bus Drives Fast

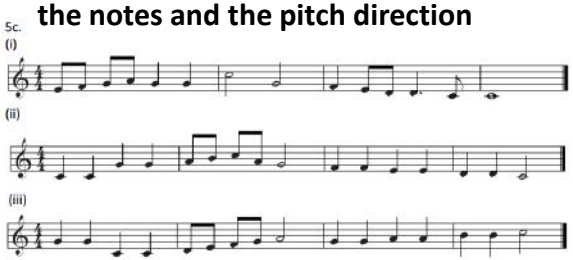
3. NOTATION SYMBOLS

Notation Symbol	Definition
𝄞	Treble clef
	Bar line

4. NOTATION EXAMPLES



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

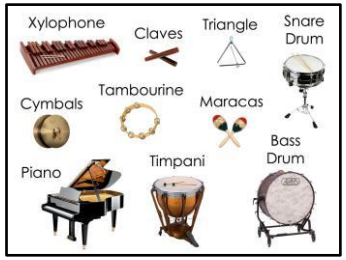


Staff notation shows precise note lengths and pitches on a stave

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?

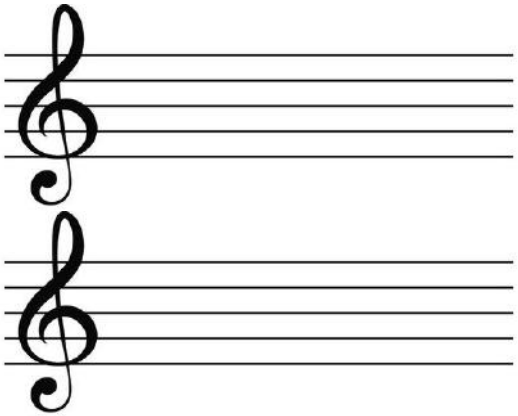
THINK IT

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 stave, 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?

Music

Music Theory

Physical Education: Volleyball

Year 7

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. Court Positions

3. Key words

Dig

Set/Setter

Libero

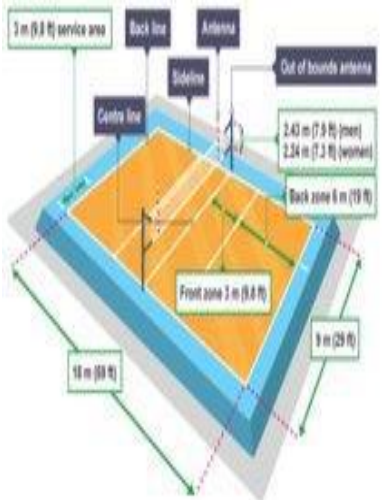
Block

Service line/Server

Out of bounds

Attacking

Defending



5. Court Regulations

- 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 time 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

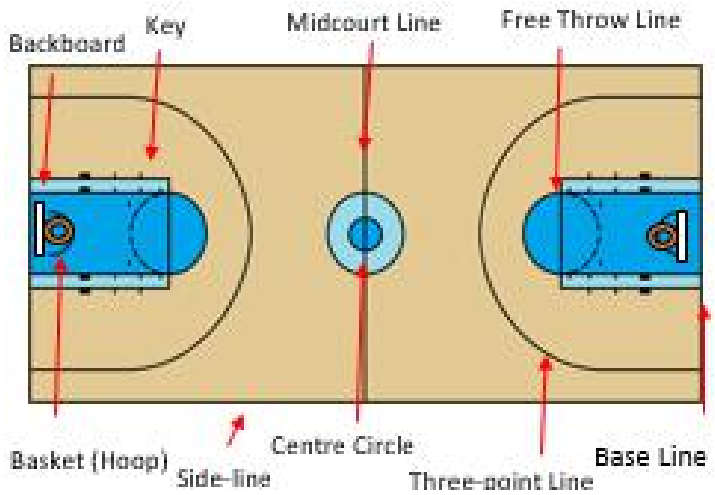
Physical Education: Basketball

Year 7

1. Rules & Scoring

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').f the shooter misses the shot – 2 Free Throws (max 2 points), makes the shot – 1 Free Throw (max 3- or 4-point play)

2. Court markings



3. Fouls & 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).

4. Positions

1. Point Guard	Bring ball up court and key passer.
2. Shooting Guard	Strong shooting and passing.
3. Small Forward	Strong attacking and defensive skills.
4. Power Forward	Presence in middle court and rebounder
5. Centre	Usually tallest player, defends and scores close to basket.

5. Web links to watch

:
https://www.youtube.com/watch?v=Tm7N2HU4noQ

https://www.youtube.com/watch?v=40dUlrx9y6U

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?
6. How many players are on each team?

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.

Physical Education

Basketball

Physical Education: Rugby

Year 7

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.
Knock ons
If the ball is dropped or deflected forward by a player from their hands, this is classed as a knock on.
Offside
Attacking players must be behind the ball to stay remain onside in rugby.
Lineout
A lineout is called if the ball travels past the sideline ('in touch).
A try
Teams can score a try by grounding the ball in the defending 'in goal area'. The player who grounds

2. 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.

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.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.

5 Online Links to watch

The Rules of Rugby Union - EXPLAINED! - Ninh Ly https://youtu.be/smnuRhNtT2E
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

KNOW IT

1.Can I explain how to perform basic skills and techniques (passing, supporting, tackling, rucking)
2.Can I describe basic tactics needed in rugby
3.Can I explain the three stages of a warm-up (pulse raiser, stretches and skill rehearsal)
4.Can I identify my Strengths and areas for improvement in own
and peers performances.
5.Can I Identify basic rules and regulations, i.e. passing backwards, knock-ons, restarts.
6.When does a scrum occur?

THINK IT

1.What drill can improve your passing?
2.What are the rules with tackling?
3.What are the teaching points of the tackle?
4.What are the progressions to improve tackling technique?
5.What the key points to consider when tackling front on?
6.When does a ruck occur?

GRASP IT

1.Can I identify and explain a range of strategies/tactics in performances to achieve a positive result i.e. the use of space effectively.
2.Can I explain the benefits of a warm-up (why we undertake each stage and the psychological and physiological benefits).
3.Can I describe basic rules and regulations, in competitive situations eg eg ,passing, knocks ons, rucking, scrum formation
4.What are the key points during a scrum?
5.What skills can be linked in rugby?
6.What are the key points when rucking?

Physical Education

Rugby

Religious Education: Leaders and Founders

Year 7

1. What makes a good leader?

- Inspirational
- Good role model
- Working for the betterment of people
- Wants to do good
- Has authority
- People respect them
- Listens and responds to people

2. Moses

He was born a slave, but his mom hides him, so he is not killed or enslaved. Moses grows up as an Egyptian, who treats the slaves terribly. He then finds out from God that he has been chosen to free the slave. Moses tries to convince the Pharaoh to let the slaves go but the Pharaoh doesn't listen, so God helps. God sends down 10 plagues which eventually frees the slaves and Moses helps them escape to the sea. God allows Moses to part/split the red sea, allowing the slaves to travel through the split and be truly free.

3. Was Jesus a rebel?

Jesus is believed to be the Son of God/ God in human form. He wasn't afraid to say things to people in charge. During Jesus' life, if he was not impressed with someone's behaviour he would confront them or make his disappointment known. The authorities at the time of Jesus' life thought that he was a troublemaker, because he taught messages of love, and heaven and not of wealth or greed.

Before his death Jesus was betrayed by one of his disciples, but he still showed forgiveness and not once did he refuse to die. Christians believe this death was to take away our sins and bring us closer to God.

4. Gandhi

Gandhi was born in India at a time where it was controlled by the British. A lot of Indians were unhappy about how they were being treated, including Gandhi. He was a <u>pacifist</u>, which means he did not agree with using violence. He carried out lots of protests to show the British how people felt. One really important protest was the Salt March, where Gandhi and over 80,000 people marched to show their upset. Britain eventually stopped ruling India in 1947.

5. Mai Bhago Kaur

Bhago was a Sikh fighter who assumed leadership of the Sikh fighters after the death of the last Guru.

She was brave, led armies of male fighters and was respected for her talents, fighting skills and knowledge. She was not afraid to die for her faith or the battles she fought. She had such great leadership skills; Guru Gobind Singh was very impressed with her.

6. WOW WORDS

<u>Leader</u>: The person who leads or commands a group, organization, or country.

<u>Freedom</u>: The power or right to act, speak, or think as one wants.

<u>Pacifist</u>: A person who believes that war and violence are unjustifiable/wrong.

KNOW IT

What characteristic's does good leader possess?

What are the 10 plagues?

Besides the 10 plagues, how else does God help Moses free the slaves of Egypt?

Why would some argue that Jesus was a rebel? And why would others disagree?

What is a pacifist?

What was the 'Salt March' and why did it happen?

Why did Mai Bhago Kaur make such a good leader?

THINK IT

1.What does the above image show you?

2.What does this image tell you about Mai Bhago Kaur?

3.Do you think Mai Bhago Kaur faced any challenges during her leadership?

GRASP IT

The 10 plagues of Egypt:

Moses led the Israelites out of captivity in Egypt. He managed to do it because he had God on his side. God helped Moses to free the Israelites in a variety of ways. Not only did God give Moses courage, God also enabled Moses to do extraordinary things (such as turning his staff into a snake) so that the Pharaoh would be frightened of his power. In the end, after Moses had attempted to free the Israelites a few times (talking to Pharaoh), God sent the 10 plagues…

1. Turning water into blood
2. Frogs
3. Lice
4. Flies
5. Death of livestock
6. Hail
7. Locusts
8. Boils
9. Darkness
10. Death of firstborn sons

Imagine if you were either Moses, The Pharaoh or an Egyptian and write a diary entry about your experience of the 10 plagues and how you might have felt.

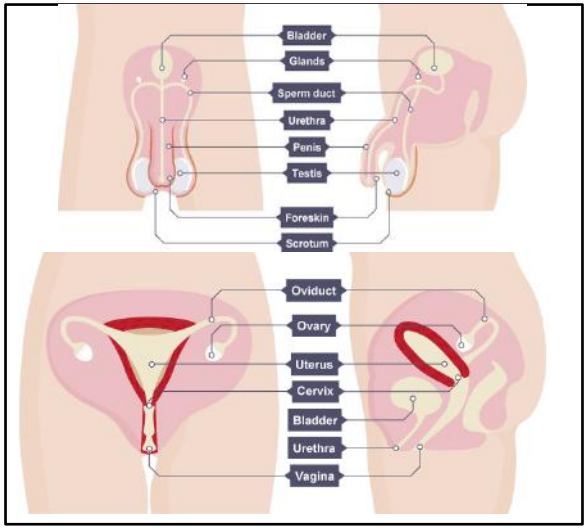
Religious Education

Leader and Founders

Science: REPRODUCTION

Year 7

1. Reproductive Organs



2. Female Reproductive System

The female reproductive system has two **ovaries.** Ovaries contain egg cells. One egg cell is released each month.
Each ovary is connected to the **uterus** by an **oviduct.** The oviduct is lined with **cilia**, which are tiny hairs on cells.

As part of the **menstrual cycle**, an egg develops, becomes mature and is released from an ovary. The cilia move the egg along the oviduct and into the uterus. The uterus is a muscular bag with a soft lining. The uterus is where a baby develops until birth. The **cervix** is a ring of muscle at the lower end of the uterus. It keeps the baby in place during pregnancy.

The **vagina** is a muscular tube that leads from the cervix to the outside of the body. A **penis** goes into the vagina during sexual reproduction. This is also where menstrual blood leaves the body and where a baby exits during birth.

3. Male Reproductive System

The male reproductive system produce **sperm** cells and release them inside a female. The male reproductive system has two **testes**. These are contained in a bag of skin called the **scrotum.** The testes produce millions of sperm and make male sex **hormones.**

During **ejaculation**, sperm pass through the **sperm ducts** and mix with fluids produced by the **glands.** The fluids provide the sperm cells with nutrients. The mixture of sperm and fluids is called **semen.** This passes out of the **penis.**

The **urethra** is the tube inside the penis that can carry both urine or semen. A ring of muscle makes sure that there is no chance of urine and semen getting mixed up.

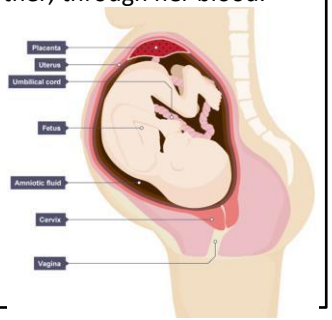
4. Fertilisation and Implantation

To create a new organism, the nucleus of the sperm and the nucleus of the egg have to join together - this is known as **fertilisation.**
Sperm are released into the vagina during sexual intercourse and swim from the vagina and enter the uterus through the cervix and travel to the oviduct. If a sperm cell meets an egg cell, fertilisation can happen. The fertilised egg divides several times to form a ball of cells called an **embryo.** After eight weeks of growth the embryo is called a **fetus.** The embryo attaches to the lining of the uterus and begins to develop into a baby. This is called **implantation**

5. Gestation

In all mammals, the time in the uterus from fertilisation until birth is known as **gestation.** It takes about 40 weeks for a fetus to develop in the uterus. To grow, a fetus needs nutrients and oxygen. It receives these from its mother, through her blood.

The **placenta** is an organ where substances pass between the mother's blood and the fetus's blood. The **umbilical cord** connects the fetus to the placenta. The **fluid sac** acts as a shock absorber, protecting the fetus from bumps.



6. The Menstrual Cycle

The female reproductive system works in a sequence called the **menstrual cycle.** This lasts about 28 days. The stages in the cycle are:
Day 1 – blood from the uterus lining leaves the body through the vagina
Day 5 – bleeding stops. The lining of the uterus begins to regrow. The lining is spongy and filled with blood. This will provide a deep layer for implantation
Day 14 - an egg cell is released from one of the ovaries. This is called **ovulation.** The egg travels through the oviduct towards the uterus.
If the egg cell does not meet with a sperms cell, the lining of uterus breaks down and the cycle starts again from day 1.

KNOW IT

1. What is puberty?
2. Describe one change that occurs during puberty
3. State two parts of the female reproductive system
4. State two parts of the male reproductive system
5. State the name of the reproductive cells (gametes) in males and females
6. What is fertilisation?
7. What is an embryo?
8. What is implantation
9. What is gestation?
10. What is the menstrual cycle?

THINK IT

1. What is adolescence?
2. Describe three changes that occur during puberty
3. Describe two parts of the female reproductive system
4. Describe two parts of the male reproductive system
5. Describe the functions of the reproductive cells (gametes) in males and females
6. Describe where fertilisation takes place
7. What is the difference between an embryo and a fetus?
8. Describe where implantation takes place
9. What does a baby need to grow during gestation
10. Describe what happens during menstruation

GRASP IT

1. What is the difference between puberty and adolescence?
2. Describe two changes that occur during puberty in BOTH boys and girls
3. Explain the importance of two parts of the female reproductive system
4. Explain the importance of two parts of the male reproductive system
5. Explain how the reproductive cells (gametes) are adapted to carry out their function
6. Describe the process of fertilization
7. Describe what is produced when an egg has been fertilised
8. Explain the importance of the uterus and its features
9. Explain how a fetus gets the things it needs to grow
10. Describe the 4 stages of the menstrual cycle

Science

REPRODUCTION

Science: Energy

Year 7

1. Energy Stores

Energy stores

- Electrical
- Kinetic (moving objects)
- Gravitational Potential (something up high)
- Elastic Potential (stretched or squashed)
- Thermal (heat)
- Electrostatic
- Magnetic
- Chemical
- **Nuclear**

4. Efficiency

Efficiency –

The more energy a device wastes, the less efficient it is.

Efficiency = useful output energy / total input energy

This is when:

- useful output energy refers to the useful energy in J (Joules) that is transferred by the device;
- input energy refers to the total energy in J supplied to a device.

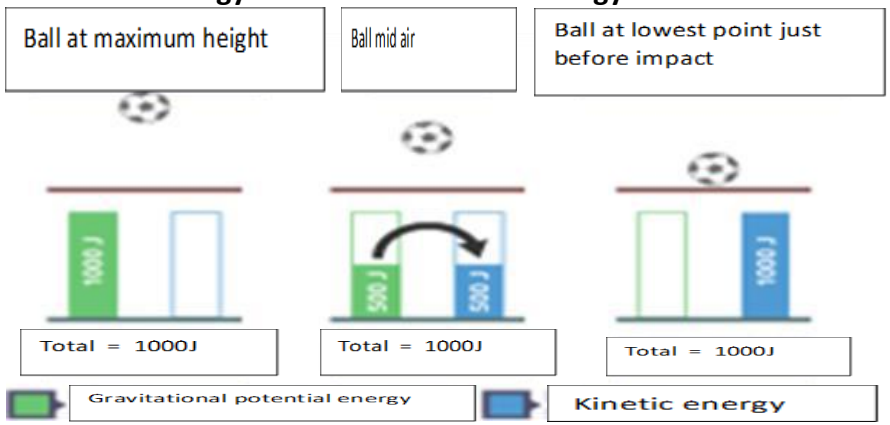
Efficiency doesn't have a unit

2. Energy Transfer

Energy transfer :

The laws of energy conservation states that energy is never CREATED or DESTROYED but transferred from one store to the other.

The total energy stored before = total energy stored after.



5. Energy Transfers

Energy transfers

Energy can be transferred by:

- mechanical working – when a force is applied to move an object through a distance
- electrical working – when charge flows (electricity)
- heating – when energy is transferred between hotter and colder regions
- radiation – when energy is transferred as a wave, for example as light or sound

3. Keywords

Keywords

- **Thermal energy store**: Filled when an object is warmed up.
- **Chemical energy store**: Emptied during chemical reactions when energy is transferred to the surroundings.
- **Kinetic energy store**: Filled when an object speeds up.
- **Gravitational potential energy store**: Filled when an object is raised.
- **Elastic energy store**: Filled when a material is stretched or compressed.
- **Dissipated**: Energy becomes spread out wastefully.
- **Energy Efficiency:** The more energy in a system that is transferred to the useful type, the more efficient it is.
- **Energy Conservation: E**nergy cannot be created or destroyed I=t is transferred from one type to another

KNOW IT

1, State the energy input into a toaster

2. State the energy input into a mobile phone

3. State the energy output of a microwave

4,)State the useful energy out of a laptop

5, State the unit of energy

7. State as many types of energy as you can

8. State the definition of 'thermal' energy

9. State the definition of energy input

10. State the definition of energy output

11. Describe the difference between useful and waste energy

THINK IT

1. Describe the energy transfer (in and out) of a radiator

2. Describe the energy transfer (in and out) of a hairdryer

3. Describe the energy transfer (in and out) of a car

4. State the equation for efficiency

5. Draw a Sankey diagram for an oven

6. Draw a Sankey diagram for a radio

7. Describe the energy changes in a roller coaster

8. Describe the energy changes in a person walking

9. Describe the particles in a solid compared to a gas

10. Compare the energy input and output in 2 objects of your choice

GRASP IT

1. Explain how energy I transfer when melting ice (mention the particles energy).

energy cannot be created or destroyed' Explain why this is true

3. Explain what the size of the arrows represent in Sankey diagrams

4. Draw an energy transfer diagram for a rollercoaster

5. Draw an energy transfer diagram for a for a bouncing ball. Explain the energy transfer that is taking place.

6. Calculate the efficiency of a bulb which has 60J inputted and 29J WASTE energy out

7. Calculate the efficiency of a bulb which has 75J inputted and 10J USUEFUL energy out

8. Suggest what information you need to know from a company to work out the efficiency of a washing machine?

9. Suggest an energy transfer which goes through several transfers in one object

10. Suggest the advantages of being able to store energy e.g. storing chemical energy in batteries

Science

Energy

Science: Separating Techniques

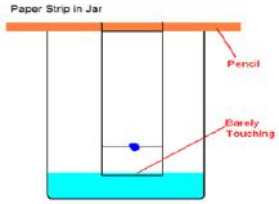
Year 7

1.

Crystalisation:
Evaporation/Crystalisation:
Heat the solution using a Bunsen burner
The liquid (solvent) will evaporate
Leaving behind the solid solute.

2.

Chromatography:
Draw a pencil line 2cm from the bottom of the paper.
Put one dot of each pen along the line.
Put 1cm of water into a beaker and put the filter paper in the beaker to the pencil line is above the water.
Take the filter paper out when the water gets near to the top and leave it to dry.

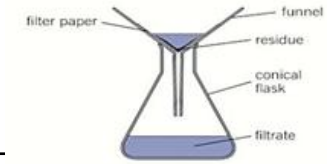


3.

Keywords:
Pure -A material that is composed of only one type of particle.
Impure - A material that is composed of more than one type of particle.
Evaporation - A change of state involving a liquid changing to a gas
Distillation - A process for separating the parts of a liquid solution. The solvent is heated and the gas is collected and cooled.
Filtration - The act of pouring a mixture through a mesh, in attempts to separate the components of the mixture.
Mixture - A material made up of at least two different pure substances.
Chromatography = A technique used to separate mixtures of coloured compounds.
Solute - a substance that dissolves in a solvent
Solvent- a liquid which is able to dissolve a solute
Solution- a mixture of solute dissolved in a solvent
Soluble- The ability to dissolve in a solvent
Insoluble-A solid which is not able to dissolve in a solvent.
Vapour – when a substance changes from a liquid to a gas.

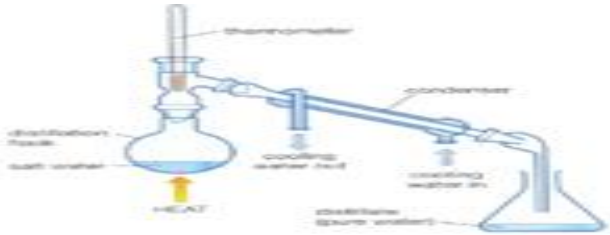
4.

Filtration:
Pour the mixture into the filter.
Insoluble material will stay in the filter paper (residue) as it is too large to pass through the filter holes.
Soluble materials will pass through the small holes of the filter paper into the conical flask (the filtrate).



5.

Evaporation:
The solution is heated and the solvent boils and begins to evaporate. The vapour (gas) travels towards a cold tube and cannot escape. When it reaches the cold tube, it condenses (turns back into a liquid). The pure liquid (solvent) is collected at the last stage.



KNOW IT

1. Identify the definition of pure.

2. Identify the definition of impure.

3. Identify the definition of distillation.

4. Identify the definition of chromatography.

5. Identify the definition of evaporation.

6. Identify the definition of filtration.

7. Identify the definition of crystallisation.

8. Identify the definition of soluble.

9. Identify the definition of a solvent.

10. Identify the solvent and the solute in a glass of salt water.

THINK IT

1. Describe how a filter works.
2. Describe the difference between filtrate and residue after filtration
3. Describe the method for crystallisation.
4. Describe the role of the condensing tube.
5. Describe what is meant by the stationary phase during chromatography
6. Describe how solubility affects the distance that the mixture travels up the stationary phase.
7. Describe the difference between a mixture and a compound
8. Explain why a pencil line is used during chromatography.
9.Explain why filtration cannot be used to separate salt from salt water
10. Describe which methods you would use and why, to separate a mixture of salt sand and water.

GRASP IT

1. Compare the similarities and differences of evaporation and distillation.
2. Explain why cold water is used inside the condensing tube.
3. Write a method for separating a mixture of two liquids with different boiling points.
4. Write a method for separating salt from water.
5. Write a method for separating the water from salt water.
6. Write a method for separating the different colour in an ink.
7. Write a method for the separation of sand and water.
8. What is the equation for working out the Rf value of a mixture?
9. What is Rf value a measurement of?
10. Research another form of chromatography and explain when it is used.

Science

Separating Techniques

D & T: Technical Drawing

Year 7

1. Technical Drawing

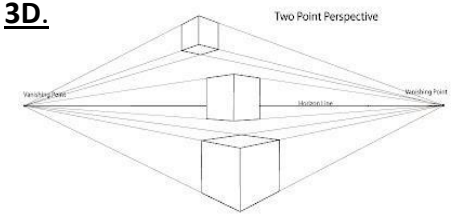
Technical drawing is a style of drawing used by **designers** and **engineers** to **communicate** design ideas to a **client** or **manufacturer**.

It is used to produce **3D** and **realistic** drawings. You will learn 2-point perspective, 1-point perspective and Isometric style. To draw complex **3D** shapes you must be able to draw simple **2D** shapes accurately.
We **measure** using **millimeters** in design and technology for accuracy.

Specialist tools and equipment: **ruler**, **protractor**, **set square** and **isosketch**.

2. 2-Point Perspective Drawing

2-Point perspective drawing rules: draw the **horizon line**, plot the **vanishing points**, draw the **front edge** of the shape, draw lines from the top and bottom of the front edge to **recede** back to **both VP's**, add **depth** to the object – make it **3D.**



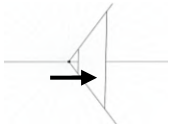
Objects appear **3D** and **realistic**.

They can be drawn at **different levels: above**, **on** or **below** the horizon line to show different **views** of the product.

These **rules/guidelines** can be followed for drawing both **shapes** and more **complicated products**.

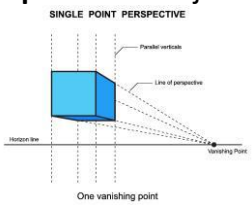
3.WOW WORDS

Horizon Line = A temporary horizontal line drawn across the page to set the height the viewer will see your drawing.
Vanishing Points = The point where all lines converge and disappear.
Parallel = Two lines that will never meet.
Construction lines = Lines which are drawn to help build the shape, these should be drawn lightly so that they can be remove.
Isometric = equal measurements or dimensions.
Millimeters = 10mm = 1cm
Plane = A face of a shape/ an axis to draw on



4. 1-Point Perspective

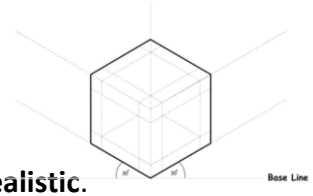
1-Point perspective drawing rules: draw the **horizon line**, plot the **vanishing point,** draw the **frontal plane**, draw lines from **corners/edges** of the front plane to **recede** back to the VP, add **depth** to the object - Make it **3D.**
Objects appear **3D** and **realistic** from the **viewpoint** of **one person**.



5. Isometric Drawing

Isometric drawing rules: draw a reference line **horizontally**, draw the front edge **vertically**, mark out **30 degrees** and draw a line through, draw a "Y" shape, by marking out **30 degrees** in the other direction, draw **two straight lines** the **same length** as the **front edge**, join the lines.

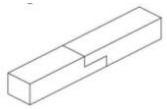
All lines will be **parallel** on the same drawing **planes**.



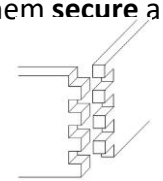
Objects will look **3D** but not **realistic**.

6. Wood Joints

Wood joints are a traditional method of **joining timber**. There are a range of different joints that can be used for different situations that provide a variety of levels of **strength**. Joints are often **glued** to make them **secure** and **permanent**.



Half-lap joint



Finger/comb joint

KNOW IT

1. Explain what technical drawing is.
2. Explain what industries use technical drawing and why.
3. Measure and draw out 2D shapes accurately.
4. State the rules of 2-point perspective drawing.
5. State the rules of 1-point perspective drawing.
6. State the rules to draw in isometric.
7. State the angles associated with isometric drawing.
8. State the names of specialist tools and equipment needed to complete these drawings.
9. State how to measure using a ruler and in what measurements we use in design and technology.
10. How to work out the area of a shape.
11. How to convert centimetres into millimetres.
12. How to use angles on a protractor.

THINK IT

1. Can you draw out basic shapes in 2D accurately?
2. Can you follow the rules of 2-point perspective drawing to draw basic shapes in different dimensions: 40mm cube, 20 x 60mm cuboid?
3. Can you follow the rules of 1-point perspective drawing to draw basic shapes in different dimensions: 10mm cube, 15 x 35mm cuboid, 50mm triangular prism?
4. Can you follow the rules of isometric drawing to draw basic shapes in different dimensions? Cube: 50, 65, 90mm.
5. Can you render (colour using shade and tone) basic shapes in 3D to show light, dark and shade on a 3D object?
6. Consider the purpose of 2-point perspective drawing?
7. Consider the purpose of 1-point perspective drawing?
8. Consider the purpose of isometric drawing?

GRASP IT

1. Draw out a 2D square in 20mm, 40mm 65mm.
2. Break down complex shapes into simple shapes and follow the rules of 2-point perspective to draw products, draw a table.
3. Break down complex shapes into simple shapes and follow the rules of 1-point perspective to draw to products, draw a chair.
4. Break down complex shapes into simple shapes and follow the rules of isometric to draw products, draw a mobile phone.
5. Add detail, material finish(timber, plastic, metal), patterns and logos to products in the correct drawing style following the relevant rules.

Technology

Technical Drawing

Year 7

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.

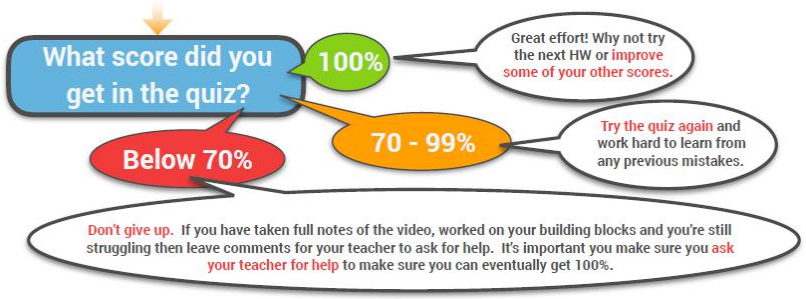
Learning maths is like learning anything. You need to practise and always put in effort. Trying your best and always putting in effort is crucial to the process. HegartyMaths is totally committed to helping students improve at maths.

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



Please refer to your student Planner for additional Maths resources.