

Knowledge Organiser

Year 7

Cycle Three

2020-21



Self-Quizzing

Why should I self-quiz?

Your mind is split into two parts: the **working-memory** and the **long-term memory**. Everybody's **working-memory is limited**, and therefore it can very easily become overwhelmed. Your **long-term memory**, on the other hand, is **effectively limitless**.

You can support your working memory by **storing key facts and processes** in long term memory. These facts and processes can then be **retrieved** to stop your working memory becoming **overloaded**.

Research shows that students remember 50% more when they test themselves after learning something.

This booklet contains **knowledge organisers** for all of your subjects. Each knowledge organiser has the key information that needs to be **memorised** to help you master your subject and be successful in lessons.

How should I self-quiz, and how often?

Research shows that regular testing improves knowledge retention; in order to learn the information in your knowledge organiser, you will need to work with it more than once! If a subject sets homework more than once per week, it is highly likely that they will ask you to work with the same information on both nights – this is so that you learn it more effectively. There are many different ways to learn the material in your knowledge organiser.

You could:

Cover – Write – Check: Cover up one section of the knowledge organiser, and try to write out as much as you can from memory. Check the knowledge organiser to see if you are right; correct any mistakes and fill in any missing information in your green pen. **Repeat this process at least twice to fill your page.** You could also include content from the previous week's homework – especially if there were some parts you struggled with.



Cover



Write



Check

If you find the cover-write-check method too simple, try one of the following strategies:

- Practice paragraphs / exam questions** – use the key information on your knowledge organiser to write a paragraph response to the topic. This will show that you can use key vocabulary in context.
- Revision clock** – draw a clock and add the topic in the middle. Break the clock face into 10 minute sections. Add notes from the knowledge organiser in each section. Cover the clock and recite the information aloud.
- Transformative tasks** – take the information from the knowledge organiser and present it in a different format: e.g. a newspaper report, a page from a text book, a comic strip, a set of quiz questions (make sure that you include the answers).
- Additional research** – Complete your own research into the topic set on your knowledge organiser. Present this new information in your homework book.
- Use your knowledge organisers to create flashcards.** These could be double sided with a question on one side and the answer on the other. Alternatively, a keyword on one side and a definition or diagram on the other. These are then used for self-quizzing.
- Draw a mind map**, jotting down everything that you can remember from the knowledge organiser. Check accuracy, correct in green pen and then repeat.

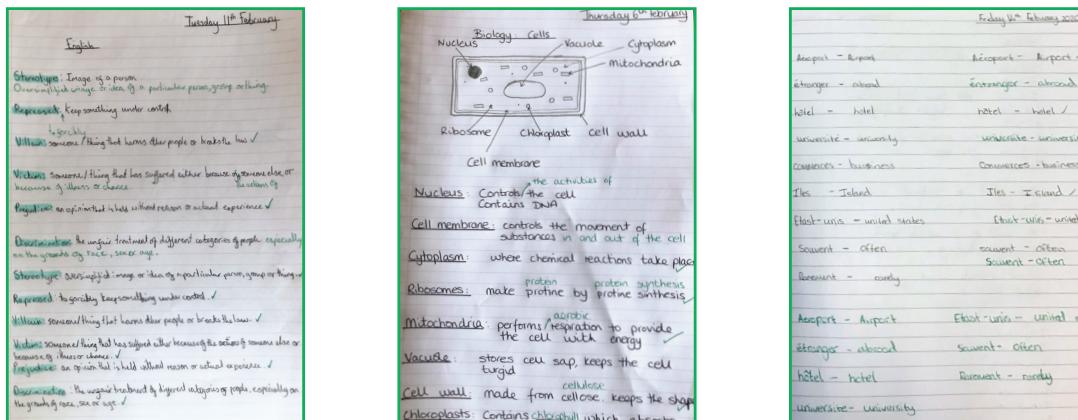
TOP TIP

Don't just copy material from the knowledge organiser into your book. This will not increase your retrieval strength, since you are not actually trying to remember anything. **It won't stick!**

How should I present my work?

Please remember that the same rules apply to the presentation of your homework as apply for your class work: **dates and titles (which should be the name of the subject) need to be underlined with a ruler** and you should **present your work as neatly as you are able to**.

If you are self-quizzing correctly, there should be **evidence of green pen on your page**. Here are some examples of how to set out your work:



Homework Schedules

Week commencing	Week	Section of KO to work from	Week commencing	Week	Section of KO to work from
19th April	A	Week 1	21st June	A	Week 9
26th April	B	Week 2	28th June	B	Week 10
3rd May	A	Week 3	5th July	A	Assessment week: revise for assessments
10th May	B	Week 4	12th July	B	Super-teaching week: teachers will set homework linked to knowledge gaps identified in assessments
17th May	A	Week 5	19th July	A	Enrichment Week
24th May	B	Week 6			
7th June	A	Week 7			
14th June	B	Week 8			

Week A	Subject 1	Subject 2	Subject 3
Monday	English	Food	Science
Tuesday	Tier 2 vocab	Maths (Sparx)	LTTF
Wednesday	Geography	History	Drama
Thursday	Science	English	Computing
Friday	Maths (Sparx)	Maths (Sparx)	MFL

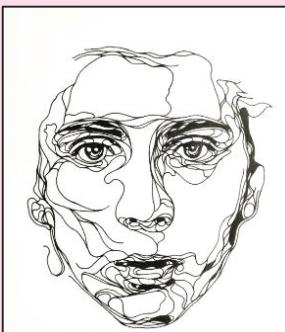
Week B	Subject 1	Subject 2	Subject 3
Monday	English	MFL	Science
Tuesday	PE	Maths (Sparx)	DT
Wednesday	Geography	History	Art
Thursday	Science	English	Music
Friday	Maths (Sparx)	Maths (Sparx)	MFL

Cover – Write – Check the ‘Art Elements’

WEEK 1/2

LINE

A line is a mark made on a surface. For example, by a pencil, pen or other art material. It can take many forms: diagonal, horizontal or curved. Line can be used to show many different qualities, for example: Contours, feelings or expressions and movements.



CONTINUOUS LINE



LINE VOCABULARY

Bold Thin Thick Erratic Zig-zag
Wavy Broken Hatch Cross-hatch
Sharp Soft Curved Angular
Dotted Continuous Straight
Horizontal Vertical Diagonal
Dashed Length Slant Outline
Parallel

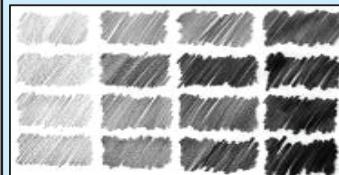
WEEK 3/4

TONE

Refers to the lightness or darkness of something. This could be a shade or how dark or light a colour appears. Tones are created by the way light falls on a 3D object.



TONAL SHADING



TONAL VOCABULARY

Light Dark Shades Harsh
Silhouette Tint Reflecting
Gradient Graphite
Grayscale Hatching Cross-hatching
Shadow Sketch
Tonal Solid Contrast
Dull Shading Highlight
Blend Bold Range

EXTEND YOUR UNDERSTANDING

1. Draw as many different types of line you can think of.
2. Create your own tonal scale with your own drawing pencils.

WEEK 5/6

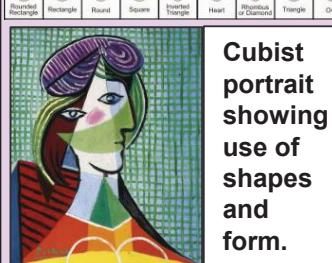
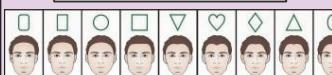
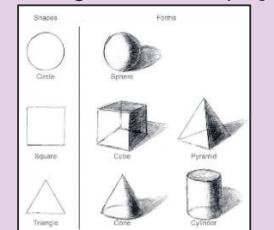
SHAPE

Is a Two-Dimensional area. Shapes can either be geometric, like a circle, square or triangle, or irregular. [2D = height + width]

FORM

Is a Three-Dimensional shape, such as a cube, sphere or cone.

[3D = height, width + depth]



SHAPE & FORM VOCABULARY

Rounded Angular Irregular
Chunky Small Fragile
Feminine Masculine Bold
Robust Bulbous Sculptural
Cylindrical Delicate
Balanced Organic
Geometric Abstract
Realistic Simplified
Structure Proportion
Spherical Square Ovoid
Regular Volume

WEEK 7/8

PATTERN

Refers to a design created by repeating lines, shapes, tones or colours. The design used to create a pattern is often referred to as a motif. These motifs can be simple shapes or complex arrangements. Patterns can be man-made, like a design on fabric, or natural, like the markings on animal fur. Patterns can also be regular or irregular.



Natural Patterns



Man-Made Patterns



PATTERN VOCABULARY

Repeat Motif Simple
Complex Symmetrical
Random Natural Man-made
Mirrored Surface
Structural Decorative
Tessellation Rhythm
Balance Recurring Block
Optical Illusion Design
Detail

Year 7 ART



WEEK 9/10

TEXTURE

Refers to how something feels or how it appears to feel. There are two types of texture; actual texture and simulated texture. **Actual Texture:** means the actual physical surface of an artwork or design. It describes the tactile feeling you would get if you ran your hand over it. **Simulated**

Texture: refers to the illusion of texture which is created by an artist using various skills.



Actual Texture



Simulated Texture

TEXTURE VOCABULARY

Scaly Flaking Crusty Rough
Smooth Bobbled Sharp Wavy
Woolly Stubble Woven Wooden
Stippled Rusty Carved Bark
Stone Feathery Polished
Crumbling Actual Visual Coarse
Fluffy Furry Silk Tactile

Year 7 Computing

Week 1

Computer networks and protocols

A computer network is when two or more computers are connected together to allow them to communicate.



Key milestones

The internet: The first internet was called the ARPANET. Only a few people had access to it initially.

Mainframe computers: Mainframe computers grew in popularity. These were large and expensive.



World Wide Web: Tim Berners-Lee invented the WWW.



The first personal computers: IBM and Apple were a couple of the brands releasing PCs.



Mini computers: Nokia introduced a mobile phone that could connect to the internet.



Question
How many devices are now connected to the internet?

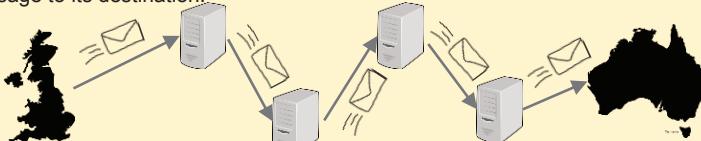
Guidance:

There are just under 8 billion people on the planet.

Message transmission: email

Just as a letter does not go directly from the sender to the recipient, the email does **not** travel from a sender's machine through a cable or "into the cloud" directly to the recipient's machine.

The message is passed on to many mail servers along the way, who help get the message to its destination.



Protocols

A protocol is a standard set of rules that allow electronic devices to communicate with each other. Protocols exist for several different applications. ... Examples include wired networking (e.g., Ethernet), wireless networking (e.g., 802.11ac), and Internet communication (e.g., IP).

email and web address protocols

For email an @ symbol must be used in an email address. The email address must be unique e.g. studentname@stlukescofe.school

For web address E.g. <http://www.stlukescofe.school> All website addresses start with 'http://' followed by 'www'. All website addresses are unique. They use dots to separate each part of the address.

Week 3

Networking Hardware

What is hardware?

Hardware is the term given to a physical device that you can see and touch. For instance the monitor you are watching this video on is a piece of hardware.



So what is Network Hardware?

The Physical devices that are needed in order to create a network

There are a number of pieces of hardware that are needed in order to create a network. You will become familiar with the following



Hub



Router



Server



Network Cable

A hub connects a number of computers together.

Ports allow cables to be plugged in from each connected computer. A message sent from computer A to computer B travels via the hub.

When a network needs to be connected to another network over a large area, a router is needed.

A router forwards messages from one network to another. It acts as a gateway.

A common job of a router is to join a home network to the internet via an internet service provider (ISP).

Some networks will have a server.

A server is a powerful computer which provides services. There are many different types of server, for example, a file server which stores files (i.e. text, images, sound, or video) that can be accessed by all devices on the network.

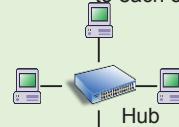
To connect together different devices, you need cables.

They have plastic plugs that connect into sockets on devices. The cable is made up of a number of copper wires.

Data can be sent in both directions across a cable

Common types of Network Topology

Network Topology is the way that the elements or parts of a network are connected to each other. The logical layout of the network.



Star Topology

The hub becomes the central device in the network.

All messages between the computers will pass through the hub.

It can be cheaper and easier to set up



Mesh Topology

All computers can communicate with one another as they all have a connection.

It is very robust

This setup requires a lot of cabling.

With more computers, this can become unmanageable and expensive.



Week 5

Wired and Wireless Networks

A computer network can be either wired or wireless.

A computer network can be either wired or wireless.



Wireless networks send data through the air using radio waves.

Popular examples of wireless technologies are:

- Bluetooth
- WiFi
- 3G (third generation wireless mobile)
- 4G (fourth generation wireless mobile)

Bandwidth

- Bandwidth is the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second
- The concept is similar to the volume of water flowing through a pipe. This depends on the size and thickness of the pipe.
- More bandwidth **DOES NOT** increase the speed.
 - In the analogy of a pipe, the water doesn't travel any faster as the pipe gets bigger, but you get more water because more can flow through at the given time.

Bandwidth is the maximum rate that data can be transferred across a connection. A common misconception is that the more bandwidth you have, the faster the data travels. This is not the case. The data still travels at the same speed, but more data can travel through at any given time.

Measuring bandwidth:

- Bandwidth is measured in bits per second
- A bit is the smallest unit of data
- Data transfer rates are now so good that bandwidth is usually measured in Megabits per second (Mbps)
- 1 Mb = 1 million bits



Year 7 Computing



Week 5

Wired and Wireless Networks

Bandwidth Performance:
Test the performance of your current connection.

Visit <https://www.speedtest.net/>

- Look at your download speed
- Look at your upload speed

Questions:

- Are your speeds the same as your neighbours'? If not, why might that be?
- If we were all watching YouTube at the same time, would this change the result?



The typical download speeds are:

- 3G: 3 Mbps
- 4G: 20 Mbps
- Broadband: 46 Mbps

Download: Your computer is receiving data (e.g. browsing a web page, watching online videos).

Upload: Your computer is sending data to the internet (e.g. putting a video on YouTube, posting a photo on Instagram).

The future

- 5G is the next generation of mobile internet connectivity.
- It is available now. EE was the first to release it in 6 cities in May 2019.
- 5G has the potential to reach speeds of 10 Gbps (1 Gb = 1000 Mb).
 - 20 times faster than 4G.
 - It would take less than 1 second to download an HD film!



Buffering

Think of your internet connection as a pipe, but instead of water, it's carrying digital data. If you see the icon shown here, it means that your connection is too narrow and the data it carries is not coming through quickly enough to keep up with your activity. An example might be when you are watching a film on Netflix and it pauses, and you have to wait for a period of time before it starts again. If this occurs a lot, you might need to change your internet package to one with more bandwidth.

Week 7

The Internet

The internet is a worldwide collection of networks **connected** globally. Information can travel between and within these networks.

- It is the physical hardware, i.e. the cables, the routers, and other pieces of hardware used to connect devices together.
- Any device connected to the internet is part of this network, for example:
 - Laptops • Games consoles • PCs • Tablets • Mobile phones

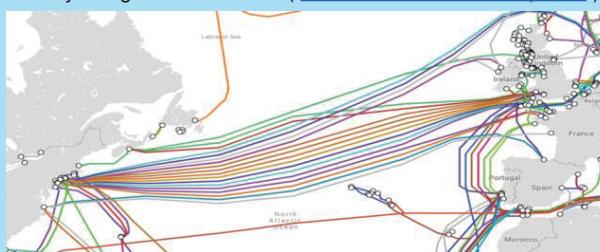
What do we use it for?

There are many uses of the internet. Below are some of the most common uses:

- Storing information (e.g. cloud storage)
- Communication (e.g. email)
- Entertainment (e.g. streaming films, videos, and music)
- Playing online games
- Social networking (e.g. Instagram)
- Online shopping
- Viewing websites

How are networks in the UK connected to networks in the United States?

By using Oceanic cables (www.submarinecablemap.com)



Satellites are used to connect distant networks in some instances, particularly in remote locations where cables are not present, but it is not the most common way. 99% of internet data passing across continents travels through cables that lie on the seabed.

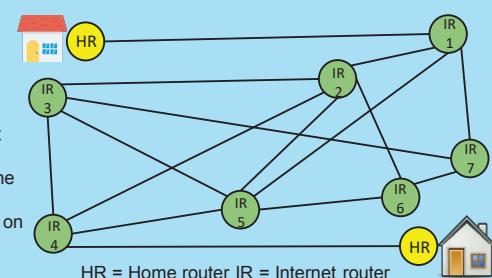
These are faster and cheaper than satellites.

Data Transmission - Packets

- Networks send and receive messages in small units of data known as 'packets'.
- A single message may be too large to fit in one packet. It is often split into many packets.
- Each packet contains a part of the message, an address of where it came from, and an address of where it is going. These addresses are known as 'IP addresses', and they are unique.

Internet Protocol (IP) addresses

- An IP address is made up of 4 groups of numbers between 0 and 255, each separated by a full stop. e.g. (192.168.0.1)
- These are unique for every device on the internet.
- Typically, this would be the address of the router that connects to the internet.



Packets and routers:

- A router joins networks together across the internet and forwards packets from sender to receiver.
- Packets will be sent in the correct order.
- There are millions of routers on the internet.
- Packets can take different routes on their way to their destination.

Week 9

Internet Services

The World Wide Web and the internet are **NOT** the same thing
The internet is a vast network of computers all connected together

The World Wide Web is a service provided on the internet. It is the websites, web pages, and links found on the internet. (the programs (software) that run on the Hardware of the Internet)

The Internet



ARPANET

THE FIRST INTERNET

- The internet was created by the US military in the 1960s and was originally called the ARPANET
- The US wanted to design a system where information could be passed on even in the event of a catastrophe or nuclear attack
- Data was sent along multiple routes and reconstructed at their destination
- The system could keep running even if parts of it were destroyed

The World Wide Web (WWW)

- The World Wide Web is part of the internet that contains websites and web pages.
- It was invented in 1989 by an English computer scientist called Tim Berners-Lee.
- The World Wide Web is also known as 'the WWW' or 'the web'.



Internet Services

- Voice over IP (VoIP) – audio calls
- Email
- Online gaming
- World Wide Web
- Media streaming (Netflix, Spotify)
- Internet of Things (IoT)
- Instant messaging

VoIP

- Allows people who have an email address to send and receive electronic messages.
- Email is delivered almost instantly over great distances, and is usually free.
- You can attach documents to emails and email multiple people at the same time.
- Many popular apps use VoIP to make internet calls, such as WhatsApp.

IoT

- The Internet of Things means taking everyday 'things' and connecting them to the internet.
- 'Connectivity' is the key factor.
- It allows the advantages of the internet to go beyond computers and smartphones.
- These connected 'things' allow us to gather information, send information, or both.

Internet of Things (IoT) concerns

Your privacy:

- IoT devices collect and share information about you, with or without your knowledge. This includes microphones, cameras, and GPS location.
- Companies may eventually be able to learn everything about you.



Your security:

- IoT devices could be hacked
- Example: opening a car or house door remotely without your permission

The Internet of Things has the potential to make our lives much simpler, but privacy must be protected, and it must be secure.

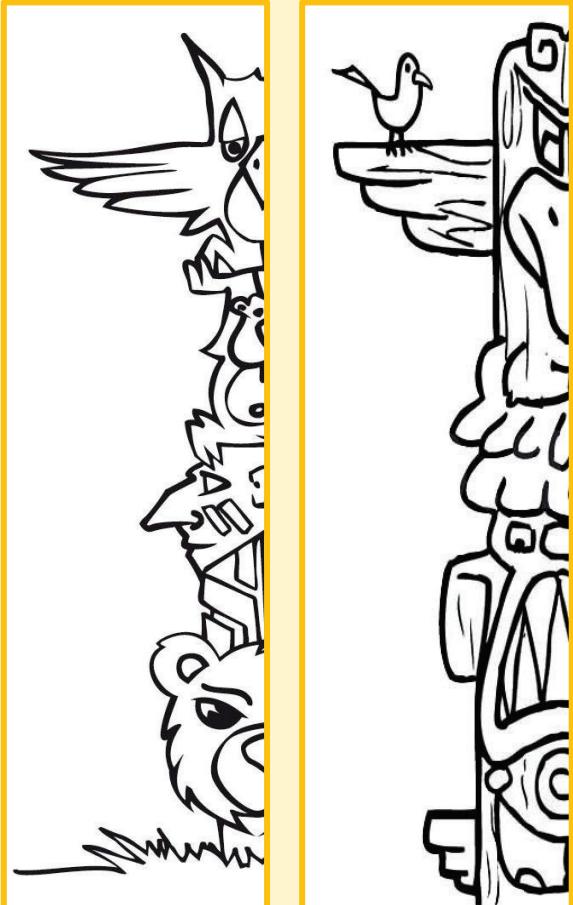
Year 7 Three-Dimensional Design

Week 1 / 2

Drawing using symmetry

Something is **symmetrical** when it is the same on both sides. A shape has **symmetry** if a central dividing line (a mirror line) can be drawn on it, to show that both sides of the shape are exactly the same.

Trace one of the images into your exercise book then complete the image by drawing the missing half, ensuring that the image is symmetrical. Focus on proportion and positioning of the facial features.

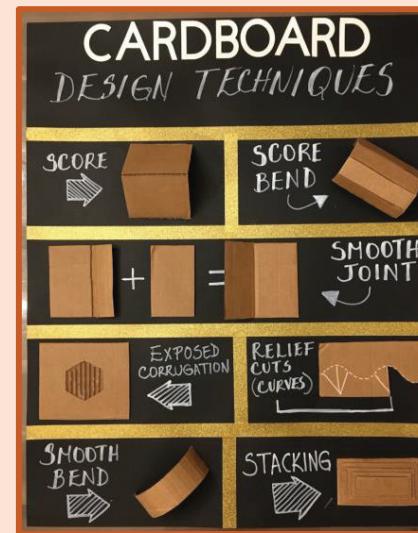


Week 3 / 4

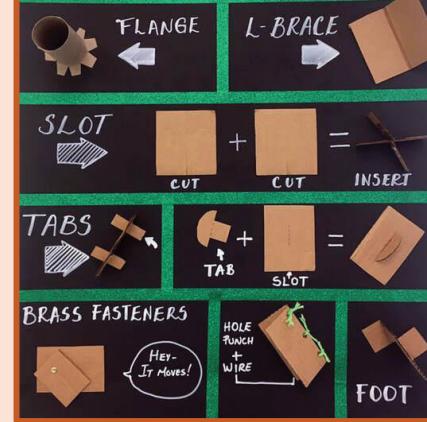
Cardboard Modelling

Making a model allows designers to visualise and test how a product looks and performs in 3D and is a great way of checking a product's viability.

Modelling can be time-consuming and expensive, but a physical model allows a person to see and handle a product



CARDBOARD ATTACHMENTS



TASK - Have a go at modelling with cardboard and create as many different samples like the ones above and opposite as you can.

Week 5 / 6

Surface Treatments

While a blank canvas holds all the possibilities in your creative world, surface textures offer an inspirational way to begin a piece of artwork.



Year 7 Three-Dimensional Design



Week 7 / 8

Critical Analysis

Critical analysis is responding to, interpreting meaning, and making critical judgments about specific works of art/design.

You are going to be analysing the Alex Yanes sculpture "Amigos" - 2013 - Mixed Media on Paint Gallons. Look at the images from Week 7/8 & 9/10 to form your answers.

CONTEXT...

- Who made it (artist's name)?
- What date was it made?
- What is the title?
- From previous knowledge organiser what do you know about the artist?

CONTENT...

- What is it a sculpture of?
- What does the work represent?
- Is it a realistic or abstract sculpture?
- Does the work tell a story or send a message?



Week 9 / 10

Critical Analysis Continued

Continue your analysis of the Alex Yanes sculpture "Amigos" - 2013 - Mixed Media on Paint Gallons. Look at the images from Week 7/8 & 9/10 to form your answers.

MOOD ...

- How does the work make you feel?
- What emotions are being displayed in the sculpture?
- Does the colour or texture affect your mood?

FORM...

- What is the work made from?
- What colours does the artist use?
- Describe the shapes or forms you can see?
- What kinds of textures can you see?



Extension Tasks (all weeks)

Colour Theory

Colour Wheel - A circle with different coloured sections used to show the relationship between colours.

Primary Colours - are the three main colours, **RED**, **YELLOW** and **BLUE**. They cannot be made but when mixed together they make all the other colours.

Secondary Colours - are made by mixing two primary colours together

YELLOW + BLUE = GREEN

YELLOW + RED = ORANGE

RED + BLUE = PURPLE

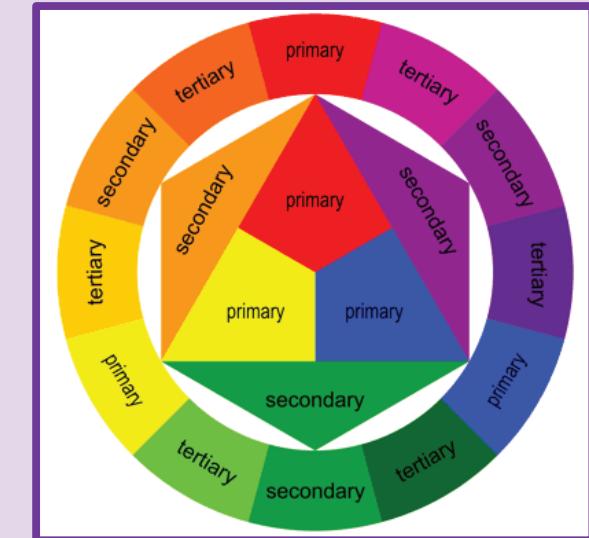
Tertiary Colours - are made by mixing a primary and a secondary colour together.

Complementary Colours - are opposite on the colour wheel they contrast each other to have a vibrant look

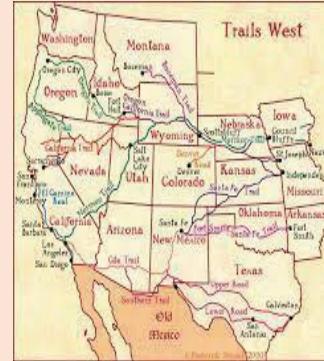
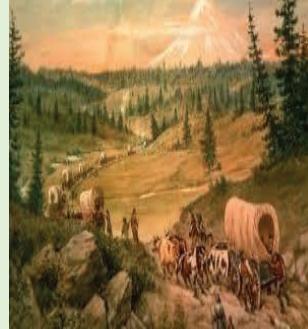
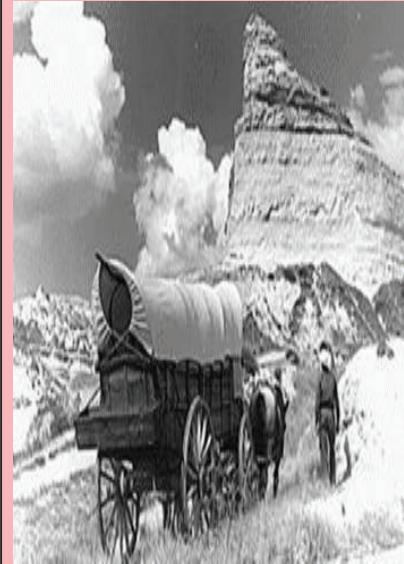
RED - GREEN

BLUE - ORANGE

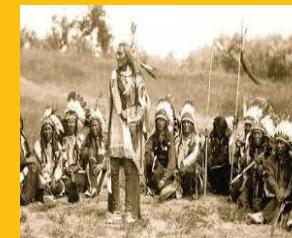
YELLOW - PURPLE



Year 7 Drama - The Way West - Oregon Trail – Exploring History Through Drama

Week 1 - Westward Expansion and Mary Ellis	Week 1 – The Route	Week 3 – Your Character	Week 3– Covered wagons	Week 5 - Dangers
<p>Facts to Learn: The Oregon Trail was a major route that people took when migrating to the western part of the United States. Between 1841 and 1869, hundreds of thousands of people travelled westward on the trail. Many of them travelled in large wagon trains using covered wagons to carry their belongings.</p>  <p>Task to do: Remember Mary Ellis Died - 7th Aug 1845. Aged - 2 months</p> <ul style="list-style-type: none"> Draw and colour her plaque and the people you imagine to be around it, when they say good by to her. Write what you think may have happened to Mary Ellis. 	<p>Facts to Learn: The Oregon Trail began in the town of Independence, Missouri and ended in Oregon City, Oregon. It stretched for around 2,000 miles and through six different states including Missouri, Kansas, Nebraska, Wyoming, Idaho, and Oregon. Along the way, travellers had to cross all sorts of rough terrain such as the Rocky Mountains and the Sierra Nevada Mountains.</p>  <p>Look on the Map on the separate Page. Copy and Learn.</p> 	<p>Task to do: In your Homework Books write out your character details.</p> <p>Include the following:</p> <ul style="list-style-type: none"> Your character Name and Surname Relationship in the family Age Names of the others on your wagon and their relationship to you Reasons for starting the journey How you feel the journey is going What you miss from your old life What you are looking forward to in Oregon Your hopes and dreams for the future 	<p>Facts to Learn:</p> <p>The main vehicle used to carry the pioneer's belongings was the covered wagon. Sometimes these wagons were called "Prairie Schooners", because they were like boats going over the vast prairies of the west. The wagons were made of wood with iron around the wheels like tires. The covers were made from waterproofed cotton or linen canvas. The typical covered wagon was about 10 feet long and four feet wide.</p>  <p>Most of the settlers used oxen to pull their wagons. The oxen were slow, but steady. Sometimes mules were used as well. A fully loaded wagon could weigh as much as 2,500 pounds. A lot of the time the pioneers walked alongside the wagons. Traveling wasn't too bad with the wagons on the flat terrain of the prairies, but once the settlers reached the Rocky Mountains, getting the wagons up and down steep trails was very difficult.</p>	<p>Facts to Learn: Travelling the Oregon Trail in the 1800s was a dangerous journey. However, the danger wasn't from Native Americans as you might think. As a matter of fact, many records show that Native Americans helped many of the travellers along the way. The real danger was from a disease called cholera that killed many settlers.</p> <p>Other dangers included bad weather and accidents while trying to move their heavy wagons over the mountains.</p> 

Year 7 Drama - The Way West - Oregon Trail - Exploring History Through Drama

Week 5 - Supplies	Week 7 – The Oregon Trail and Other Trails	Week 7 – Native Americans & their Moons	Week 9 Native Americans	Week 9 Oregon Trail Quiz																										
<p>Facts to Learn: The pioneers were able to bring very little with them. When they left their homes in the east, they had to leave most of their belongings. The covered wagon was mostly filled with food. It took over a 1,000 pounds of food to feed a family of four on the trip out west. They took preserved foods such as hard tack, coffee, bacon, rice, beans, and flour.</p>  <p>They also took a few basic cooking utensils such as a coffee pot, some buckets, and an iron skillet. The pioneers didn't have room for a lot of fancy items. They only had room to pack two or three sets of tough clothing. They packed candles for lighting and a rifle to hunt with along the way. Other items included tents, bedding, and basic tools such as an axe and a shovel.</p> 	<p>Facts to Learn: Although the Oregon Trail was the most used wagon trail, there were other trails that led out west. Some of them branched off the Oregon Trail like the California Trail which left the Oregon Trail in Idaho and headed south to California. In 1849, a guide was published describing the overland journey to California.</p> <p>There were reports of the trail being littered with items that people cast off along the way. These included books, stoves, trunks and other heavy items.</p> <p>It took about five months for a wagon train to make the journey</p> <p>Facts to Learn: The first major migration took place in 1843 when a single large wagon train of 120 wagons and 500 people made the trip.</p> <p>The trail was popular until the 'transcontinental railroad' connected the east to the west in 1869.</p> <p>In 1978, the U.S. Congress officially named the trail the Oregon National Historic Trail. Although much of the trail has been built over through the years, around 300 miles of it has been preserved and you can still see the ruts made from the wagon wheels.</p>	<table border="1"> <thead> <tr> <th>Each Month is</th> <th>The Moon...</th> </tr> </thead> <tbody> <tr> <td>Jan</td> <td>Of The Strong Cold</td> </tr> <tr> <td>Feb</td> <td>When The Snow Drifts</td> </tr> <tr> <td>Mar</td> <td>Of the Red Grass appearing</td> </tr> <tr> <td>Apr</td> <td>When the ponies shed</td> </tr> <tr> <td>May</td> <td>When the Grass is up</td> </tr> <tr> <td>Jun</td> <td>When the cherries are Ripe</td> </tr> <tr> <td>Jul</td> <td>When the Geese Lose their Feathers</td> </tr> <tr> <td>Aug</td> <td>When the Deer Paw the earth</td> </tr> <tr> <td>Sep</td> <td>Of the Drying Grass</td> </tr> <tr> <td>Oct</td> <td>Of the Wild Rice</td> </tr> <tr> <td>Nov</td> <td>Of the Rutting Deer</td> </tr> <tr> <td>Dec</td> <td>Of the Popping Trees</td> </tr> </tbody> </table> <p>Copy out this calendar and draw or find images to go with each moon</p>	Each Month is	The Moon...	Jan	Of The Strong Cold	Feb	When The Snow Drifts	Mar	Of the Red Grass appearing	Apr	When the ponies shed	May	When the Grass is up	Jun	When the cherries are Ripe	Jul	When the Geese Lose their Feathers	Aug	When the Deer Paw the earth	Sep	Of the Drying Grass	Oct	Of the Wild Rice	Nov	Of the Rutting Deer	Dec	Of the Popping Trees	<p>Some Native Americans were nomadic (did not live in one place, but travelled between seasons), some were semi-nomadic, and others were static (remained in the same place).</p> <p>It is estimated that there were many languages spoken in around 600 different dialects.</p> <p>Religions and beliefs were very important to the Native American way of life. Animism is a commonly shared belief amongst American Indian tribes. It is based on the spiritual belief that everything, living, natural or inanimate and has a soul or spirit</p>  <p>Festivals and ceremonies were very important to Native American culture and were closely linked to religion and beliefs. It was usual to hold ceremonies and rituals to worship and pacify the spirits; the festivals and ceremonies would include chanting, singing and dancing.</p> <p>Native American totem poles are large trees carved with figures representing faiths and beliefs. The carvings, colours and symbols on a totem pole have spiritual meanings and significance.</p> <p>Music and dance were important parts of the Native American culture. Songs were sung at important religious rituals, but were also part of everyday life. They believed that music was the language of the spirits.</p> 	<p>Task to do: Copy out the Questions and answer them.</p> <ol style="list-style-type: none"> 1) Around how long is the Oregon Trail? 2) In what state did the Oregon Trail begin? 3) What was the main vehicle used to carry belongings by pioneers on the Oregon Trail 4) True or False: The main danger to pioneers on the trail was Native Americans. 5) Around how long did it typically take for a wagon train to travel the Oregon Trail? 6) Which of the following states did the Oregon Trail NOT pass through Nebraska, California, Idaho, or Wyoming, Oregon? 7) During what century was the Oregon Trail most travelled? 8) In what state did the Oregon Trail end? 9) What was the main cause of death to pioneers on the trail? 10) What was the main item that pioneers brought with them in their covered wagons?
Each Month is	The Moon...																													
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Map of the Way West- Oregon Trail Study. Copy. Learn



Year 7 English: "Of Mice and Men"

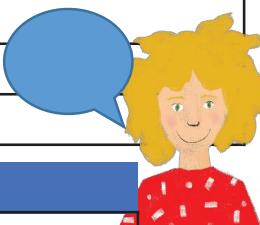
Week 1: Character and Setting	Week 2: Power	Week 3: Women	Week 4: The Depression	Week 5: Prejudice
Inference: a conclusion based on evidence and reasoning. Connotation: an idea or feeling which a word evokes for a person in addition to its literal or primary meaning. Semantic field: a group of words that link to a similar idea or subject. E.g. a semantic field of danger: beaten, mottled, flooded, flame, red. "Guys like us, that work on ranches, are the loneliest guys in the world."	Hierarchy: a system in which members of an organisation or society are ranked according to relative status or authority. Conditions: the state or condition of a place; what a place is like. To domineer (v): to bully or intimidate someone in an arrogant way. Domineering (adj): to be a bully that intimidates someone in an arrogant way. "The walls were whitewashed and the floor unpainted." "he wore high-heeled boots and spurs to prove he was not a labouring man." "He stiffened and went into a slight crouch. His glance was at once calculating and pugnacious."	Archetype: a very typical example of a certain person or thing. To infantilise (v): to treat someone like a young child. Infantilised (adj): to be treated like a young child. To objectify (v): to treat someone like an object. Objectified (adj): to be treated like an object. "Both men glanced up, for the rectangle of sunshine in the doorway was cut off." "I think Curley's married...a tart" "She had full, rouged lips and wide-spaced eyes, heavily made up."	Omniscient: all knowing. To aspire (v): to hope to achieve something. Aspiration (n): a hope or ambition of achieving something. To emasculate (v): to make someone weaker or less effective. Emasculated (adj): to be made weaker or less effective. "The old man squirmed uncomfortably"	Prejudice: a negative perception or treatment of a specific person or group. To segregate (v): to isolate or separate a specific group from others. Segregated (adj): to be isolated or separated from others. To oppress (v): to control or subject someone to hardship. Oppressed (adj): to be controlled or subjected to hardship. "Being a stable buck and a cripple, he was more permanent than the other men" "Well, you keep your place then, n****r. I could get you strung up on a tree so easy it ain't even funny."
In 1929, the Wall Street Crash left millions of Americans unemployed. Migrant workers travelled from all over the country, with over half a million heading to California in search of work. Migrant workers, or 'Okies' were often met with scorn by California farmers and natives, which only made their dislocation and poverty more unpleasant.	As more migrants arrived in California, there were far more workers than jobs available. This meant that migrant workers could be paid less because they were 'disposable' When he was a young man, Steinbeck worked on ranches himself and saw first-hand how migrants and migrant workers were treated.	After WWI, many women entered the workforce for the first time. However, with the Great Depression, many of the rights that women had gained were lost. In the 1930s, women were broadly expected to return to more traditional roles like looking after the home, raising children and supporting their husbands.	As a Capitalist country, American society in the 1930s was built around the idea that people or resources are only useful if they can generate profit or value for business. The Wall Street Crash led to widespread bank failures – savings that had taken people a lifetime to achieve were wiped out. With little of value to offer to employers and having lost their savings, many elderly Americans were left isolated and emasculated.	The Emancipation Proclamation brought an end to slavery in the USA in 1863. However, by the 1930s the vast majority of African Americans in the southern states continued to be oppressed. The Jim Crow laws of the 1930s were designed to segregate black and white citizens. They touched on many aspects of society including restaurants, waiting rooms, drinking fountains and burial grounds.

Year 7 English: "Of Mice and Men"

Week 6: Isolation	Week 7: Dreams	Week 8: The End	Week 9: Key Vocabulary	Week 10: Academic Phrasing
<p>Human Nature: How human beings behave.</p> <p>To isolate (v): to cause a person to be separated from others.</p> <p>Isolated (adj): to have minimal contact or little in common with others.</p> <p>Hostility (n): unwelcoming behaviour.</p> <p>Hostile (adj): showing dislike; unfriendly.</p> <p>"Candy joined the attack with joy. 'Glove fulla Vaseline,' he said disgustedly."</p> <p>"S'pose George don't come back no more. S'pose he took a powder and just ain't coming back. What'll you do then?' Crooks' face lighted with pleasure in his torture."</p> <p>"An' what am I doin'? Standin' here talkin' to a bunch of bindle stiffs- a n****r an' a dum-dum and a lousy ol' sheep- an' likin' it because they ain't nobody else."</p> <p>All the characters in "Of Mice and Men" are presented as lonely in some way, reinforcing Steinbeck's message that the Great Depression led to widespread hostility and isolationism.</p> <p>In "Of Mice and Men", Steinbeck appears to suggest that the Great Depression damaged American society to the extent that it has become savage and inhumane.</p>	<p>Contrast: when two things are strikingly different from each other.</p> <p>To juxtapose (v): to place two contrasting things side by side.</p> <p>Juxtaposition (n): when two things are put next to each other to emphasise their differences</p> <p>To foreshadow (v): to warn or give a clue about what will happen later.</p> <p>Foreshadowing (n): a warning or clue that suggests what might happen later in the text</p> <p>Lennie: "Live off the fatta the lan"</p> <p>Vs.</p> <p>George: "I think I knowed from the very first. I think I knowed we'd never do her."</p> <p>Curley's Wife: "I tell you I ain't used to livin' like this. I coulda made somethin' of myself." She said darkly, "Maybe I will yet."</p> <p>Crooks: "Nobody ever gets to heaven and nobdy gets no land"</p> <p>The American Dream is rooted in the Declaration of Independence, which proclaims that "all men are created equal" with the right to "life, liberty and the pursuit of happiness."</p> <p>In "Of Mice and Men", Steinbeck appears to suggest that the Great Depression has made the American dream unachievable by creating a clear contrast between the aspirations of his characters and reality of their situation.</p>	<p>Cyclical Structure: a story that ends in a similar way to how it begins.</p> <p>Structural Echo: when an idea or image is repeated in a story.</p> <p>Denouement: the outcome of a situation, when something is decided or made clear.</p> <p>George: His voice was monotonous. Had no emphasis</p> <p>Slim: "You hadda George, I swear you hadda"</p> <p>Carlson: "Now what the hell ya suppose is eatin' them two guys?"</p> <p>The ending of Of Mice and Men represents the conflicting philosophies in American society; the comfort and compassion of Slim compared to the callous disregard for human life illustrated by Carlson.</p> <p>"Everyone in the world has a dream he knows can't come off but he spends his life hoping it may. This is at once the sadness and greatness and the triumph of our species" - John Steinbeck</p>	<p>Tier 2 Verbs</p> <p>Domineer: to control or bully.</p> <p>Objectify: to treat like an object.</p> <p>Infantilise: to treat like a child.</p> <p>Emasculate: to weaken.</p> <p>Segregate: to isolate.</p> <p>Isolate: to separate from others.</p> <p>Aspire: to hope to achieve something.</p> <p>Contrast: to compare in a way that emphasises differences.</p> <p>Juxtapose: to directly compare in a way that emphasises differences.</p> <p>Foreshadow: to provide a clue about something that will happen later.</p> <p>Academic Descriptors</p> <p>Indisputably: unquestionably.</p> <p>Invariably: usually.</p> <p>Arguably: possibly.</p> <p>Significantly: importantly.</p> <p>Notably: importantly.</p> <p>Remarkably: worth mentioning.</p> <p>Paradoxically: absurd or self-contradictory.</p> <p>Diametrically: extremely opposed to.</p> <p>Unequivocally: leaves no doubt.</p>	<p>Start with a clear statement of your view and link it to context: Influenced by.... Steinbeck presents the character of XXXXX as XXXXXX in order to skilfully highlight....</p> <p>Identify a quotation that proves your point This is perhaps best illustrated when....</p> <p>Explain what this quotation literally means and what you can infer from it This shows.... which suggests</p> <p>Now analyse the methods Steinbeck has used Steinbeck's use of X could indicate....</p> <p>Can you offer a secondary interpretation of the same method? Alternatively, this could also show...</p> <p>Now explain what effect this has on the reader (what does it lead the reader to think/ realise/ understand) Steinbeck prompts the reader to ... because...</p> <p>If you haven't already link this back to context This analysis would be further reinforced by the context of the time:</p> <p>Now reinforce your point with a second piece of evidence. Steinbeck's suggestion that... is then further reinforced elsewhere in the text when...</p> <p>Repeat the steps above to support your argument. Remember to always link back to the question.</p>

Week 1

apprendre	to learn, learning
comprendre	to understand, understanding
dire	to say, saying
je dis	I say, I am saying
tu dis	you say, you are saying
il dit	he says, he is saying
elle dit	she says, she is saying
prendre	to take, taking
je prends	I take, I am taking
tu prends	you take, you are taking
il prend	he takes, he is taking
elle prend	she takes, she is taking
l'erreur (f)	mistake
la vérité	truth
facile	easy



Week 4

dormir	to sleep, sleeping
je dors	I sleep, I am sleeping
tu dors	you sleep, you are sleeping
il dort	he sleeps, he is sleeping
elle dort	she sleeps, she is sleeping
l'équipe (f)	team
le bureau (m)	desk
parfois	occasionally
sous	under
sur	on



Year 7 French

Week 2

sortir	to go out, going out
je sors	I go out, I am going out
tu sors	you go out, you are going out
il sort	he goes out, he is going out
elle sort	she goes out, she is going out
venir	to come, coming
je viens	I come, I am coming
tu viens	you come, you are coming
il vient	he comes, he is coming
elle vient	she comes, she is coming
devenir	to become, becoming
revenir	to come back, coming back
l'Algérie (f)	Algeria
algérien	Algerian (m)
algérienne	Algerian (f)
important(e)	important (m/f)
de	of, from
Alger	Algiers



Week 3

que ?	that, what?
la langue	language
les maths (mpl)	maths
la matière	subject
la musique	music
la science	science
le nom	full name
quel ?	which? (m)
quelle ?	which? (f)
combien ?	how much? / how many?
pourquoi ?	why?
parce que	because



Vocabulary learning involves knowing different aspects of a word.

Use this checklist:

1. I have seen this word before.
2. I know what the word means.
3. I can read the word aloud.
4. I can spell the word correctly.
5. I can use the word in a sentence.
6. For nouns, I know the gender and the correct word for 'the'.



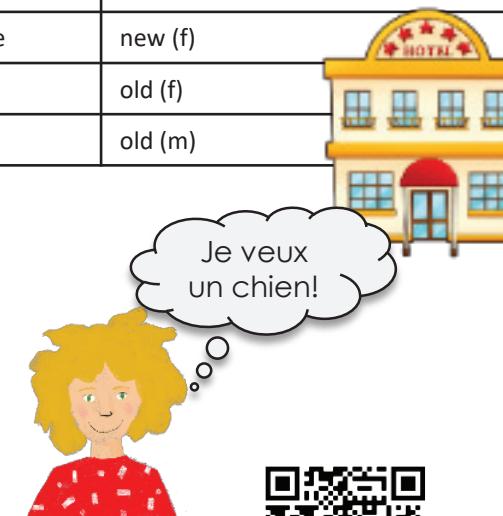
Week 5	
le café	café
le cinéma	cinema
la plage	beach
la rue	street
derrière	behind
devant	in front of
entre	between



Week 6	
le bâtiment	building
l'église (f)	church
le pont	bridge
le jardin	garden
belle	beautiful (f)
bonne	good (f)
haut(e)	high (m/f)
nouveau	new (m)
nouvelle	new (f)
vieille	old (f)
vieux	old (m)



Week 8	
l'allemand (m)	German
l'avion (m)	aeroplane
la lettre	letter
allemand	German nationality (m)
allemande	German nationality (f)
différent(e)	different (m/f)
prochain(e)	next (m/f)
bientôt	soon
demain	tomorrow



Week 9		visiter	to visit, visiting
devoir	must, to have to	vouloir	to want (to), wanting (to)
je dois	I must, I have to	je veux	I want (to), I am wanting (to)
tu dois	you must, you have to	tu veux	you want, you are wanting (to)
il doit	he must, he has to	il veut	he wants (to), he is wanting (to)
elle doit	she must, she has to	elle veut	she wants (to), she is wanting (to)
dormir	to sleep, sleeping	le billet	ticket

Year 7 French

Week 7

partir	to leave, leaving
je pars	I leave, I am leaving
tu pars	you leave, you are leaving
il part	he leaves, he is leaving
elle part	she leaves, she is leaving
l'avenir (m)	future
madame	Miss, Mrs, Ms, madam
le match	match
monsieur	Sir, Mr
encore	again
en retard	late
tôt	early
à l'avenir	in the future

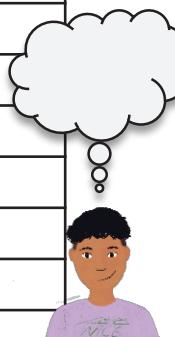


Week 10

aider	to help, helping
chercher	to look for, looking for
partager	to share, sharing
pouvoir	can, to be able to
je peux	I can, I am able to
tu peux	you can, you are able to
il peut	he can, he is able to
elle peut	she can, she is able to
savoir	to know how to, knowing how to
je sais	I know how to
tu sais	you know how
il sait	he knows how to
elle sait	she knows how to
le projet	plan
désolé	sorry (m)
désolée	sorry (f)
peut-être	maybe

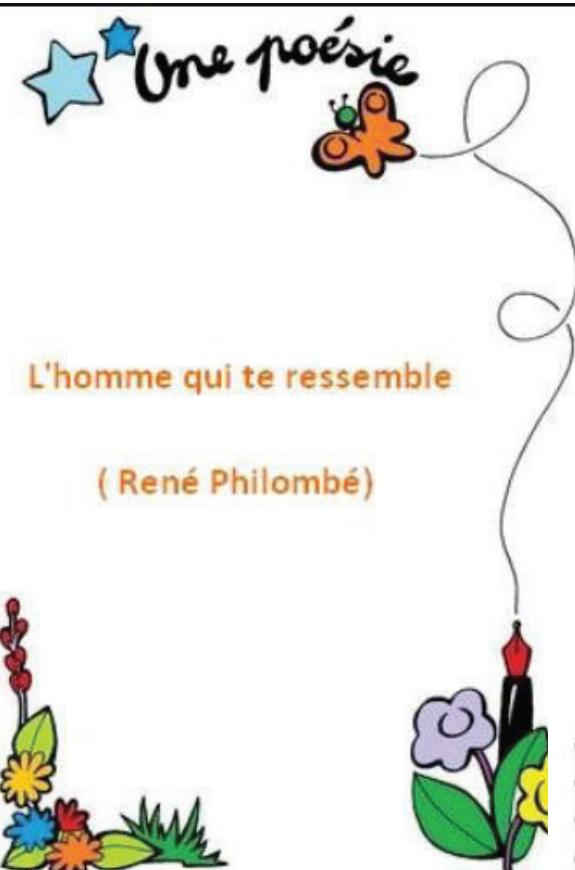


Year 7 French



J'ai frappé à ta porte
J'ai frappé à ton cœur
Pour avoir un bon lit
Pour avoir un bon feu
Pourquoi me repousser ?
Ouvre-moi mon frère !...

Pourquoi me demander
Si je suis d'Afrique
Si je suis d'Amérique
Si je suis d'Asie
Si je suis d'Europe ?
Ouvre-moi mon frère !...



L'homme qui te ressemble

(René Philombé)



Je ne suis pas un noir
Je ne suis pas un rouge
Je ne suis pas un jaune
Je ne suis pas un blanc
Mais je ne suis qu'un homme
Ouvre-moi mon frère !...

Pourquoi me demander
La longueur de mon nez
L'épaisseur de ma bouche
La couleur de ma peau
Et le nom de mes dieux ?
Ouvre-moi mon frère !...

Ouvre-moi ta porte
Ouvre-moi ton cœur
Car je suis un homme
L'homme de tous les temps
L'homme de tous les cieux
L'homme qui te ressemble.

René Philombe - 1977

YEAR 7 CYCLE 3 GEOGRAPHY – Tectonic Hazards Knowledge Organiser

WEEK 1

In 1912, **Alfred Wegener**, a German meteorologist, put forward his theory of **continental drift**. He argued that millions of years ago, the continents that we know today were joined together into one **supercontinent** called Pangea. The continents have been drifting apart and together ever since.

Lithosphere: Outer layer of the Earth. Sometimes called the crust.

Mantle: Much thicker mass of rock under the lithosphere (about 2900km thick). Rocks hot enough to deform and move like plastic.

Outer core is liquid. **Inner core** is solid and made of iron and nickel.

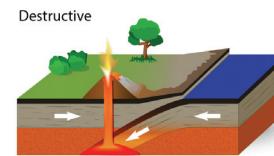
Oceanic plate: 50-100km thick.

Continental plate: Up to 200km thick.

WEEK 2

Destructive plate boundary: Plates move together. If an oceanic plate moves towards a continental plate, the heavier oceanic plate sinks (called **subduction**) beneath the continental one. This creates an **ocean trench**. Continental plate moves up to form mountain belts. The melting oceanic plate creates **magma** which rises to the surface as a volcanic eruption. The pressure can trigger earthquakes.

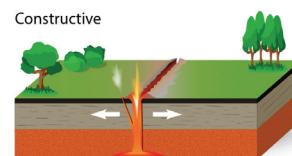
Collision zone: Two continental plates meet and push upwards to create high mountain belts. No volcanoes.



WEEK 3

Constructive plate boundary: two plates are forced apart. Magma rises and the hot rocks melt, forming a ridge of volcanoes and new ocean lithosphere. Forms a **mid-ocean ridge**.

Conservative plate boundary: Two plates slide slowly past each other. **Friction** causes the plates to stick together and pressure builds. As the friction is overcome, the sudden movement creates a severe earthquake. No magma escapes so there are no volcanic eruptions.



WEEK 4

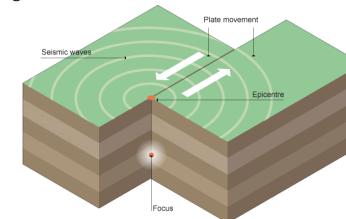
Focus: the centre of an earthquake below the Earth's surface.

Epicentre: the area on the surface directly above the focus.

Seismic waves: waves of energy.

Richter scale: measurement of the magnitude or size on an earthquake. Recorded on a seismometer.

Mercalli scale: measurement of the intensity of the earthquake by recording the effect and damage it caused.



WEEK 5

Nepal earthquake (25 April 2015)

Collision zone between Indian and Eurasian plate. Focus 8km deep. 8,632 dead and 19,009 injured. Worst in 80 years. Temperatures fell at night, survivors suffering hypothermia. Landslides cut off remote villages. Triggered an avalanche at Mt Everest. International aid from China and India: \$1 billion to help.

Christchurch earthquake (22 February 2011)

6.3 magnitude, 5km deep.

Conservative plate margin (Pacific and Australian plate). 181 people died, 2,000 injured. Over 50% of the city's buildings damaged. Businesses closed. \$898 million in insurance claims. Water and sewerage restored by August 2011.

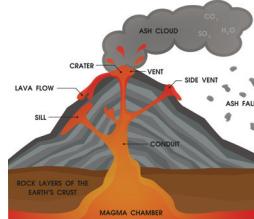
WEEK 6

Magma chamber: A store of molten rock deep within the Earth.

Pyroclastic flow: a fast-flowing current of hot gas, ash and other volcanic matter. Can reach speeds of **700km/h** and temp of **1000°C**.

Shield volcano: gentle slopes forming from runny lava spreading far e.g. Mauna Loa, Hawaii

Composite volcano: Steep sides, cone shape. Form from thick, viscous lava that does not flow easily e.g. Mt Fuji, Japan.



WEEK 7



Eyjafjallajökull eruption, Iceland (April 2010)

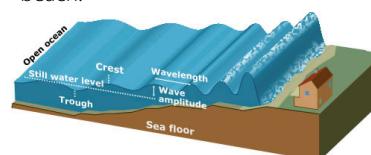
Started on 20 March when a 500 metre **fissure** opened up. Constructive plate margin. The eruption happened under an ice sheet. Dissolved gases in the molten rock along with steam generated from the melting ice caused a huge column of **volcanic ash**.

Areas were flooded by the **Jökulhlaups** (glacier meltwater floods). Farm land was affected by heavy ash fall, poisoning animals. Perishable foods were wasted as they could not be transported into Europe e.g. flowers from Kenya. 95,000 flights were cancelled. People were not able to get to work because they were stranded. The eruption cost airlines \$200 million per day.

WEEK 8

Tsunami: a large ocean wave caused by an underwater earthquake or volcanic eruption. They are NOT tidal waves!

A tsunami can have a very long **wavelength** that can be hundreds of kilometres long. You tend not to notice them at sea; they increase in height when they meet the shallow water and friction at the shore. In deep water, tsunamis travel over **500mph** or as fast as a jet plane. A sign that a tsunami is coming is often the withdrawal of water from a beach.



WEEK 9



SE Asia tsunami (25 December 2004)

Indo-Australian plate subducting beneath Eurasian plate. Magnitude 9.0 quake. Speed of tsunami up to 800km/h. 15 metre height onshore. 250,000 people died across 13 countries. Two million homeless. Indonesia and Thailand most affected. Now an Indian Ocean early warning system.

Japan tsunami (11 March 2011)

Magnitude 9.0. Pacific and North America plate. Epicentre 129km away from Japan. Wave travelled 10km inland in Sendai. Destroyed sea walls. Fukushima nuclear power plant flooding – radioactive disaster. 18000 people died. Total damages \$300 billion.

WEEK 10

Managing earthquakes: People may have **earthquake survival kits** and **earthquake drills** to practise what people would do during a real earthquake (drop, cover, hold on).

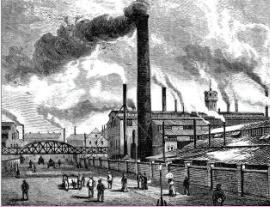
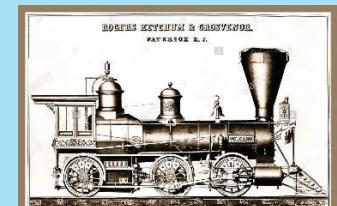
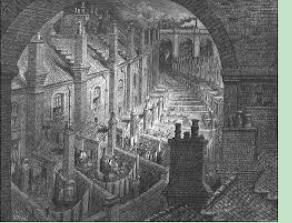
Building can be made earthquake resistant using cross bracing and shear walls. Old buildings can be modified to make them more resistant (called **retrofitting**).

Managing volcanic eruptions: Easier to **predict** than earthquakes – changes in gases, deformed land, foreshocks. Communities can have **evacuation plans** and hazard maps prevent building in vulnerable places. Some cities, like Tokyo, have hazards guides **educating people** about what to do in the event of tectonic hazards.

Year 7 History

Week 1	Week 2	Week 3	Week 4	Week 5
<p>The Norman Conquest</p> <p>The 3 contenders for the throne in 1066 were William the Conqueror, Harold Godwinson and Harald Hardrada.</p> <p>September 1066 – Harold Godwinson defeated Harald Hardrada at the Battle of Stamford Bridge.</p> <p>October 1066 - William the Conqueror won the Battle of Hastings.</p> <p>How did the Normans keep control?</p> <p>1. They built castles: motte and bailey, stone keep and concentric. These were for protection, to show the Normans' power and to be centres of trade.</p> <p>2. They introduced the feudal system:</p> <pre> graph TD KING[King] -- "Provides money and knights" --> BARONS[Barons] KING -- "Grants land to" --> KNIGHTS[Knights] BARONS -- "Provide protection and military service" --> KNIGHTS BARONS -- "Grant land to" --> PEASANTS[Peasants] KNIGHTS -- "Provide food and services when demanded" --> PEASANTS KNIGHTS -- "Grant land to" --> KING PEASANTS -- "PEASANTS" --> KING </pre> <p>3. They used fear and violence e.g. the Harrying of the North in 1069.</p>	<p>Why did Henry VIII break with Rome?</p> <p>Love Henry VIII had fallen in love with Anne Boleyn so wanted to divorce Catherine of Aragon to marry Anne. However, the Pope would not grant him a divorce.</p> <p>Money Henry VIII was bankrupt due to wars in France and extravagant spending. If he changed the church from Catholic to Protestant then all taxes could be given to him instead of the Pope. He could also gain the monasteries' wealth. Many people thought that the Catholic Church was too rich.</p> <p>Power All English churches were Catholic and so were controlled by the Pope. Henry VII did not like this. He also wanted to have an heir to the throne, a boy, in order to continue his family line.</p> <p>Faith Two of Henry's close advisers were Protestant: Thomas Cromwell and Thomas Cranmer. Many other rich people in England would also support a Protestant Church.</p>	<p>Causes of the English Civil War</p> <p>Religious</p> <p>Some MPs were worried Charles was trying to make England more Catholic. He married a French Catholic, Henrietta Maria and Archbishop Laud made churches more richly decorated.</p> <p>Economic</p> <p>Charles introduced Ship Money without Parliament's permission.</p> <p>Political</p> <p>The Royalists believed Charles was appointed by God (the divine right of kings) and that Parliament were unfairly trying to limit his power.</p> <p>Parliament believed that Charles was abusing his power and not listening to the people. For example, he shut down parliament for 11 years.</p> <p>Parliament gave Charles 2 lists of demands: the Grand Remonstrance and the 19 Propositions.</p>	<p>Events of the English Civil War</p> <p>When was it? 1642 – 1649</p> <p>Who was involved? The Royalists were nicknamed the Cavaliers and led by Charles I. They fought the Parliamentarians who were nicknamed the Roundheads and led by Oliver Cromwell.</p> <p>What happened? The Parliamentarians eventually defeated the Royalists. Charles I was put on trial and executed in 1649.</p> <p>What were the consequences? Between 1649 and 1660 England was a republic (there was no monarch). From 1653 – 1658 Oliver Cromwell ruled England. He was known as the Lord Protector. In 1660, Charles I's son, Charles, was invited back to be King Charles II.</p>	<p>The Industrial Revolution – Key words:</p> <p>Industry: the making of goods.</p> <p>Revolution: a major change.</p> <p>Trade: the buying and selling of goods.</p> <p>Population: the number of people living in a certain place.</p> <p>Labour: hard work.</p> <p>Rural: areas of countryside.</p> <p>Urban: areas that have been developed as towns or cities.</p> <p>Urbanisation: when people move from rural areas to urban areas.</p> <p>Agriculture: farming.</p>

Year 7 History

Week 6	Week 7	Week 8	Week 9	Week 10
<p>Changes during the Industrial Revolution, 1750-1900:</p> <p>Population increased from about 10 million to about 40 million.</p> <p>There was mass urbanisation – In 1750 about 15% of people lived in towns or cities. By 1900 it was about 80%.</p> <p>Between 1750 and 1850 the amount of food produced on British farms doubled.</p> <p>The steam powered train was invented and railways were built across Britain.</p> <p>Canals (man-made waterways) were built to transport coal and other goods.</p> <p>Instead of jobs which were based in the home or small workshops, most people began to work in factories or mines.</p> 	<p>Causes of the Industrial Revolution:</p> <p>Population growth</p> <p>Between 1750 and 1900 the population grew from 10million to 40 million. This provided the workforce for the factories and people to buy the goods that were made.</p> <p>Raw materials</p> <p>By 1850, Britain produced two thirds of the world's coal. Coal was the fuel that powered steam engines and machines in factories. Iron was also used to make machines and railways.</p> <p>The agricultural revolution</p> <p>New farming equipment was developed and machines began to replace farm workers. The amount of corn grown per acre increased by 40%.</p> <p>Improvements in transport</p> <p>The first steam-powered railway was built between Liverpool and Manchester in 1830. Railways were then built across the country in the 1840s and 1850s. Canals (human-made waterways) were also built to transport goods and materials.</p> 	<p>Causes of the Industrial Revolution:</p> <p>Growth of banks</p> <p>Banks were started in the 18th century and by the early 19th century there were over 400 banks across the country. Banks provided capital (money) for entrepreneurs, who took out loans.</p> <p>Inventors and inventions</p> <p>Thomas Newcomen invented a steam engine in around 1712. This was improved in the 1770s by James Watt, who invented a steam engine, that could turn a wheel much more efficiently.</p> <p>Entrepreneurs</p> <p>Entrepreneurs were businessmen who were willing to take risks by investing money to set up businesses producing goods. Two successful entrepreneurs were Richard Arkwright and Matthew Boulton.</p> <p>Growth of the British Empire</p> <p>At one point, Britain ruled around 450 million people in 56 different countries. British companies could sell their goods to people all over the Empire. Britain also gained raw materials such as cotton from the colonies.</p> 	<p>Industrial Cities – Key words:</p> <p>Labour: hard work.</p> <p>Profit: the money that you make (income minus expenditure).</p> <p>Terraced housing: houses that are joined together in a row.</p> <p>Back-to-backs: houses that were built in terraces and joined to the row behind. They had only one wall that windows could be put in to.</p> <p>Cellars: a room built below the ground floor. They were often damp and dirty.</p> <p>Privies: toilets which were built outside houses. They were shared by up to hundreds of people from poor families.</p> <p>Cesspits: the hole dug underneath privies, were sewage collected.</p> <p>Night-soilmen: people who cleaned out the cesspits. Sometimes they were not paid by landlords and the cesspits overflowed.</p> 	<p>Industrial Cities – Key words:</p> <p>Disease: an illness that is spread by germs.</p> <p>Waterborne disease: a disease that spreads through dirty water.</p> <p>Cholera: a waterborne disease that killed 31,000 people in Britain in 1831-32. Symptoms included diarrhoea, vomiting, turning a blue-black colour and sunken eyes.</p> <p>Tuberculosis (TB): a disease that attacks people's lungs. It affected people who lived in dirty and damp homes. Symptoms included severe coughing, coughing up blood and fever. It is estimated to be responsible for about one third of deaths between 1800-1850 in Britain.</p> <p>Miasma: many people believed that dirty streets and sewers gave off a poisonous gas called 'miasma'. They were wrong – most diseases actually spread through dirty water.</p> <p>Rate payers: people who pay taxes.</p> 

Year 7 Hospitality and Catering

Week 1

Fibre

Fibre helps keep the digestive system healthy. **Soluble fibre dissolves in water** and the **insoluble kind doesn't**.

Dietary fibre has many health benefits:

- It can reduce your risk of heart disease, diabetes and some cancers, and also help weight control.
- Fibre is also important for digestive health - fibre bulks up stools (poo) and holds water in them, making them softer and easier to pass. It also makes waste move through the digestive tract more quickly, which is better for the gut and can help to prevent constipation.

Fibre can be found in food from the:

- Fruit and vegetable food group; 
- Potatoes, bread, rice, pasta and other starchy carbohydrates food group; 
- Beans, pulses, fish, eggs and meat food group (in the beans and pulses). 

How Much do we Need? 30g a day for adults, 2-5 years 15g per day, 5-11 years 20g per day, 11-16 years 25g per day, 16-18 years 30g per day

To increase your fibre intake you could:

- Choose a high fibre breakfast cereal e.g. bran flakes, or porridge
- Choose wholegrains like whole-wheat pasta, bulgur wheat or brown rice, wholemeal bread
- Go for potatoes with skins
- For snacks try fruit, vegetable sticks, rye crackers, oatcakes, unsalted nuts or seeds
- Include plenty of vegetables with meals – either as a side dish or added to sauces, stews or curries
- Add pulses like beans, lentils or chickpeas to stews, curries and salads
- Eat fruit!
- Add nuts and seeds to recipes

Week 3

Water

We need water to stay alive. Water is found in food and drinks.

Keeping hydrated is important. In addition to any water provided in the food we eat we also need to drink at least 6-8 drinks everyday – more when we are active or the weather is warm.

Water makes up just over 2/3 of the human body and is required for:

- Maintaining body temperature
- Metabolising fat
- Aiding digestion
- Lubricating organs
- Transporting nutrients
- Flushing out waste and toxins

Foods rich in water.



Week 5

Main Food Groups and Nutrients

Nutrients are molecules in food that all organisms need to make energy, grow, develop and reproduce.



Food Group	Nutrient (main)	Function
Fruit and vegetables	Vitamins, e.g. Vitamin A and Vitamin C	Vitamin A is needed for night vision. Vitamin C is needed for the maintenance of healthy skin.
Potatoes, bread, rice, pasta and other starchy carbohydrates	Carbohydrate	Carbohydrate is the main source of energy for the body.
Beans, pulses, fish, eggs, meat and other proteins	Protein	Protein is needed for growth and repair. Iron is a mineral which is needed for healthy blood.
Dairy and alternatives	Minerals, e.g. Calcium	Calcium is a mineral which is needed for the growth and maintenance of strong bones and teeth.
Oil and spreads	Fat	Fat is needed for health, but in small amounts.

Week 7

Nutrients are split into two groups. Macronutrients and micro nutrients. The macronutrients are:

- Protein
- Fats
- Carbohydrate.

Macronutrient - Macronutrients are the nutrients we need in larger quantities that provide us with energy

The micronutrients are:

Micronutrient - The vitamins and minerals needed to be healthy. These are not produced by the human body

Vitamins and minerals needed to be healthy. These are not produced by the human body

Common Deficiencies

Iron deficiency is very common, especially among young women, children, and vegetarians. It may cause anaemia, fatigue, a weakened immune system, and impaired brain function.

Vitamin D deficiency is very common. Symptoms include muscle weakness, bone loss, an increased risk of fractures, and – in children – soft bones. It is very difficult to get sufficient amounts from your diet alone.

Vitamin B12 deficiency is very common, especially in vegetarians, vegans, and older adults. The most common symptoms include blood disorders, impaired brain function, and elevated homocysteine levels.

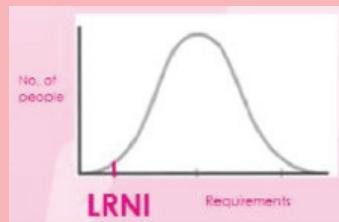
Week 9

Nutritional Needs for Teenagers

Eating a healthy, varied diet and keeping active will be good for teenagers' health.

Your teenage years are a time of rapid growth and development, and the requirements for some nutrients, like calcium and phosphorus, is fairly high.

There are a significant proportion of teenagers not meeting the micronutrient requirements, with many having below the LRNI, lower reference nutrient intake.



Girls need more iron than boys to replace menstrual losses.

Calcium intake & vitamin D are really important to ensure Peak Bone Mass is reached – setting up bone health for life.

Boys need extra iron initially for growth and muscles but this need decreases after age 19.

Boys need more protein and energy than girls due to their later growth spurt

Many UK teenagers are lacking in calcium, iron and vitamin A.

Year 7 - Life To The Full

Week 1	Week 3	Week 5	Week 7	Week 9
<p>Image</p> <p>Tips for taking control:</p> <ul style="list-style-type: none"> • Talk to someone • Write things down • Communicate your decisions clearly • If you have uncomfortable feelings about a relationship, tell an adult • Be truthful <p>Photoshop: when an image is electronically altered</p> <p>Reflect (Write this in your H/W books)</p> <p>What does society say a stereotypical Western male should look like?</p> <p>What does society say a stereotypical Western female should look like?</p> <p>How does that put pressure on male teenagers?</p> <p>How does that put pressure on female teenagers?</p>	<p>Building Confidence</p> <p>Key word Paparazzi: photographers who follow celebrities to get photos of them</p> <p>Research go to: https://www.princes-trust.org.uk</p> <p>Then click on: Help for young people</p> <p>Then click on: Tools- resources</p> <p>Then click on: Building confidence</p> <p>TASKS:</p> <ol style="list-style-type: none"> 1. Watch the video 2. Click on 'Discover your strengths' Write the answers to activity 1 and 2 in your homework book 3. Go through the other three red boxes to learn more on building confidence 	<p>Research and reflection:</p> <p>Write the following information in your homework book.</p> <ol style="list-style-type: none"> 1. On your phone, find out and write down what your privacy settings are for: <ul style="list-style-type: none"> • Snapchat • Instagram • TikTok • Any other forms of social media you have 2. What is your Bluetooth privacy set to? 3. Go to: www.saferinternet.org.uk <ol style="list-style-type: none"> a.) Click on: Young people – resources for 11-19s b.) Scroll down and then take the Safer Internet Day 2018 Quiz c.) Read or watch one other clip on that page and make notes in your homework book. 	<p>Key words to memorise on risk</p> <p>Addiction: physically and mentally dependent on a particular substance</p> <p>STD / STI: sexually transmitted disease / infection</p> <p>HIV / AIDS: a disease that attacks the body's immune system</p> <p>Nicotine: a toxic colourless or yellowish oily liquid which is the main part of tobacco. It acts as a stimulant in small doses and is very addictive</p> <p>E-Cigarettes: an electronic cigarette, used to simulate the experience of smoking</p> <p>Tobacco: a plant whose leaves are dried for use, contains nicotine</p>	<p>Research on drugs</p> <p>Go to: www.talktofrank.com</p>  <p>Click on: Drugs A-Z</p> <p>Create a fact file of five different drugs that you <u>didn't</u> look at in class.</p>

SparkX

Homework

- How to login:**
1. Go to 'www.sparx.co.uk'
 2. Click on 'Login' in the top right corner, then on 'Student Login'.
 3. Search for St Luke's Church of England School' in the 'find your school' box.
 4. Login with your username and password, which should be written into your spark book.
 5. Click on 'Homework'

Complete your compulsory Spark homework as follows:

- ✓ Write the bookwork code
- ✓ You must show your working and your answer.
- ✓ Mark your answer.
- ✓ If you are struggling, watch the video.
- ✓ Your homework is only complete when you have answered every question correctly.

<u>Homework</u>		<u>Thursday 1st June 2017</u>	
<u>Tack 1</u>		<u>E 41</u> $P(\text{yellow}) = \frac{3}{6}$	
D 40	$12 + 13 = \underline{\underline{25}}$	F 51	$P(\text{black}) = \frac{4}{8}$
E 50	$4 \times 3 + 2 \times 5 =$		$= \frac{1}{2}$
H 70	$12 + 10 = \underline{\underline{22}}$	G 61	<i>All the marbles are green</i>
F 60	$(\frac{1}{6} : \frac{1}{8}) \div 6$ $\underline{\underline{\frac{1}{6}}} \div \underline{\underline{\frac{1}{8}}} \quad \checkmark$	H 71	<i>The probability of choosing a purple marble is impossible</i>
H 70	$\frac{1}{4} + \frac{1}{7} = \frac{1}{21}$		
T 90	$\frac{1}{8} + \frac{1}{4} = \frac{1}{8} + \frac{2}{8}$ $= \frac{3}{8}$		
A 01	4493 162 $\underline{\underline{655}}$		
J 22	<u>Kuene</u>	Tack 3	

Your book work should look like this.
 You can earn merits for good book work, as well as completing your compulsory, optional and target homework tasks.

Set	Due (8am)
Friday	
Wednesday	

What if I need help?

Drop in help is available on Tuesday.

Music : Just Play Pop



Voices in Pop

In pop music singers will usually be one of the following:

The lead singer – they sing the main melody and are often the most famous person in a group. Think Freddie Mercury in Queen or Jon Bon Jovi in Bon Jovi!

Backing Singer – they sing the harmonies that accompany the melody.

The main ways they accompany the lead singer are:

In Harmony
All singing different notes that fit together.

In Unison
All singing the same notes.

Descant
Singing a much higher part in time with the main tune.

Call and Response
Repeating whatever the lead vocalist sings or answering the lead with another tune.

Singers can sing in many different ways, please try and learn the following:

A Cappella – singing with no instrument or backing track

Vibrato – when a singer's voice wobbles slightly up and down in pitch

Falsetto – when men or sometimes women, make their voices go really high

Portamento – when a singer slides from one note to the other

Riffing – when singers decorate and add bits to a tune. Mariah Carey is very famous for doing just this.

Rapping – when lyrics are spoken or chanted to a beat.

Beatboxing – using the voice to make percussive sounds, imitating a drum kit or DJ equipment.

Weeks 1 & 2



Weeks 3 & 4

Pop Song Structure

Pop songs usually have an **intro**. This does two jobs:

- It often uses the best bit from the rest of the song to set the mood.
- It grabs the listener's attention and makes them listen!

Verse-Chorus Structure

After an intro most pop songs go :

Verse – Chorus – Verse – Chorus

All verses usually have the same tune but different lyrics for each verse.

The chorus has a different tune to the verse and this is usually very catchy. The lyrics do not change.

To avoid boredom songs will usually fit in something called a **Middle 8 or Bridge**. It's usually in the middle of the song as it is something very different to the rest of what has come before it.

Weeks 5 & 6

Instruments of Pop

Pop songs can use any instruments but these are the most common.

- **Lead Guitar** – this is an electric guitar that plays the tune
- **Rhythm Guitar** – this is a guitar that plays chords
- **Bass Guitar** – this instrument plays the bass line (the lowest pitched part of the music)
- **Drums** – this instrument sets the tempo and plays rhythms to fit the style of the music.

The main instruments of a drum kit are :

Snare drum, Bass drum, Hi-hat, Tom-toms and Cymbals

- **Piano/Keyboard** – these instruments can play the melody or chords to fill out the harmony
- **Synthesizers** – they can play any part as they can make the sound of any instrument you want.

Weeks 7 & 8

Make sure you know the exact position of these chords on the keyboard and how they look on the music stave.

C Major			G E C
E Minor			B G E
D Major			A F# D
G Major			D B G

Weeks 9 & 10

Electronic Vocal Effects

You can add even more interest to the voice in pop music by applying effects. Some are interesting and some are really strange...

- **Reverb** – this is short for reverberation and sounds like an echo has been added to the sound.
- **Multi-Tracking** – this is when tracks are recorded separately and then played back at the same time. It allows one singer to record the solo part and the backing vocals. This would allow them to be the only voice on a record.
- **Sampling** – using a short recording of someone else's voice in your song.
- **Vocoder** – this is a type of synthesizer that electronically alters your voice. It is able to create some very strange effects such as altering the pitch of your voice to ridiculous extremes.
- **Auto-Tuning** – when your voice is electronically adjusted to sound as if it is in tune. This then makes them sound as if they are pitch perfect.

Year 7 PE



Week 1 / 2	Week 3 / 4	Week 5 / 6	Week 7 / 8	Week 9 / 10
<p><u>The Principles of training – Acronym - SPORT</u></p> <ul style="list-style-type: none"> Specificity - Making training relevant to demands of the sport, muscles used, needs of the person. Progressive - Gradually increasing intensity of training over time. Overload - Working harder than normal to push the body. Reversibility - Negative effects when you stop training. Going backwards in training. Tedium - Boredom. <p><u>The Principles of training – Acronym - FITT</u></p> <ul style="list-style-type: none"> Frequency - How often you train. Intensity - How hard you train. Time - How long you train for. Type - What method of training you use. 	<p><u>The Components of Fitness.</u></p> <p><u>REMEMBER THE ACRONYMS</u></p> <p>Sprinters Can Run Fast Speeds Marathon Can Be Painful</p> <p>Strength - The ability to overcome a resistance.</p> <p>Coordination - The ability to use 2 or more body parts together smoothly and efficiently.</p> <p>Reaction time - The time taken to initiate a response to a stimulus.</p> <p>Flexibility - The range of movement possible at a joint.</p> <p>Speed- The maximum rate at which an individual is able to perform a movement or cover a distance in a period of time.</p> <p>Agility - The ability to move and change direction quickly whilst maintaining control.</p> <p>Muscular Endurance - The ability of a muscle group to undergo repeated contractions avoiding fatigue.</p> <p>Cardiovascular Endurance - The ability of the heart and lungs to supply oxygen to the working muscles.</p> <p>Balance - Maintaining the centre of mass over the base of support.</p> <p>Power - Maintaining the centre of mass over the base of support.</p>	<p><u>Types (Methods) of Training</u></p> <p>Continuous training – steady-state low- moderate intensity.</p> <p>Example Athletes– Paula Radcliffe/Mo Farrah (long distance runners).</p> <p>Fartlek training – continuous steady state aerobic exercise with random higher intensity periods.</p> <p>Example Athletes– Lucy Bronze/Ollie Watkins (footballers).</p> <p>Interval Training – periods of exercise followed by periods of rest used by both aerobic and anaerobic performers.</p> <p>Example Athletes – Candace Parker/ LeBron James (Basketballers).</p> <p>TRAINING SEASONS</p> <p>PRE-SEASON (PREPARATION)</p> <p>Build fitness, aerobic. Skills needed for season.</p> <p>COMPETITION SEASON (PEAK/PLAYING)</p> <p>Peak level of fitness, maintain it, work on skills.</p> <p>POST-SEASON (TRANSITION)</p> <p>Rest and recover, light aerobic training to not drop too far.</p>	<p><u>Types (Methods) of Training</u></p> <p>Circuit Training – a series of exercise stations arranged in a specific order to usually alternate muscle groups.</p> <p>Example Athlete Katarina Thompson-Johnson (heptathlon)/Raheem Sterling (footballer).</p> <p>Weight Training – a series of exercises organised into repetitions with an intensity and recovery time specific to the individual.</p> <p>Example Athlete Dina Asher-Smith/ (100m)/ Anthony Joshua (Boxer).</p> <p>High Altitude Training</p> <p>2000m+ above sea level</p> <p>Less oxygen so body has to work harder</p> <p>Body compensates by creating more red blood cells</p> <p>Return to sea level and training is easier due to more red blood cells</p> <p>Suits endurance athletes</p> <p>Example Athletes – Paula Radcliffe/Mo Farrah (Marathon Runners). Juliana Buhring/Sir Bradley Wiggins (Endurance Cyclists)</p>	<p><u>Types (Methods) of Training</u></p> <p>Plyometrics – a series of explosive exercises to improve the speed at which a muscle contracts. Used by performers who sprint, jump or throw .</p> <p>Example Athletes – Candace Parker ((Basketballers)/ Philips Idowu (Triple Jump)).</p> <p>High Intensity interval training (HIIT) – repeated periods of high-intensity exercise followed by varied recovery times.</p> <p>Example Athletes– Lucy Bronze/Ollie Watkins (footballers).</p> <p>MAXIMUM HEART RATE =</p> <p>220 MINUS YOUR AGE</p> <p>E.g. $220-11=209$</p> <p>60-80% = Aerobic</p> <p>E.g. $125-167$ bpm</p> <p>80+% = Anaerobic</p> <p>E.g. 167 bpm and over</p>

Year 7 Science

Week 1	Week 2	Week 3	Week 4	Week 5
<p>Energy cannot be created or destroyed but it can be transferred, dissipated or stored in different ways.</p> <p>There are eight main stores of energy: magnetic, internal (thermal), chemical, kinetic, electrostatic, elastic potential, gravitational potential and nuclear.</p> <p>Energy can be transferred between different stores. Energy transfer can occur electrically, mechanically, thermally and by light and sound.</p> <p>Efficiency is a measure of how good a device is at transferring energy from one form to another. Energy efficiency can be calculated using:</p> $\text{Efficiency} = \frac{\text{useful energy transferred}}{\text{total energy supplied}}$ <p>Diagrams can be used to show how energy is transferred:</p> <p>1. Flow diagram: boxes show energy stores; arrows show energy transfers.</p> <p>A flow diagram showing the energy transfers when a car brakes.</p> <p>2. Sankey diagram: the size of the arrow represents the amount of energy in joules.</p> <p>D energy transfers in a light bulb</p>	<p>Energy can be transferred by heating in three different ways: conduction, convection and radiation.</p> <p>Conduction</p> <p>When a substance is heated:</p> <ul style="list-style-type: none"> its particles gain internal energy and move more vigorously. the particles bump into nearby particles and make them vibrate more. this passes internal energy through the substance from the hot end to the cold end. <p>The energy in the hot part of the bar is transferred along the bar, making these particles vibrate more. The vibrating particles transfer some of their energy to the next particles in the bar.</p> <p>As energy is transferred to the metal bar, its particles vibrate faster.</p> <p>Convection</p> <p>Convection occurs when particles with a lot of heat energy in a liquid or gas move and take the place of particles with less heat energy. Convection currents occur because:</p> <ul style="list-style-type: none"> the liquid or gas in hot areas is less dense than the liquid or gas in cold areas, so it rises into the cold areas. the denser cold liquid or gas falls into the warm areas. <p>D energy transfers in a light bulb</p>	<p>Radiation</p> <p>Infrared radiation is a type of electromagnetic radiation that involves waves. Because no particles are involved, radiation can transfer heat energy through a vacuum. Infrared radiation can also pass through some gases and solid materials.</p> <p>Energy that is transferred to unwanted forms of energy is wasted. Wasted energy <i>spreads out</i> into the surroundings; this is called dissipated energy.</p> <p>There are a number of ways that unwanted energy transfers can be reduced.</p> <p>Lubrication can be used to reduce the friction between moving parts of a machine, which reduces the thermal energy transfer.</p> <p>The wasteful dissipation of thermal energy to the surroundings can be reduced using thermal insulation, e.g. loft insulation and cavity wall insulation.</p>	<p>An energy resource is a useful supply or store of energy. The main energy resources available for use on Earth are:</p> <ul style="list-style-type: none"> the fossil fuels (coal, oil & gas) nuclear fuels such as uranium biofuels such as bioethanol the wind hydroelectricity the tides the Sun <p>Fossil and nuclear fuels are non-renewable; these resources are not replenished at the rate they are being used so will eventually run out.</p> <p>How the time left varies for different fuels</p>	<p>Kinetic energy is the energy stored in a moving object. The amount of kinetic energy stored in an object in motion depends on its mass and speed.</p> <p>Kinetic energy can be calculated using the equation:</p> $\text{kinetic energy (J)} = \frac{1}{2} \times \text{mass (kg)} \times \text{speed}^2 (\text{m/s})$ <p>often written as $KE = \frac{1}{2} mv^2$</p> <p>A cricket ball with a mass of 160g is bowled at a speed of 30m/s. How much kinetic energy is stored in the moving ball?</p> <p>160g = 0.16 kg</p> $KE = \frac{1}{2} \times m \times v^2$ $= \frac{1}{2} \times 0.16 \text{ kg} \times (30 \text{ m/s})^2$ $= 72 \text{ J}$ <p>Gravitational potential energy (GPE) is the energy stored in an object that is raised against the force of gravity. The amount of GPE stored in a raised object depends on its mass, the strength of gravity and how far the object is moved upwards (its height).</p> <p>GPE can be calculated using the equation:</p> $\text{Change in GPE (J)} = \text{mass (kg)} \times \text{gravitational field strength (N/kg)} \times \text{change in vertical height (m)}$ <p>often written as</p> $\Delta GPE = m \times g \times \Delta h$ <p>$g = 10\text{N/kg}$ on Earth</p> <p>Worked example:</p> <p>A 5kg box stores an extra 25J of GPE when it is lifted onto a shelf. Calculate the distance it was lifted.</p> $\Delta h = \frac{\Delta GPE}{m \times g}$ $= \frac{25\text{J}}{5\text{kg} \times 10\text{N/kg}}$ $= 0.5\text{ m}$

Year 7 Science

Week 6

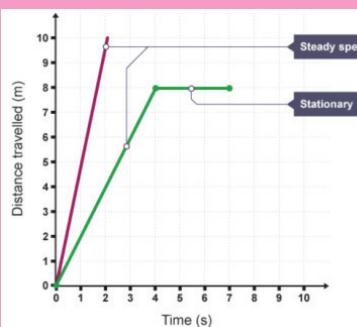
A physical **quantity** is something that can be measured, e.g. speed, distance and velocity.

Speed is the distance travelled per unit time. It can be calculated using the equation:

$$\text{Speed} (\text{m/s}) = \frac{\text{distance} (\text{m})}{\text{time} (\text{s})}$$

Speed is a **scalar quantity**; it has **magnitude** (size) but does not have a specific direction. Speed in a stated direction is known as **velocity**. Velocity is a **vector quantity**; it has both magnitude and a specific direction.

For a moving object, the distance travelled can be represented by a **distance-time graph**.



On a distance-time graph:

- **horizontal lines** show that the object is stationary (not moving)
- **sloping lines** show that the object is moving

The speed of an object can be calculated from the **gradient** of the line. The greater the gradient (and the steeper the line) the faster the object is moving.

Week 7

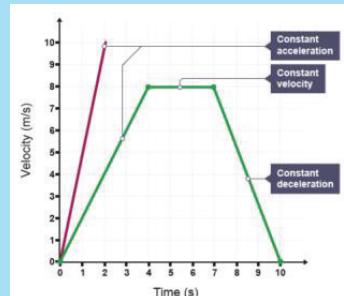
Acceleration is the rate of change of velocity, i.e. the amount that velocity changes per unit time.

If an object accelerates from an **initial velocity (u)** up to a **final velocity (v)**, its **average acceleration (α)** can be calculated using the equation:

$$\alpha (\text{m/s}^2) = \frac{v-u (\text{m/s})}{t (\text{s})}$$

where **t** is the **time taken**.

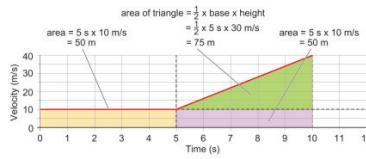
For a moving object, the velocity can be represented by a **velocity-time graph**.



On a velocity-time graph:

- **horizontal lines** show that the object is moving at constant velocity
- **sloping lines** show that the object is accelerating

The area under a velocity-time graph represents the distance travelled and can be calculated using geometry as shown below.



Week 8

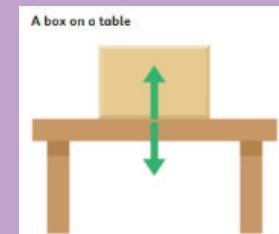
Forces are responsible for all the interactions between particles and objects.

Contact forces: forces exerted between two objects when they are touching, e.g. reaction force, tension, friction and air resistance.

Non-contact forces: forces that act between two objects that are not touching, e.g. magnetic, electrostatic and gravitational force.

A force diagram uses **arrows** to show the forces acting on an object. These **force arrows** (or **force vectors**) represent the two essential features of a force:

- The **direction** in which the force acts is shown by the direction of the arrow
- The **size** of the force is shown by the length of the arrow.



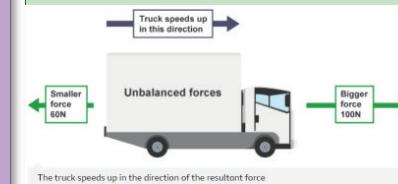
Two forces can be added together to find a **resultant force**.

If the weight of a box (acting downwards) is 50N and the normal reaction force (acting upwards) is 50N, the forces are **balanced**. The **resultant force is zero**.

Week 9

Forces affect the **motion** of an object. An object will remain in the same state of motion unless a resultant force acts on it. If the forces on an object are **unbalanced**:

- a **stationary** object starts to move in the direction of the resultant force
- a moving object changes speed and/or direction in the direction of the resultant force



The acceleration of an object in the direction of a resultant force depends on:

- the **size of the force** (for the same mass, the bigger the force the bigger the acceleration)
- the **mass** of the object (for the same force, the more massive the object the smaller the acceleration)

Balanced force: when the forces acting on an object in opposite directions are equal in magnitude

Resultant force: The single force that could replace all the forces acting on an object, found by adding these together.

Stationary: not moving

Unbalanced forces: when the force acting on an object in one direction is more than the force in the other direction.

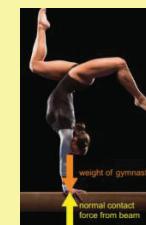
Week 10

Whenever two objects interact, they exert **equal and opposite forces** on each other.

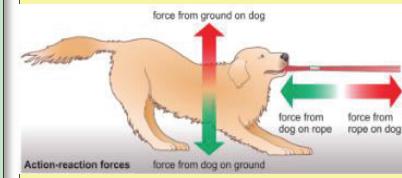
Two objects can interact:

- when objects touch, e.g. when you sit in a chair
- at a distance, e.g. the gravitational attraction between the Earth and the Moon

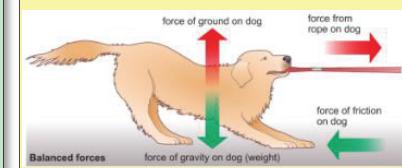
The pair of forces acting on two interacting objects are known as **action-reaction forces**.



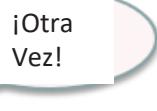
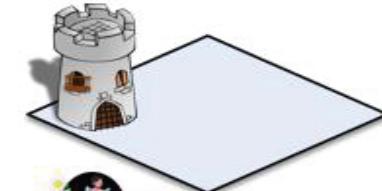
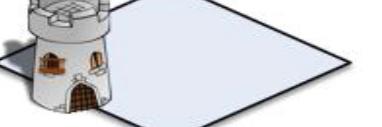
Action-reaction forces are of the **same type**, e.g. both contact, and the **same magnitude**, but are acting on two **different objects**.



Action-reaction forces are not the same as **balanced forces**, which act on the **same object**.



Year 7 Spanish

Week 1 and 2	Week 3 and 4	Week 5 and 6	Week 9 and 10
me gusta: I like	me llamo: I am called	me gusta mucho: I like a lot	Corro: I run
me gustan: I like	Soy: I am	Especialmente: especially	por la mañana: in the morning
Porque: because	la música clásica: classical music	me encanta: I love	por la tarde: in the afternoon
el baile: dance	el té: tea	no me gusta nada: I don't like at all	por la noche: in the evening
la música: music	el café: coffee	Aburrido: boring	el fin de semana: at the weekend
la pintura: painting	Hacer: to make, to do	el futbol: football	Como: I eat
el deporte: sport	Jugar: to play	Normalmente: normally	Bebo: I drink
las películas: films	Pintar: to paint	a veces: sometimes	Escribo: I write
los animales: animals	Bailar: to dance	raras veces: rarely	Leo: I read
los artes marciales: martial arts	Cocinar: to cook	muchas veces: lots of times	Aprendo: I learn
el parque: park	Cantar: to sing		La plaza tiene una torre (Antonio Machado)
la playa: beach	Mirar: to watch		La plaza tiene una torre, la torre tiene un balcón,
el frío: cold	Escuchar: to listen		el balcón tiene una dama, la dama una blanca flor.
los libros: books	Montar: to ride		Ha pasado un caballero - ¡quién sabe por qué pasó! -
la tele: television	Escribir: to write		y se ha llevado la plaza, con su torre y su balcón,
Vocabulary learning involves knowing different aspects of a word. Use this checklist:			con su balcón y su dama, su dama y su blanca flor.
1. I have seen this word before. 2. I know what the word means. 3. I can read the word aloud. 4. I can spell the word correctly. 5. I can use the word in a sentence. 6. For nouns, I know the gender and the correct word for 'the'.	 tip  ¡Otra Vez!	Week 7 and 8 Siempre: always Bailo: I dance Cocino: I cook Canto: I sing Miro: I watch Toco: I play Bailas: you dance Cantas: you sing Miras: you watch Montas: you ride	    

Vocabulary – Prefix of the Week

How do I use this Knowledge Organiser?

What is a Prefix?

- A **prefix** is an affix (a part of a word) which is placed before the main part of a word. A prefix can add or change the meaning of the original word stem.
- For example:** when the prefix un- is added to the word happy, it creates the word *unhappy*.

How will this help me?

- Knowing common prefixes will help you to decode words you come across when you are reading. Every week you will be learning a range of Tier 2 and Tier 3 vocabulary which will be linked to the same prefix. Some of these words you will be familiar with, but some will be brand new vocabulary for you to learn.

How do I use this knowledge organiser?

- Every fortnight you will need to learn meaning of the prefix and as many words beginning with this prefix as you can. You will need to learn the words, the definitions and their spellings.
- You can learn the words and their meanings in different ways. You can copy them out using 'write/cover/check'. You can create Frayer Models of the different prefixes and words. You could even draw images to help you to learn them.
- When doing the work in your homework books, you should prioritise the words you don't already know. If you are already confident with using the Tier 1 words and some of the Tier 2 words, then you don't need to revise them. Focus on the words you are not familiar with.
- You will be given a range of words with detailed explanations, but also a list of extension words. You can look up the meaning of these words online or using a dictionary and learn them too.

Week 1

non- (not)

TIER 2 AND TIER 3 WORDS

nonfiction - writing that is about real events and facts (*His recipe book was this year's most popular nonfiction book.*)

nonconformity - living and thinking in a way that is different from other people. (*Her green hair was an immediate signal of her nonconformity.*)

non-volatile – not likely to change suddenly; in computing, when data is not lost from storage when the power is lost.

non-identical – twins who do not look the same because they were developed from two separate eggs. (*Eva's non-identical twin sister Emma is very different from her.*)

nonlinear - a process or series of events, etc. in which one thing does not clearly or directly follow from another. (*The Witcher is a novel which features a nonlinear narrative.*)

Extension Words: nondescript, noncommittal, non-traditional, nonentity, non-uniform, non-verbal

un- (not)

TIER 1 WORDS:

Unhappy, unfriendly, unbelievable,

TIER 2 AND TIER 3 WORDS

unsustainable – cannot continue at that rate. (*The amount of money you're spending is unsustainable.*)

unconventional – different from what is usual or normal. (*Although we agree that Einstein was a genius, he was also very unconventional.*)

unrepentant – not feeling sorry for something you've done (*He was unrepentant and refused to accept his mistakes.*)

unhygienic – not clean, in a way that might cause illness. (*A lack of clean water leads to unhygienic conditions.*)

unambiguous - expressed in a completely clear way (She gave a clear, unambiguous answer to the question.)

Extension Words: unrequited, unobtrusive, unscathed, uncertainty, unfeasible, unreactive, uncontrolled

Week 3

ex-, exo-, ecto- (outside/outer)

TIER 2 AND TIER 3 WORDS

external - of, on, for, or coming from the outside. (*The external walls of the house were painted grey.*)

excretion – to get rid of material such as solid waste or urine from the body. (*Most toxins are naturally excreted from the body.*)

extremophiles - a microorganism that is able to live in extreme conditions. (*We think extremophiles are very similar to organisms that existed on early Earth.*)

exothermic - describes a chemical reaction that produces heat. (*Exothermic reactions usually release heat and weak bonds are replaced with stronger ones.*)

ectomorph - a person with a long body shape and not much fat. (*Ectomorphs have the ideal body shape for long-distance running.*)

Extension Words: exterior, exfoliate, ectopic, exocytosis, exoskeleton

extra-, extro- (outside)

TIER 2 AND TIER 3 WORDS

extract – verb - to remove or take out something. (*The dentist extracted the painful tooth.*)

extrovert - an energetic person who enjoys being with other people. (*His extroverted personality made him a excellent salesman.*)

extracurricular – an activity at school which takes place outside of normal lessons. (*The school offered sports teams and performing arts as extracurricular activities.*)

extraneous – something irrelevant or unrelated to the subject being dealt with. (*These questions are extraneous to the issue being discussed.*)

Extension Words: extraordinary, extrasensory, extrapolate, extranet, extravaganza, extravagant, extradite

Vocabulary – Prefix of the Week

Week 5

intra-, intro- (within)

TIER 2 AND TIER 3 WORDS

introvert - someone who is quiet, and prefers to spend time alone, not with lots of other people. (*Because she was an introvert, she avoided parties.*)
intravenous – into or within veins (*The nurse set up an intravenous drip to deliver fluids to the patient.*)
introspective – thinking internally about your own ideas, thoughts and feelings. (*His failed job interview had made him quiet and introspective.*)
intramolecular – Intramolecular forces are the forces that hold atoms together within a molecule.
intranet – uses internet technology but for a local communications network, such as within a business.

Extension Words: intrapersonal, intrauterine

inter- (between)

TIER 1 WORDS: interrupt, internet, internal

TIER 2 AND TIER 3 WORDS

interfere – involving yourself in a situation when it's not wanted. (*Interfering in other people's arguments is always a mistake.*)
intervene – to deliberately get involved in a difficult situation to prevent it from getting worse. (*Their mother had to intervene when the siblings' play fighting got out of hand.*)
intercity – travelling between cities. (*The intercity trains were fast, regular and good value for money.*)
intermolecular - intermolecular forces are forces that exist between molecules.

Extension Words: interface, interstate, interstellar, intercede, interloper, interact, interject, interpose, intersperse

Week 7

sub- (under)

TIER 1 WORDS: submarine, subway, subtle

TIER 2 AND TIER 3 WORDS

subtext – a hidden or less obvious meaning. (*The simple film had a serious political subtext.*)
subatomic – smaller than or within an atom. (*An electron: a subatomic particle that circles the nucleus of the atom.*)
subset – a set that is part of another, larger set (*In maths, set A is a subset if all elements of A are also elements of B.*)
subservient – obeying others (*Historically, women were expected to be subservient to men.*)
subvert – undermine the power and authority of an established system or institution. (*The rebel army is attempting to subvert the government.*)

Extension Words: subtend, sub-cellular, subsidiary, subside, subvert, subjugate, subterranean, subtle, subterfuge, sublimate, substance, subsection, subdivision, subordinate

under- (under)

TIER 1 WORDS: underwater, underwear, underground

TIER 2 AND TIER 3 WORDS

underestimate - estimate or judge something to be smaller or less important than it really is. (*The cost of building a new swimming pool was underestimated by the local council.*)
understudy - an actor who learns the parts of other actors in a play. (*Understudies don't know when they'll perform.*)
undervalue - to consider someone or something as less valuable or important than he, she, or it really is. (*He did not get a pay rise so he felt undervalued by his boss.*)
underachieve - to do less well than you could. (*He didn't do any revision so he underachieved in the exam.*)
underprivileged - without privileges and opportunities available to the average person. (*The charity helped underprivileged children.*)

Extension Words: underlie, underscore, undergraduate

Week 9

trans- (across, through)

TIER 1 WORDS: transport, translate,

TIER 2 AND TIER 3 WORDS

transfer - to move someone or something from one place to another. (*We were transferred from one bus onto another.*)

transform - to change completely the appearance or character of something or someone. (*They transformed the old barn into a beautiful new home.*)
transgender – someone whose gender identity differs from what is typically associated with the sex they were assigned at birth. (*Society has become more understanding of people who are transgender.*)

translate - to change words into a different language. (*Her job involves translating English into French.*)

transplant - a medical operation in which a new organ is put into someone's body. (*His kidney transplant surgery was a success.*)

transversal - In geometry, a transversal is a line that passes through two lines in the same plane at two distinct points.

Extension Words: transpose, transpiration, transverse, transcendent, transgress, transformation, transversal

EXTENSION:

Check over your homework for the last term. Revise any vocabulary you are not confident on, ready for your test in Assessment Week.

