

Home Learning Booklet



Knowledge Goals Year 8
Half Term 1

How to self-test

Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your knowledge goals booklet to create mind maps, make sure to use colour and images, keep writing to the bare minimum.

How to mind map:



Information for parents on knowledge retrieval



Flash cards

Use your knowledge goals booklet to make flash cards. Write the questions on one side and on the other record the answer. Test yourself or work with a friend to make sure you know all the key information for each topic.

How to mind map:



How should students use the Knowledge Goals booklets?

Your Knowledge Goals booklet provide the essential knowledge that you need to learn in each subject this half term. You are **expected to spend one hour a night during the week 'learning' the content.** You will be assessed during lessons using 'low stake' quizzing. **Your teacher may choose to set you additional homework.**

How can parents support?

- Read through the organiser with your child – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they have to fill in. Miss out more and more until they are word perfect.

Subject Index

Suggested Homework Schedule (1 hour of independent study per night).

To help you get organized, we have planned out your weekly home learning to cover all subjects. You may choose to create your own version:

Subject	Page No
Art	6
Biology	9
Chemistry	11
Computer Science	13
Drama	15
Electronics	17
English Language	19
Food technology	20
French	22
Geography	24
History	26
Materials	28
Pdev	30
PE	32
Physics	34
Maths	36
Music	39
PRE	41
Spanish	43
Freya model templates	45

Week A

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)
Monday	Art	English Language	Physics
Tuesday	Biology	Technology	Maths
Wednesday	Chemistry	Spanish	Music
Thursday	Computer Science	Geography	RS
Friday	Design Technology	History	PE

Week B

Day	Subject 1 (20mins)	Subject 2 (20mins)	Subject 3 (20mins)
Monday	Drama	Personal Development	Teir 2 Vocab
Tuesday	Maths	English	Physics
Wednesday	Chemistry	English	Music
Thursday	Teir 2 Vocab	Maths	Biology
Friday			

Literacy Tier 2 Vocabulary

These words are all 'tier 2' words; in other words, they are seen as 'academic vocabulary' and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

#	Key word	Definition
1	Justify/justification	
2	Analyse	
3	Context	
4	Infer/inference	
5	Compare/comparison	
6	Imply/implication	
7	Annotate	
8	Exemplify	
9	Consequence	
10	Evaluate	

Watch this video for more information
<https://youtu.be/Dvb3TrGqCaA>

Knowledge Goals: Art

Project overview

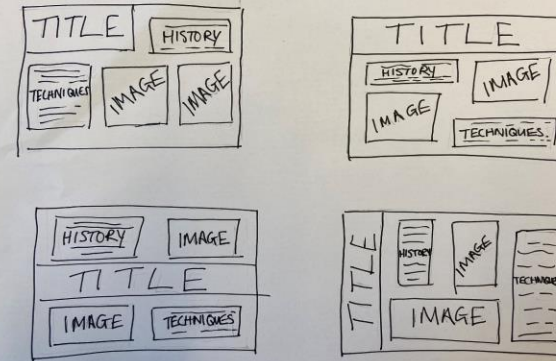
Using **seascapes** as your subject you will create an A3 painting using techniques inspired by **traditional Chinese ink paintings** and more **modern watercolour** techniques based on the work of **John Palmer** and **Peter Rothwell**. You will research the history and techniques of traditional Chinese ink painting and create a research page based on this. You will learn about what **tone** is, and practice creating a full range of tone before applying that to your seascape painting. You will also learn and practice how to create texture using watercolour paint.

When and where did ink painting originate?

- Ink painting is created with a **brush on rice paper or silk** and uses different concentrations of **black ink**.
- It emerged in **Tang dynasty (618-907) in China**, and scholars spent years perfecting the brush strokes and techniques.
- The skills of ink painting spread to other countries in Asia such as **Japan and Korea**.
- The paintings were normally created on **long scrolls**.
- Collectors would often add **poems** and their seal would be added with a **stamp and red ink**.
- With this style of painting it is important to portray **the spirit of the subject** rather than creating a life-like painting.

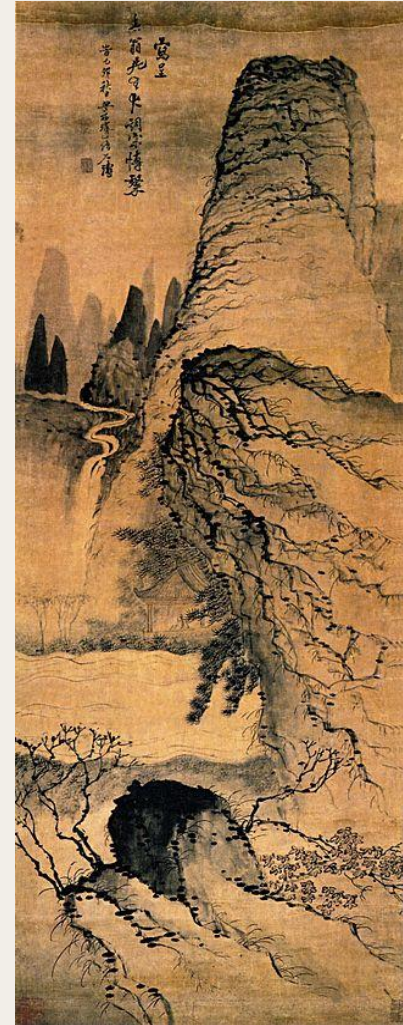
How to plan a layout for your ink painting research page

Use one of the page layouts below



Key terms

Focal Point - the area in the composition to which the viewer's eye is naturally drawn.
Tone - How light or dark something is



Knowledge Goals: Art

Leonard Baskin

Leonard Baskin (August 15, 1922 – June 3, 2000) was an American sculptor, draughtsman and graphic artist.

Baskin is known for his wood, limestone, bronze, and large-scale woodblock prints, which ranged from naturalistic to fanciful, and were frequently grotesque, featuring bloated figures or humans merging with animals.

Having vowed to become a sculptor at the age of 15, Baskin studied sculpting as an apprentice to Maurice Glickman from 1937 to 1939 at the Educational Alliance in New York City. Baskin studied at the New York University School of Architecture and Applied Arts from 1939 to 1941. In 1941, he won a scholarship to Yale where he studied for two years.



Project Overview

Using **birds** as the theme, you will develop skills in **observational drawing** from secondary sources using **charcoal**. You will research the work of artist **Leonard Baskin**, and use your sketchbook to develop ideas. Final outcome is an A2 charcoal bird drawing. During this project you will learn how to break down complex forms into **simple shapes**, to help improve the **accuracy of your drawing**.

Key terms

Tone – How light or dark something is

Line – delicate and soft, or harsh and bold

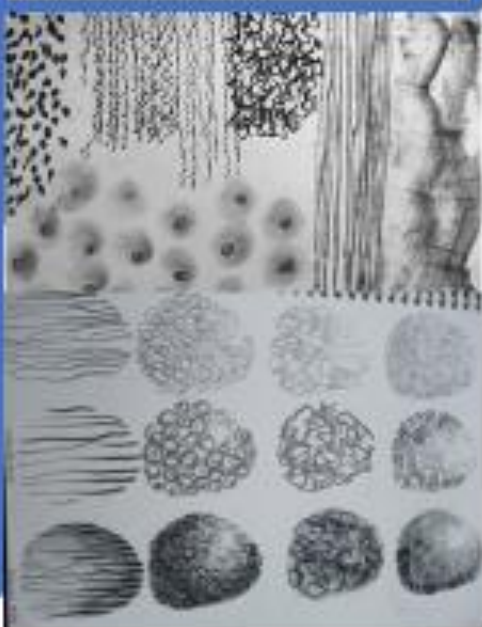
Style - expressive and moody or intricate and calm

What words would you use to describe Leonard Baskin's art work?

Find out more about Leonard Baskin here

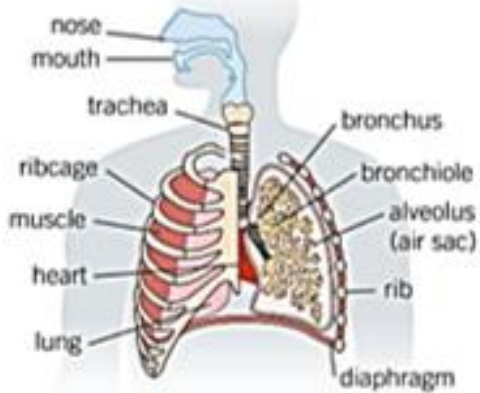
<https://www.artnet.com/artists/leonard-baskin/>

Mark making describes the different types of lines, dots, patterns, and textures we create in our art.



Knowledge Goals: Biology – Breathing

What happens when we breathe?



Air enters your body through your mouth and nose.

Air moves down the **trachea** (windpipe) – a large tube.

Air moves down a **bronchus** – a smaller tube.

Air moves through a **bronchiole** – a tiny tube.

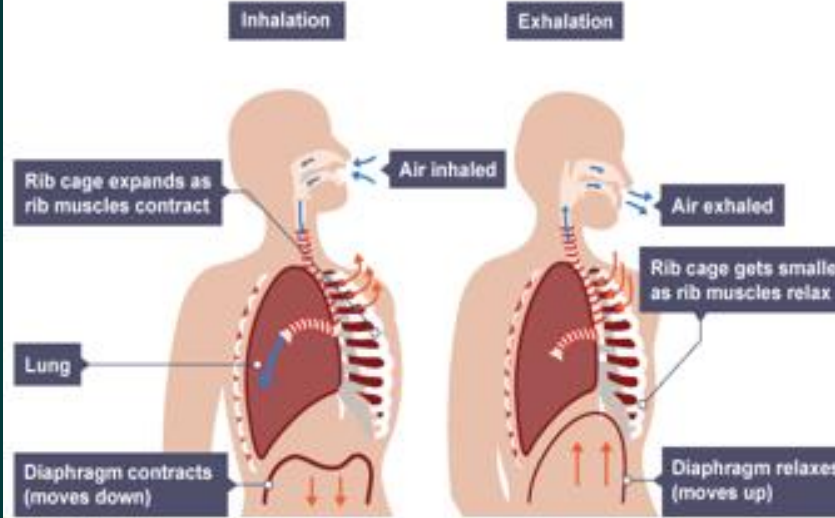
Air moves into an **alveolus** – an air sac.

Oxygen then diffuses into the blood.

ALVEOLI; there are millions in your lungs. This creates a large surface area. They have very thin walls (one cell thick). This allows gases to exchange quickly.

Why do we breathe in and out? We inhale to take in oxygen (used in respiration) and exhale to remove carbon dioxide (waste product- turns limewater cloudy). The harder you exercise, the faster your breathing rate and greater your depth of breathing. This allows you to take in more oxygen for respiration (transferring more energy to the muscle cells).

INHALATION AND EXHALATION#



SMOKING

Tobacco smoke contains many harmful substances.

These include:

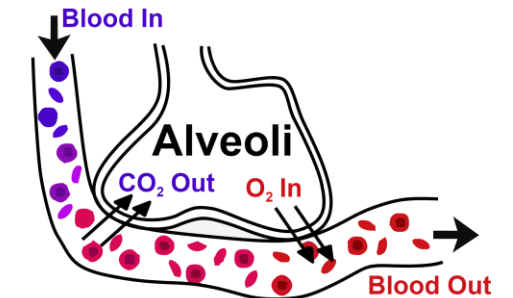
- **Tar** → Causes lungs, mouth and throat **cancer**. It coats the inside of the lungs, including the **alveoli**, causing coughing. **It damages the alveoli, making it more difficult for gas exchange to happen.**
- **Nicotine** → is **addictive** and also increases the heart rate and blood pressure, and makes blood vessels narrower than normal. This can lead to **heart disease**.
- **carbon monoxide** → is a gas that takes the place of oxygen in red blood cells, reducing the amount of oxygen that the blood can carry. It means that the **circulatory system** has to work harder, causing heart disease

It also causes a low birth weight in babies born to mothers who smoke.

The breathing system is well adapted for gas exchange.

Breathing occurs through the actions of muscles in the ribcage and diaphragm changing the volume of the chest. Lungs are made of elastic tissue which can expand when you breathe in. As they are delicate, they are protected by your ribs.

Gas is exchanged between the blood and the alveoli through the process of diffusion.



Exhaled air has a higher percentage of CO₂ and water vapour.

Gas	Amount in inhaled air	Amount in exhaled air
Oxygen	21%	17%
Carbon dioxide	Very small amount	3%
Nitrogen	79%	79%
Water vapour	Small amount	Large amount

Knowledge Goals: Chemistry – Periodic table

The periodic table

- The periodic table is arranged in rows called periods and columns called groups, which can be used to locate any element.
- Metals are found on the left of the periodic table and non-metals on the right.
- Rows of elements are called periods. They go across the whole periodic table, even if there is a gap. For example, the third period contains sodium (Na) through argon (Ar).
- Columns of elements are called groups and are numbered. For example, group 4 contains carbon (C) through flerovium (Fl).
- Groups contain elements with similar chemical and physical properties. For example, all the elements in group 0 are unreactive gases.

Groups												Group 4						Periods			
1	2											3	4	5	6	7	0				
																			H	He	1
Li	Be											B	C	N	O	F	Ne			2	
Na	Mg											Al	Si	P	S	Cl	Ar			3	
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		4		
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		5		
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		6		
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og		7		

■ Metals
 ■ Non-metals

Group 1 – Alkali metals

- Lithium, sodium, potassium
- They are all very soft, with a low melting point and low densities (meaning they can float on water).
- Their melting points and boiling points increase going down Group 1.
- They are very reactive and react vigorously with water forming an alkaline solution.
- They need to be stored in oil as they will react with air.
- The reactivity increases going down the group.

3	Li	Lithium
11	Na	Sodium
19	K	Potassium
37	Rb	Rubidium
55	Cs	Caesium
87	Fr	Francium

Group 7 – The Halogens

Halogen	Appearance	Use
Fluorine	Pale yellow gas	Toothpastes and in drinking water
Chlorine	Green gas	Disinfectant in bleaches and pools
Bromine	Brown/orange liquid	Pesticides and in making plastics
Iodine	Grey solid (purple vapour)	Antiseptic (usually in hospitals)

- The melting and boiling points increase going down Group 7.
- Reactivity of the halogens decreases down the group
- A more reactive halogen will displace a less reactive one from its compound.

9	F	Fluorine
17	Cl	Chlorine
35	Br	Bromine
53	I	Iodine
85	At	Astatine
117	Ts	Tennesine

Knowledge Goals: Computer Science – App Development

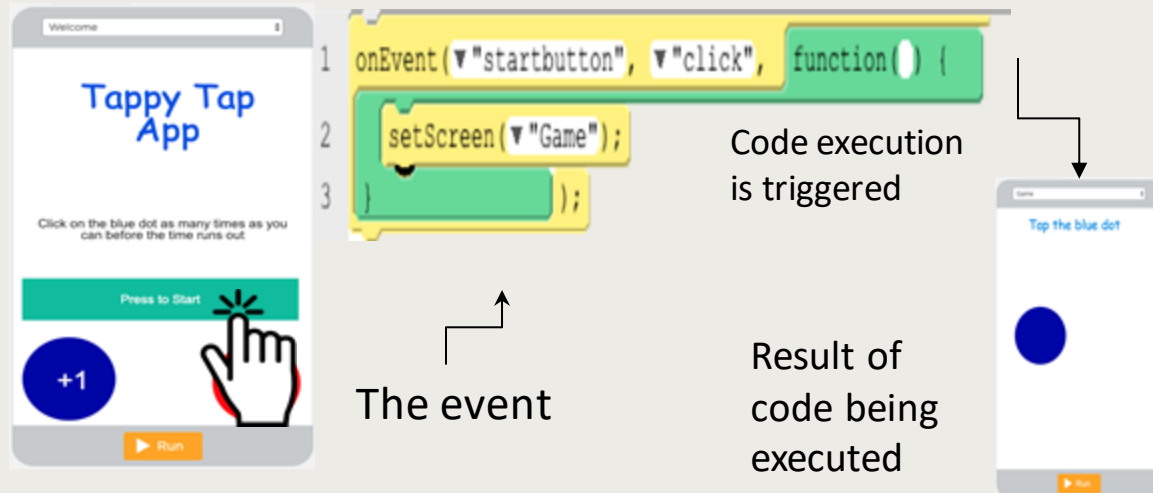
In **event-driven programming**, the flow of the program is controlled by events.

Events can be user actions such as:

- Mouse clicks (or the touchscreen equivalent)
- Key presses
- Hovering over a picture
- Voice input (“OK Google...”)

Events can also be triggered by:

- Sensors (e.g. if movement is sensed, turn the light on)
- Messages from other programs



Programming constructs

Sequence

Instructions are executed one after another. Sequence is the order in which the instructions are executed.

Selection

Is the process of making a decision. The result of the decision decides which path the **program** will take next.

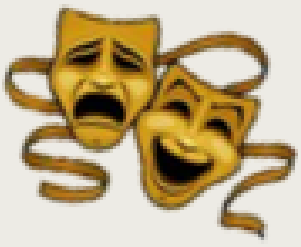
Iteration

There are times when a **program** needs to repeat certain steps until told otherwise, or until a condition has been met. This process is known as iteration.

Variables

When programming it is often necessary to store a value for use later on in the program. A variable is a label given to a location in memory containing a value that can be accessed or changed. Think of a variable as a box with a label that you can store information in.





Knowledge Goals: Drama

Working from Script and Genre

Genre: a style or category of performance/script.
For example: horror, mystery, comedy.

The different elements of a script:

- the context and background given by the playwright.
- Stage directions written in brackets.
- New character new line
- No speech marks!

What is a fable?

- A story with a moral teaching to it.
- Often uses stock characters
- Clear divide between good and evil.
- The main character is often posed with a choice to make, which impacts the outcome.

Top Tips For Script Writing:

- Always give a summary of the location, characters and time-period in opening sentences at the start of the scene.
- Each time a character speaks put their name at the start of the line followed by a colon ***NO SPEECH MARKS***
- Each time a new character speaks this should be written on a new line.
- Stage directions should be written in brackets and should tell the actors what to do.
- The script should move the storyline along, think about character relationships and information the audience need to know to understand the narrative.

Throughout this unit you will work on scripts from different genres and work through the challenges set by each genre, working from script.

Knowledge Goals: Drama – *Script and Genre*

Half Term 1: Tier 3 Vocabulary

	Key word	Definition
1	Genre	The type of story being told and is decided by the playwright.
2	Style	Is the way in which the performance is presented, using techniques from a specific practitioner of drama.
3	Context	The given information about history, time period, other influences that effect how a text is staged or performed.
4	Construct Narrative	To build and create a storyline for performance.
5	Fable	A tale with a moral teaching for the audience.
6	Stage Directions	These are short sentences that tell the actor what to do, written by the playwright in brackets and tell you how to perform their work.
7	Intentions	This is what the director/character want to get out of a particular moment, for example to be hurtful towards another character, to make them laugh.
8	Practitioner	Someone with their own thinking as to how Drama should be, they often have their own styles with specific performance features.
9	Playwright	The person/author of the play. (The one who writes the text).

Knowledge Goals: Electronics

Health and Safety
It is really important we **ASSESS** the **RISK** and **REDUCE** the **RISK** of Injury by **LISTENING** To the **TRAINING** and following the correct **PPE** usage

- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running


Symbols to recognise

	Switch (Open)		Lamp
	Switch (Closed)		Fuse
	Cell		Voltmeter
	Battery		Ammeter
	Diode		Thermistor
	Resistor		LDR
	Variable Resistor		LED


Input	Function	Use
Light-dependent resistor (LDR)	The resistance changes as the light level changes, and the change in resistance can be used as an input	Solar garden lights and street lighting
Thermistor	The resistance changes as the temperature changes, and the change in resistance can be used as an input	Fridges, central heating systems and freezers to maintain temperatures

Process	Function	Use
Switch	A switch can either allow or prevent electrical power from flowing round a circuit	Any device that needs power to be turned on and off
Resistor	To limit the flow of current - they are made to restrict current flow in varying degrees (resistance)	It helps control the flow of current and protects delicate components from being overloaded

Output	Function	Use
Speaker	Uses pulses of electricity to move an electromagnet that vibrates to create sound	Headphones and radios
Light-emitting diode (LED)	A long-lasting, low-power light	Torches, lamps and power indicators



Wire strippers: Remove the plastic coating from the wire to expose the wire to attach with soldering to other components



Solder- using a soldering iron it attaches two components together

KEY TERMS

Types of plastics

Thermosetting
Plastics **cannot be reheated** and **reshaped** due to a chemical reaction that occurs when they are first manufactured.

- Initially **set by heat**
- Cannot be **reshaped once set**
- Extremely **strong and durable**
- **CANT** be recycled

Thermoforming
Plastics **can be reheated** and therefore **reshaped**.

- **Soften** when heated
- **Can be reshaped**
- **More commonly used in school**
- **CAN** be recycled


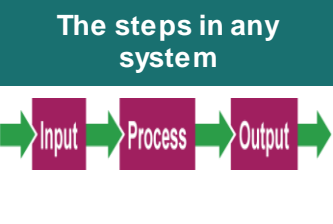
Think of the word "set" what does it mean?
(Put something in a set position)

JIG: A production aid to make sure that every time the material is shaped to the same angle

CAM
Computer Aided Manufacture

Laser cutter

Laser cutting works by directing the output of a high-power laser. The focused laser beam is directed at the material, which then cuts the material leaving an edge with a high-quality surface finish. In school we mainly cut and engrave on Plywood and Acrylic

Knowledge Goals: English Lang

TEXT SELECTION	CORE ASSESSMENT SKILLS AND WHAT STUDENTS ARE AIMING TO BE ABLE TO WRITE:
<p>A Sound of Thunder Ray Bradbury Avatar The Guardian: Nasa names first female astronaut The Time Machine HG Wells The War of the Worlds by HG Wells The Hunger Games (2012 film) The Hunger Games by Suzanne Collins Children of Men (2006 Film) The Children of Men by PD James Divergent (2014 film) Divergent Veronica Roth The Quiet World by Jeffrey McDaniel Compassion Circuit by John Wyndham Online Article: Meet the Teenage AI Whizz</p>	<p>Vary sentence construction (SV) What different sentence types can you find here? Use ambitious punctuation (AP) What are the dashes used for here? Apply language techniques (ALT) Which ones are examples of repetition and which are rhetorical questions? Use ambitious vocabulary (AV) Can you find three words to improve?</p> <p>It's not like I had to try very hard, is it? Everyone always thinks I'm older than I really am, just because I'm tall. In St Joan of Arc Primary, the teachers seemed to think that height and age were the same thing. If you were taller than someone, you must be older than them. If you were tall and you made a mistake – even if it was only your first day – you got, "You should know better, big lad like you." Why, by the way? Why should a big lad know better just because he's big? King Kong's a big lad. Would he know the way to the toilet block on his first day at school? When no one had told him? No, I don't think he would. Anyway a few hours back the Infinite Possibility was supposed to complete a routine manoeuvre and basically it didn't. It rolled out of orbit, wrecking all the communication equipment, and now we're very lost in space.</p>

<p>Home Learning Tasks:</p> <ol style="list-style-type: none"> 1) Complete 15 minutes of reading every night, using your AR book. 2) Complete the vocabulary acquisition quizzes, set on Teams every fortnight. 3) Using this knowledge organiser, learn and review the key ingredients of crafting effective narratives. 4) Read at least one text from the wider reading list! 	<p>Dreadnought by April Daniels</p>	<p>All the Light We Cannot See by Anthony Doerr</p>	<p>All the Broken Places- John Boyne</p>	<p>The Knife of Never Letting Go by Patrick Ness</p>	<p>Explorers: Amazing Tales of the World's Greatest Adventurers (DK Explorers) by Nellie Huang</p>
	<p>Dosh by Robert Swindells</p>	<p>The Amber Spyglass by Philip Pullman (Young Adult)</p>	<p>Grasshopper Jungle by Andrew Smith</p>	<p>Not Your Sidekick Book by C. B. Lee (Young Adult)</p>	<p>Night by Elie Wiesel</p>
	<p>Number The Stars by Lois Lowry</p>	<p>Configured by Jeanette Penner</p>	<p>The Disasters by M.K. England</p>	<p>Ignite the Stars by Maura Milan</p>	<p>Illuminae by Amie Kaufman and Jay Kristoff</p>
	<p>The Girl from Everywhere by Heidi Heilig</p>	<p>The Long Way to a Small Angry Planet by Becky Chambers (Young Adult)</p>	<p>The Unbeliever by Robert Dale Parker</p>	<p>The Lion, the Witch and the Wardrobe by C. S. Lewis</p>	<p>Defy the Stars by Claudia Gray</p>

Knowledge Goals: Food Technology

Seasonality and Food Miles

What are seasonal foods?

Seasonal food is the time of year when food is at its best, in terms of flavour or harvest.

Many foods are available all year, as they are imported from other countries.

When local seasonal food is available it tends to be fresher and cheaper - there has been less travel/storage from farm to fork.

Food - a fact of life 2012



Micronutrients

Needed in small amounts to help the body function properly

Vitamin	Food Sources
Vitamin A	Carrot, sweet potato, milk, eggs
Vitamin B complex	Whole grains, legumes, nuts and seeds, meat, eggs, dairy
Vitamin C	Citrus fruits, strawberry, bell peppers, tomatoes
Vitamin D	Fatty fish, fish liver oil, egg yolk, mushrooms
Vitamin E	Wholegrain foods, nuts and seeds, avocado
Vitamin K	Green leafy vegetables, broccoli, cauliflower, cabbage, meat, fish, eggs

Macronutrients

Needed in large amounts to help the body to function properly

Fat

Function: Energy, Warmth, Protection of organs

Sources:

Saturated Fat (Bad Fats)	Unsaturated Fat (Good Fats)
Meat	Avocado
Processed Foods	Nuts
Lard	Olive oil

Saturated Fats - solid at room temperature and are from animal sources. Unsaturated fats are liquid at room temperature and are vegetable sources.

Carbohydrates

Function: Energy

Sources: Bread, Pasta, Rice, Wheat, Potatoes, Cereals

Sugars: Cakes, Sweets, Fizzy drinks

We should consume no more than 30g of sugar per day

Protein

Function: Growth and Repair, Energy

Sources:

Plant: Nuts, Quorn, Beans, Lentils	Animal: Eggs, Fish, Meat
---	---------------------------------

Too much	Too little
<ul style="list-style-type: none"> Obesity Type 2 diabetes Heart Disease 	<ul style="list-style-type: none"> Fat soluble vitamin deficiencies

Too much	Too Much
<ul style="list-style-type: none"> Obesity Type 2 diabetes Heart Disease 	<ul style="list-style-type: none"> Tooth decay Type two diabetes Obesity

Too much	Too little
<ul style="list-style-type: none"> Turns to fat if not turned into energy 	<ul style="list-style-type: none"> Anaemia Slow growth in children

Water
Keeps us hydrated.
Source
Drinks, fruit and vegetables, soup.
Function
<ul style="list-style-type: none"> Controls body temperature. Gets rid of waste in the body.
Too little
<ul style="list-style-type: none"> Dehydration leads to headaches, irritability and loss of concentration.

Fibre
Function: It helps with digestion, it helps to get rid of waste
Source: Wholegrain, Whole wheat, Wholemeal cereals, Peas and beans
Too Little
<ul style="list-style-type: none"> Constipation Bowel Cancer

Vegetarianism

<p>Lacto-ovo-vegetarians</p> <ul style="list-style-type: none"> Eggs Milk Honey Plant food 	<p>Lacto-vegetarians</p> <ul style="list-style-type: none"> Eggs Milk Honey Plant food
<p>Ovo-vegetarians</p> <ul style="list-style-type: none"> Eggs Milk Honey Plant food 	<p>Vegans</p> <ul style="list-style-type: none"> Eggs Milk Honey Plant food

+ Yes, they eat these foods

- No, they do not eat these foods

Food Poisoning

Types of Food Poisoning

Food poisoning comes from many sources, including bacteria, viruses, and fungi.

<p>Listeria fresh milk, unwashed produce</p>	<p>E. coli fecal contamination</p>	<p>Campylobacter undercooking, unhygienic kitchen</p>	<p>Salmonella undercooking, poor hygiene</p>
Abdominal pain	Diarrhea	Fever	Nausea Vomiting

Knowledge Goals: French

Nous habitons ...	We live ...
à la campagne	<i>in the country</i>
à la montagne	<i>in the mountains</i>
au bord de la mer	<i>on the coast</i>
dans un village	<i>in a village</i>
en banlieue	<i>in the suburbs</i>
en ville	<i>in town</i>
un appartement	<i>a flat</i>
un chalet	<i>a chalet</i>
une ferme	<i>a farm</i>
un immeuble	<i>a block of flats</i>
une maison	<i>a house</i>
notre/nos	<i>our</i>
chez nous	<i>at home/at our house</i>

Les pièces	The rooms
le bureau	<i>the study</i>
la cave	<i>the cellar</i>
la chambre	<i>the bedroom</i>
la cuisine	<i>the kitchen</i>
la douche	<i>the shower</i>
l'entrée	<i>the entrance hall</i>
la salle à manger	<i>the dining room</i>
la salle de bains	<i>the bathroom</i>
la salle de jeux	<i>the games room</i>
le salon/la salle de séjour	<i>the sitting room/ lounge</i>
l'escalier	<i>the staircase</i>
le garage	<i>the garage</i>
le jardin	<i>the garden</i>

Qu'est-ce que c'est?	What's this?
C'est ...	<i>It's ...</i>
le collège	<i>the (secondary) school</i>
l'église	<i>the church</i>
la gare	<i>the station</i>
la poste	<i>the post office</i>
le supermarché	<i>the supermarket</i>
Ce sont ...	<i>They're ...</i>
les magasins	<i>the shops</i>

Qu'est-ce qu'on fait dans ...?	What do you do in ...?
On dort.	<i>You sleep.</i>
On fait sa toilette.	<i>You get washed.</i>
On lit des livres.	<i>You read books.</i>
On mange.	<i>You eat.</i>
On prend une douche.	<i>You take a shower.</i>
On prépare les repas.	<i>You prepare meals.</i>
On travaille.	<i>You work.</i>

Qu'est-ce qu'on fait ce soir?	What are we going to do this evening?
On regarde la télé?	<i>Shall we watch TV?</i>
On joue aux cartes/aux échecs?	<i>Shall we play cards/chess?</i>
On joue à l'ordinateur?	<i>Shall we play on the computer?</i>
On écoute de la musique?	<i>Shall we listen to music?</i>
On fait les devoirs?	<i>Shall we do our homework?</i>
On regarde la télé/une vidéo?	<i>Shall we watch TV/a video?</i>

Ma maison	My house
au sous-sol	<i>in the basement</i>
au rez-de-chaussée	<i>on the ground floor</i>
au premier/deuxième/troisième étage	<i>on the 1st/2nd/3rd floor</i>
à la mansarde	<i>in the attic</i>
Il y a ...	<i>There is/There are ...</i>
Nous avons ...	<i>We have ...</i>
un balcon	<i>a balcony</i>
une cave	<i>a cellar</i>
un garage	<i>a garage</i>
un jardin	<i>a garden</i>

Il n'y a pas de ...	<i>There isn't a/There aren't any ...</i>
avec	<i>with</i>
beaucoup de	<i>lots of</i>
mais	<i>but</i>
très	<i>very</i>
Où?	Where?
dans	<i>in</i>
devant	<i>in front of</i>
autour de	<i>around</i>
près de	<i>near</i>

Dans ma chambre	In my room
As-tu un/une/des ...?	<i>Have you got a/ some ...</i>
Oui, j'ai un/une/des ...	<i>Yes, I've got a/ some ...</i>
une armoire	<i>a wardrobe</i>
des CD	<i>some CDs</i>
une chaîne stéréo	<i>a stereo system</i>
une chaise	<i>a chair</i>
une commode	<i>a chest of drawers</i>
une étagère	<i>a bookcase</i>

une lampe	<i>a lamp</i>
un lit	<i>a bed</i>
des lits superposés	<i>bunk beds</i>
un ordinateur	<i>a computer</i>
des posters	<i>some posters</i>
une table	<i>a table</i>
Non, je n'ai pas de/d'....	<i>No, I haven't got a/any ...</i>
dans	<i>in</i>
par terre	<i>on the floor</i>
sous	<i>under</i>
sur	<i>on</i>

Verbes au pluriel	Plural verbs
nous habitons	<i>we live</i>
vous habitez	<i>you live</i>
ils/elles habitent	<i>they live</i>
nous avons	<i>we have</i>
vous avez	<i>you have</i>
ils/elles ont	<i>they have</i>



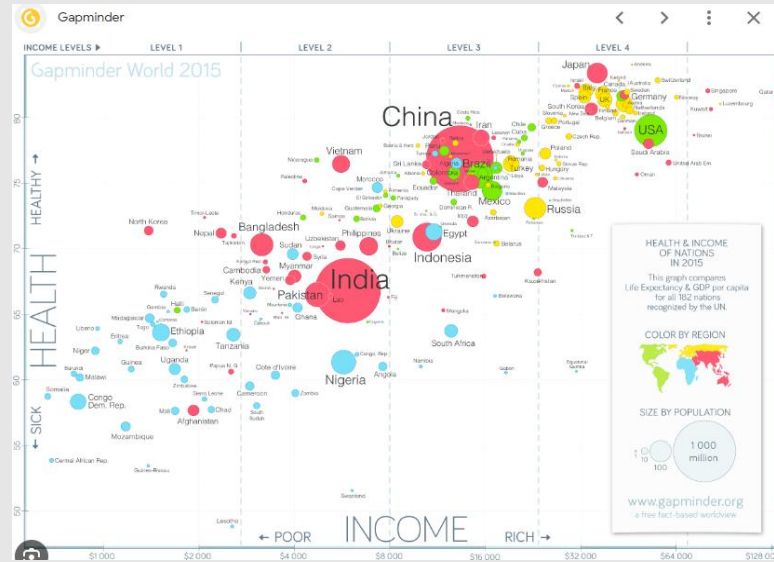
Knowledge Goals: Geography

Will poverty ever end?



Poverty

Poverty is when an individual lacks access to basic human needs such as clean water, shelter, food, work, health care, sanitation and education. The World Bank judges people to be living in Extreme Poverty if they have an income of less than US \$1.90 a day. The poverty cycle below shows how difficult it can be for people to get out of poverty unless there is some outside intervention. There is a strong link between poverty and human well-being. This can be explored using a scattergraph.



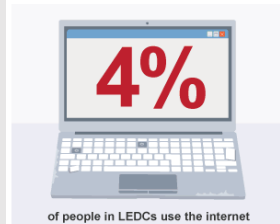
WHAT CAUSES WATER SCARCITY?

There are a number of factors contributing to the rise of water scarcity around the globe, including:

- Climate Change**
 - It is raising the frequency and severity of droughts across the planet and rapidly melting glaciers and snow packs that traditionally provide a source of freshwater downstream.
- Unsustainable energy production**
 - These include coal-fired electric plants, the operation of which draws on tremendous amount of water.
- Water pollution**
 - Sources include pesticides, fertilizers, industrial waste, and human wastewater.
- Unsustainable industrial practices**
 - A variety use massive amounts of water and/or contribute significantly to water pollution.
- Industrial agriculture**
 - It currently uses a whopping 70 percent of the globe's available freshwater – and then waste 60 percent as a result of poor irrigation and application methods.
- Global population growth**
 - This has increased the number of people drawing on water resources.

Source: worldwildlife.com

What does 'poverty' mean?



Key facts about world poverty

UN, 2012



SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD



Explore GapMinder scan here



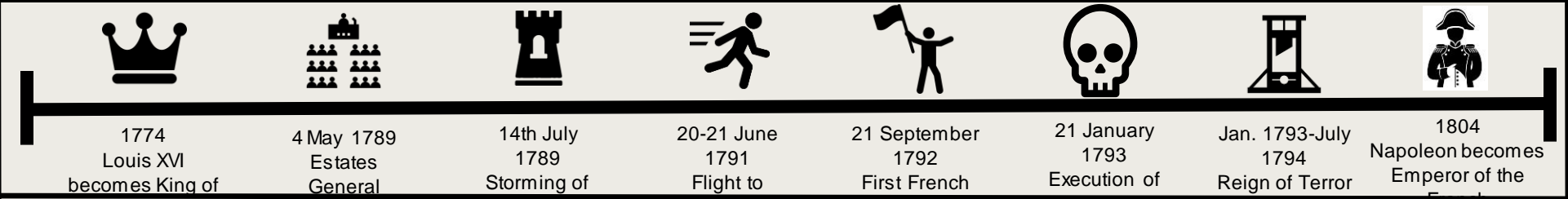
Measuring poverty and inequality

The World Bank uses the economic indicator of Gross National Income (GNI) per capita. This is dollar value of a country's final income in a year, divided by its population. In 1990 the Human Development Index (HDI) was created which combined living standards, health and education, though many experts feel as if human activities on the environment should also be considered. A choropleth map can be used to compare development at global scales.

Investigate regional difference found across the UK by looking at range of economic and social factors by visiting the [https:// www.gov.uk/search/research-and-statistics](https://www.gov.uk/search/research-and-statistics)

McArthur Highway, Brgy. Nancayasan, Urdaneta City 2428
8:00 AM to 5:00 PM (Monday to Friday) | 8:00 AM to 12:00 NN (Saturday) | (075) 656-1044 / 09258734261
facebook.com/ucwdprimewaterurdanetacity

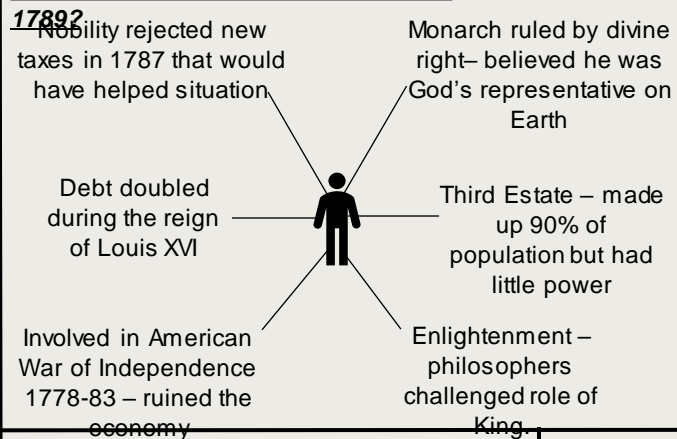
Knowledge Goals: History – French Revolution



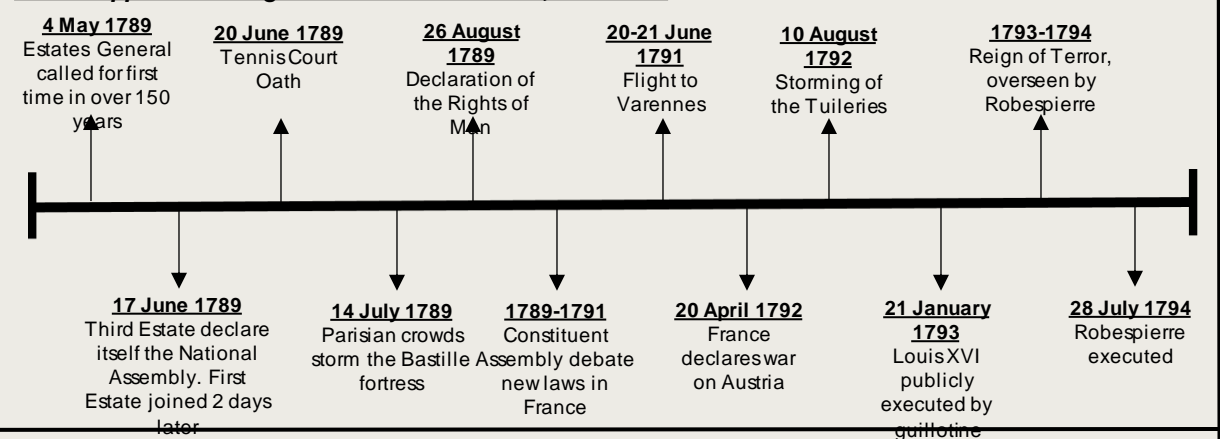
What was the French Revolution?

The French Revolution was not a single event, but a series of developments over many years. Caused by various factors, the French Revolution continued from the meeting of the Estates General in May 1789 to widespread criticism of the monarchy, government and society. The French Revolution showed the people of Europe that inspired revolutionaries everywhere.

What was life like in France before 1789?



What happened during the French Revolution, 1789-94?



Who was Maximilien Robespierre?

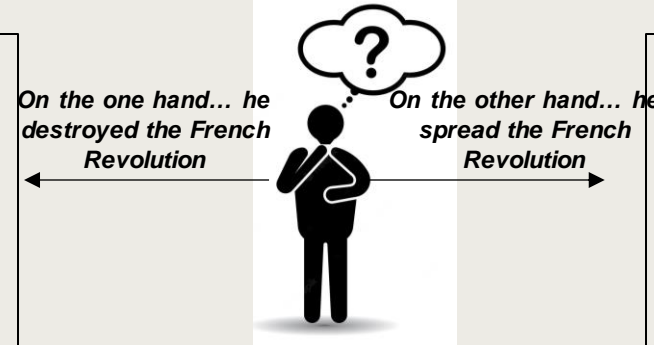
Robespierre was a French lawyer, and before the French Revolution was known for defending the poorest in society. Shortly after the execution of the King, he was elected to the Committee of Public Safety. This was created to reverse the government without a King. In this time, he encouraged and oversaw the Terror, leading to the execution of around 40,000 opponents to the Revolution. Eventually, the Committee of Public Safety turned on him, and he was executed on 28 July 1794.

Robespierre has been viewed as an evil figure in the history of the French Revolution. This has been shown by his execution of 'enemies of the people'. However, others

Who was Napoleon Bonaparte?

Napoleon was a French military leader. A brilliant general who won many battles, he organised a coup and established the Consulate in France in 1799. He became the First Consul, making him a dictator in some way. He later became the Emperor of the French. It has been debated whether he destroyed the values of the French Revolution, or actually spread them.

- Turned France into an absolutist regime – against what French Revolution was challenging.
- Over a million French people died as Napoleon tried to build the French Empire
- Restored slavery and the slave trade in France and its colonies in 1802

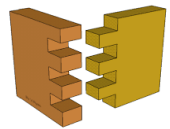


- Key ideas of 'Liberty, Equality and Fraternity' kept under Napoleon.
- Recognised freedom of opportunity, and promoted people on merit.
- Set up a new system of schools (lycees) and supported the idea of universal education.

Knowledge Goals: Materials

Wood Joints

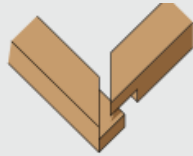
Finger



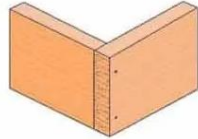
Half-Lap



Half-Lap Mitre



Butt



Scales of production

One off production – These products are expensive at cost price, sometimes bespoke, and often take a long time to make and cost of materials & labour are high. Many prototypes are 'one off products'.

Batch production – these products are identical and produced in small batches, daily, weekly, monthly or when needed. They can range in cost priced. Production normally runs from between 2 - 10k.

Mass production – These products are produced in very high volumes, 10k +. They are normally products that are in high demand and can range in expense, cars are a good example.

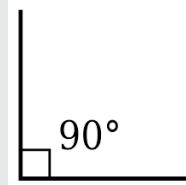
Continuous production – These items are normally very cheap to but make and could be considered 'throwaway'. These factories are often found in developing countries where land for factories and equipment are cheaper.

Just in time production (JIT) – This scale of production relies on the product been manufactured to a time schedule. This allows raw materials to be delivered at an exact time for production and then manufactured and are shipped straight to distribution /retailers. Apple INC uses JIT production.

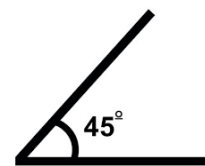
Plan of Manufacture: The steps to manufacture the product in order including health and safety and Quality Control

Maths

90 degrees



45 degrees



Saws

Tenon Saw
For straight lines



Mitre Saw
Sawing 45 degrees



Health and Safety

It is really important we **ASSESS** the **RISK** and **REDUCE** the **RISK** of Injury by **LISTENING** To the **TRAINING** and following the correct **PPE** usage

- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running

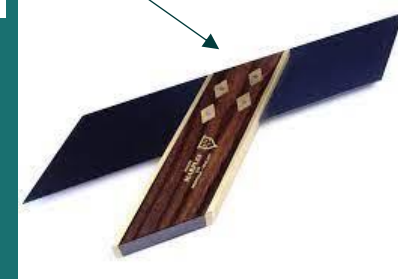


Cross-headed screwdriver

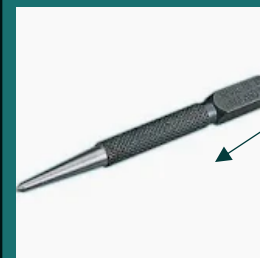


Engineers square

Mitre-Square



Scribe



Router

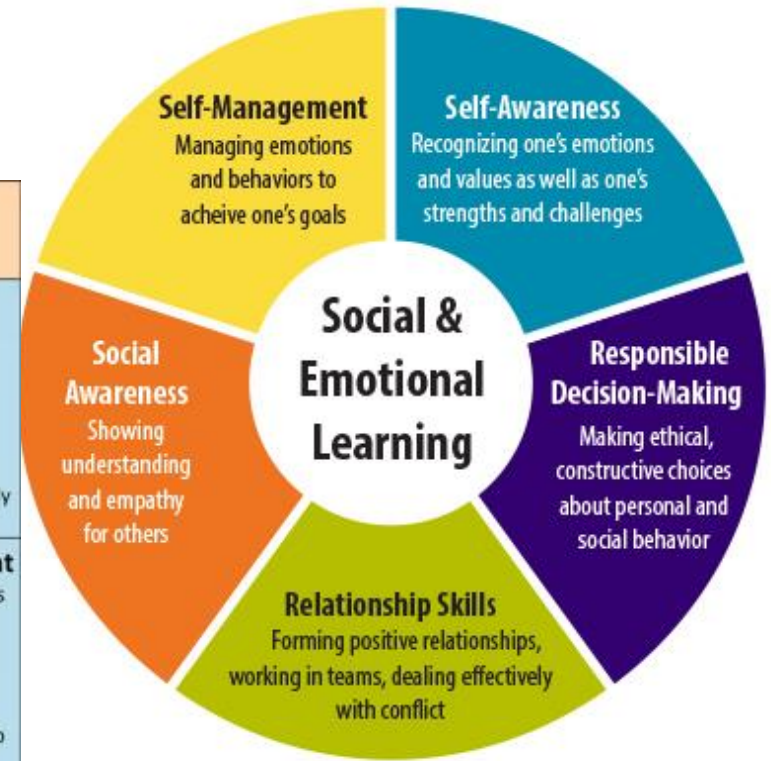


Knowledge Goals: PDEV

Self-Care Tips for Better Self-Confidence



	Recognition	Regulation
Personal Competence	Self-Awareness <ul style="list-style-type: none"> ✓ Self-confidence ✓ Awareness of your emotional state ✓ Recognizing how your behavior impacts others ✓ Paying attention to how others influence your emotional state. 	Self-Management <ul style="list-style-type: none"> ✓ Getting along well with others ✓ Handling conflict effectively ✓ Clearly expressing ideas and information ✓ Using sensitivity to another person's feelings (empathy) to manage interactions successfully
Social Competence	Social Awareness <ul style="list-style-type: none"> ✓ Picking up on the mood in the room ✓ Caring what others are going through ✓ Hearing what the other person is "really" saying 	Relationship Management <ul style="list-style-type: none"> ✓ Getting along well with others ✓ Handling conflict effectively ✓ Clearly expressing ideas/information ✓ Using sensitivity to another person's feelings (empathy) to manage interactions successfully



verywell

INTERNAL VS EXTERNAL

SELF-AWARENESS

FROM: DR. TASHA EURICH

IMAGE BY: JACOB MORGAN



VS



Internal self-awareness

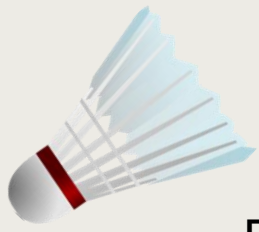
is how we see our own values, thoughts, and emotions.

External self-awareness

is how we are seen by others.

THEFUTUREORGANIZATION.COM





Badminton

- Serving** – I know the rules concerning service areas .I can perform both the Backhand and Forehand serves over a modified net.
- The Clears** – I can hit the shuttle high and with power over a modified net.
- The Drop Shot** – I can land the shuttle towards the front of the court, over a modified net.
- The Smash** – I can perform the smash using good technique and clear the modified net.
- Net Play**– I show good technique and land the shuttle close to the net.
- Game Play** – I am able to score correctly during a game



Hockey

- Ball Control** – I consistently use the stick to control the ball at increasing speeds and demonstrate changes of direction and pace in my work.
- Passing** – I can assess the technique of others and can offer assistance to improve technique. My reception position is low providing a "long bar" to stop the ball.
- Dribbling** – I can move with the ball in front of me either using short taps or rolling the ball with increasing speed.
- Tackling** – I can increasingly use the block tackle effectively in structured practice to breakdown another player's control of the ball.
- Game Situations** – I take advantage of taking free hits quickly to help my team gain ground up the pitch.

Knowledge Goals: PE

Football



- Ball Control** – I can control the ball comfortably with my feet and use other body parts but not always with control.
- Passing** – I can pass the ball accurately using my inside foot while not under pressure over a moderate distance.
- Defending** – I can *pressure* an opponent quickly and successfully tackle them in a 1v1.
- Dribbling** – I can dribble the ball with control when it is close to me and not under *pressure*.
- Shooting** – I can accurately shoot from a moderate distance using the inside of my foot.
- Game Situations** – I move into space in games and communicate with teammates and can maintain *possession* for short periods when the ball is at my feet.



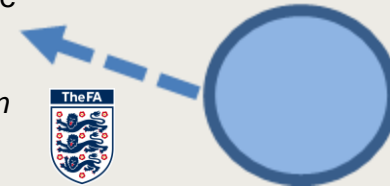
Netball

- Passing** – I am able to pass the ball accurately using a chest, shoulder and bounce pass and identify what pass should be selected for certain situations.
- Footwork** – I am able to demonstrate a good pivot technique when catching the ball and looking for my next pass.
- Attacking skills** – I can change direction to create a space to receive the ball.
- Defending skills** – I am able to mark a player with a ball demonstrating a knowledge of the rules; i.e. a 3 foot mark.
- Game Situations** – I can demonstrate an understanding of both an attacking and a defending position and where all positions can go on the court.

Gymnastics



- Floor** – I can perform an individual 6-8 action sequence including a variety of balances and linking movements, showing control and tension.
- Jumps** – I can perform flight movements (pike & straddle) from the springboard or trampette.
- Apparatus** – I can perform an astride, through vault and a neckspring off the end of the box.
- Performance** - I can perform simple movements and balances as part of a pair.



Rugby

- Evasion/Support Play** – I understand the 2nd 'principle of play' – support and can demonstrate this during drills.
- Passing & Catching** – I can catch a ball on the move that is passed accurately to me and then pass it to a team mate holding depth in attack and moving onto the ball at pace I can perform a 'loop' pass and manipulating defences
- Tackling/Defensive Strategies** – I can tackle an opponent using the side tackle and front tackle at speed
- Rucks & Mauls** – I can form a ruck and maul to successfully secure possession.
- Game Play** – I understand the different positions and the attributes needed to perform them. I understand the setup of 3-man uncontested scrums.

Knowledge Goals: Physics – Contact forces

Effects of forces


- Forces can cause objects to
 - speed up or start moving
 - slow down or stop moving
 - move in a different direction
 - turn or rotate
 - change shape

Types of force

- Forces can be described pushes or pulls.
- Forces which don't need contact to act are called non-contact forces. Examples include magnetism and gravity.
- Forces which only act when there is contact between objects are called contact forces. Examples include friction and air resistance.

Balanced forces

- The overall effect of the forces acting on an object is called the **resultant force**.
- If all the forces acting on an object cancel each other out, we say the object is in equilibrium. The resultant force is zero. The object will be stationary or moving with constant speed.

constant speed 100N ←  → 100N

- If the forces acting are unbalance, the resultant force is not zero and the object will speed up or slow down.

acceleration 100N ←  → 50N

deceleration 50N ←  → 100N

Drag

- Materials which flow are called fluids; gases and liquids are fluids.
- When an object tries to move through a fluid, it will experience some resistance to this motion. This is called drag.
- Drag due to moving through the air is also called air resistance.
- Drag is important in the design of aeroplanes and the movement of birds. Each change the shape of their wings to slow down.

Streamlining

- Objects that are good at moving through fluids without causing a lot of drag are streamlined.
- To minimise drag, scientists can use a wind tunnels to examine how air passes around an object. The design of the object can be changed to make it more aerodynamic.



Peregrine falcons have the fastest dive speed of any bird (186 mph).



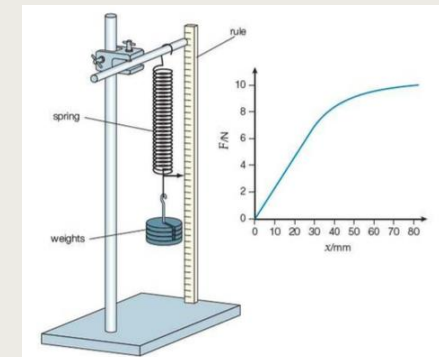
Testing the aerodynamics of a lorry in a wind tunnel.

Stretching and compression

- Materials change shape when a force is applied to them.
- A compression force can squash an object.
- A tension forces can stretch an object.
- Some materials don't change shape very much even with very large forces.
- Some materials break easily with a small force.
- A material which returns to its original shape after the force is removed is called an elastic object.
- If an object is stretched past its elastic limit, it will not return to its original shape. It becomes deformed and it may break.

Hooke's Law

- Springs are normally elastic.
- They have predictable behaviour which means they extend by a known amount for every newton of force applied.
- The extension of springs follow a linear relationship.
- Springs can be used as force-meters.



Knowledge Goals: Maths

Unit 1 – Rounding & Estimating

Topic	Video	Resource
Rounding to decimal places	Watch this	Complete Check your work
Rounding to significant figures	Watch this	Complete Check your work
Estimating	Watch this	Complete Check your work

Estimating Calculations

Estimate the value of 28×48

If we round both to 1 sf, this gives:
 $30 \times 50 = 1500$

Therefore $28 \times 48 \approx 1500$

Estimate the value of
 $(59.3 + 12.09) + 23.4$

We can approximate this sum to be $(60 + 12) + 20 = 25$

Therefore,
 $(59.3 + 12.09) + 23.4 \approx 25$

Estimate the value of $\frac{(4.2 \times 2.4)^2}{\sqrt{5}}$

We can estimate that (4.2×2.4) is approximately equal to 4×2 (8)

Now to deal with $\sqrt{5}$. We know that 4 is a square number and it is close to 5 so we can say that $\sqrt{5}$ is approximately equal to $\sqrt{4}$ (2).

The sum becomes $\frac{(4 \times 2)^2}{\sqrt{4}} = 32$

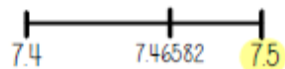
so $\frac{(4.2 \times 2.4)^2}{\sqrt{5}} \approx 32$

Round to Decimal Places

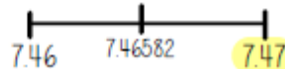
"To 1 dp" means to one number after the decimal
"To 2 dp" means to two numbers after the decimal

Method 1

Round 7.46582 to 1 dp



Round 7.46582 to 2 dp



Method 2

Round 7.46582 to 1 dp

7.46582, 6, so we round up to 7.5

Round 7.46582 to 2 dp

7.46582, 5, so we round up to 7.47

Round to Significant Figures

Start counting as soon as you get to a non-zero digit

Rounding to 1 significant figure (1 sf)

Round 1394 to 1 sf = 1000

Round 265 to 1 sf = 300

Round 32 to 1 sf = 30

Round 187 to 1 sf = 200

Round 0.439 to 1 sf = 0.4

Round 0.008722 to 1 sf = 0.009

Round 0.0005043 to 1 sf = 0.0005

Rounding to 2 significant figures (2 sf)

Round 1394 to 2 sf = 1400

Round 265 to 2 sf = 270

Round 32 to 2 sf = 32

Round 187 to 2 sf = 190

Round 0.439 to 2 sf = 0.44

Round 0.008722 to 2 sf = 0.0087

Round 0.0005043 to 2 sf = 0.00050

Knowledge Goals: Maths

Unit 2 – Calculations with Fractions

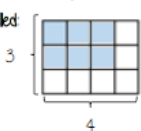
Topic	Video	Resource
Find equivalent fractions & write fractions in their simplest form	Watch these equivalent Watch this simplifying	Online practice Simplifying Worksheet Check your answers
Compare & order 2 or more simple fractions	Watch this	Ordering Worksheet Check your answers Quick Online Practice Equivalent Fraction Pairs
Convert mixed numbers to improper fractions & vice versa	Watch this Watch this	Improper fractions to mixed numbers Mixed numbers to improper fractions
Calculating with fractions including mixed numbers	Watch this + & - Watch this multiplication Watch this division	Adding Subtracting Multiplying Dividing

Multiplying non-unit fractions

Shade in 3 parts → $\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$ ← Parts shaded

Repeat it on this many rows →

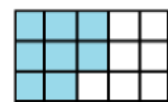
This many columns → This many rows →

Modeled:  Total number of parts in the diagram

Dividing any fractions Remember to use reciprocals

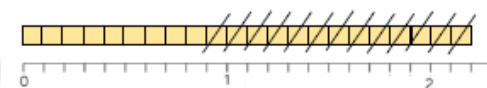
$\frac{2}{5} \div \frac{3}{4} = \frac{2}{5} \times \frac{4}{3} = \frac{8}{15}$

Multiplying by a reciprocal gives the same outcome.

Represented:  = $\frac{8}{15}$

Add/Subtraction fractions (improper and mixed)

$2\frac{1}{5} - 1\frac{3}{10} = 2\frac{2}{10} - 1\frac{3}{10} = \frac{22}{10} - \frac{13}{10} = \frac{9}{10}$



- Convert to an improper fraction
- Calculate with common denominator

Partitioning method

$2\frac{1}{5} - 1\frac{3}{10} = 2\frac{2}{10} - 1\frac{3}{10} = 2\frac{2}{10} - 1 - \frac{3}{10} = 1\frac{2}{10} - \frac{3}{10} = \frac{9}{10}$

Knowledge Goals: Music

Form and Structure

Why do I need to plan ahead?

When writing a piece of music, it is not just what the melody sounds like that composers will consider. There are a wide range of things that are taken into consideration, including what instruments are used and experimentation with elements such as tempo and dynamics. The structure is the way in which the music is sequenced (ordered) and the whole piece is composed in sections. In this unit you will learn about some of the common forms (structures) in music and how to identify change. Taking inspiration from Gustav Holst's 'The Planets Suite', you will compose your own piece of music with a space theme.

Gustav Holst

Gustav Holst was an English composer and he has written many well-known pieces of music, but The Planets Suite is amongst his most famous work. Holst was inspired by astrology and he wanted to write a successful piece of music for a large orchestra. He gave each planet a mood or character and composed music to create the atmosphere for those characters. Examples include 'Mars: The Bringer of War', 'Venus: The Bringer of Peace' and 'Jupiter: The Bringer of Jollity'



Great Composers

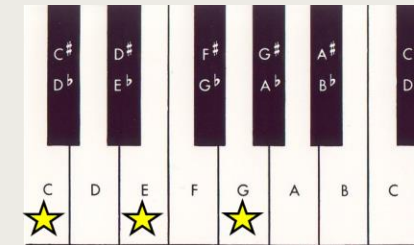
Gustav Holst
The Planets

Bach
Minuet in G

Mozart
Rondo alla Turca

Chords

A chord is where two or more notes are played at the same time. The most common type of chord is a triad and the easiest way to create a triad is:



Play one, miss one, play one, miss one, play one

Common triads include major and minor, where major feels happy and bright, and minor feels slightly sad

Wider Listening

A range of music from the classical period and 20th century including pop and folk music is a good place to start. Why don't you try to write down the structure as you listen?

Knowledge Goals: Philosophy, Religion and Ethics

Philosophy

The first cause argument

Thomas Aquinas

The **first cause** argument is an argument for the existence of God associated with **St Thomas Aquinas** (1225-1274).



The design argument

“ *In the absence of any other proof, the thumb alone would convince me of God's existence.* ”

Isaac Newton (1642-1727)



William Paley (1743-1805) compared the design of the universe to finding a watch. He argued that if you were walking on a moor (grassland area) and found a watch lying on the grass and saw how complicated it was you would have to assume someone made it.

By looking at the watch you would see that all the coils, springs and movements all work together so that the watch is able to keep time. Anyone who found this watch, having never seen a watch before, would have to conclude that **someone designed it** for it to fulfil its purpose of keeping time.

Paley compared this to the design of the world. He argued that just as someone who found the watch would conclude that it was made by someone because of its design, someone who looks at the universe must conclude that there is a designer because of how the universe has been designed.

Religious experience argument

A religious experience is when someone feels they have had a direct or personal experience of God.

It is argued that if someone feels they have experienced God, this will be the most convincing proof of God's existence because they have personally experienced or felt God for themselves. It is not simply an argument based on logic or reason.

A religious experience could be a dream or vision where God speaks to a person, or it could be a miraculous healing. This first-hand experience is utterly convincing to that person.



All in the mind?

It could be argued that religious experience is all in the mind. We do not fully understand the complexities of the human mind and perhaps it can play tricks on us, making us think we have experienced God.

Coincidence?

It could be argued that religious experiences are simply coincidences, or that a person is looking for a religious experience and therefore creates one in their mind.



Find out more!

Knowledge Goals: Spanish

Estrategia

Building your vocabulary

Try to collect words so that you can use them again. Here are some ideas:

- Note down words in different categories:
Verbs
Adjectives
Nouns
Cognates
- Note down words under different topic headings:
Hobbies
Daily routine
Appearance
Character
Opinions
- Note down words as pairs of opposites:
alto/a – bajo/a
- If you find a word difficult to remember, write out a sentence using it:
lazy = perezoso
Mi mejor amigo es inteligente, pero un poco perezoso.

¿Qué te gusta? Me gusta ... Me interesa ... Me encanta ... el fútbol la música la natación Me gustan ... Me interesan ... Me encantan ... los cómics los videojuegos las hamburguesas	What do you like? I like ... I'm interested in ... I love ... football music swimming I like ... I'm interested in ... I love ... comics video games hamburgers
¿Qué no te gusta? No me gusta la música. Odio el fútbol. No me interesan los cómics.	What don't you like? I don't like music. I hate football. I'm not interested in comics.

¿Cómo es de carácter? Es ... No es ... Nunca es ... divertido/a generoso/a hablador(a) inteligente perezoso/a serio/a	What kind of person is he/she? He/She is ... He/She isn't ... He/She is never ... amusing generous talkative, chatty intelligent lazy serious
¿Cómo es su pelo? Tiene el pelo ... castaño negro pelirrojo rubio corto largo ondulado	What is his/her hair like? He/She has ... hair. brown black red fair, blond short long wavy

Los amigos tu mejor amigo/a ¿Cómo es? Es ... alto/a bajo/a delgado/a guapo/a	Friends your best friend What is he/she like?, What does he/she look like? He/She is ... tall short slim good-looking, attractive
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¿De qué color son sus ojos? Tiene los ojos ... azules grises marrones verdes	What colour are his/her eyes? He/She has ... eyes. blue grey brown green
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En mi tiempo libre ¿Qué haces en tu tiempo libre? Bailo. Chateo por internet. Escucho música. Hago deporte. Juego con el ordenador. Mando mensajes. Salgo con mis amigos. Voy de compras.	In my free time What do you do in your free time? I dance. I chat online. I listen to music. I do sport. I play on my computer. I send messages. I go out with my friends. I go shopping.
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Más o menos ¿Quién es más alto/a? ¿Quién es menos alto/a? ... es más viejo/a que es menos joven que ...	More or less Who is taller? Who is less tall/shorter? ... is older than is less young than/ isn't as young as ...
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¿Cuándo? después luego normalmente por la mañana por la tarde primero	When? afterwards then normally in the morning in the evening first
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Mi rutina diaria ¿Qué haces por la mañana? Por la mañana ... me despierto me levanto me ducho me peino me visto desayuno voy al instituto ¿Qué haces por la tarde? Por la tarde ... hago mis deberes ceno veo la televisión me lavo los dientes me acuesto	My daily routine What do you do in the morning? In the morning ... I wake up I get up I shower I comb/brush my hair I get dressed I have breakfast I go to school What do you do in the evening? In the evening ... I do my homework I have dinner/supper I watch TV I brush my teeth I go to bed
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Palabras muy útiles nunca pero también y o más menos mejor	Very useful words never but also and or more less better, best
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Nacionalidades ¿Cuál es tu nacionalidad? Soy ... argentino/a chileno/a colombiano/a escocés/escocesa español(a) estadounidense galés/galesa inglés/inglesa irlandés/irlandesa mexicano/a	Nationalities What is your nationality? I'm ... Argentinian Chilean Colombian Scottish Spanish American Welsh English Irish Mexican
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