

# Home Learning Booklet



## Knowledge Goals Year 8 Half Term 3

# How to self-test

## Mind mapping

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

How to mind map:



## Information for parents on knowledge retrieval



## Flash cards

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

How to mind map:



## How should students use the Knowledge Goals booklets?

Your Knowledge Goals booklet provide the essential knowledge that you need to learn in each subject this half term. You are **expected to spend 30 minutes per subject per week 'learning' the content**. You will be assessed during lessons using 'low stake' quizzing. **Your teacher may choose to set you additional homework.**

## How can parents support?

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

# Subject Index

Suggested Homework Schedule (1 hour of independent study per night if you have not been set homework by your class teacher).

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

## Week A

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

## Week B

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

Subject	Page No
Teir 2 Vocabulary	4
Art	6
Biology	7
Chemistry	10
Computer Science	12
Drama	14
Electronics	16
English Language	18
Food technology	20
French	22
Geography	24
History	26
Materials	28
Maths	30
Music	33
PE	35
Physics	39
PRE	41
Spanish	43
Freya model templates	45

# Literacy Tier 2 Vocabulary



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

#	Key word	Definition
1	Adequate	
2	Ambiguous	
3	Attribute	
4	Decipher	
5	Exemplify	
6	Pivotal	
7	Stability	
8	Sufficient	
9	Turbulent	
10	Validity	

# Literacy Tier 2 Frayer Model

examples

Definition	Characteristics
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<div style="border: 2px solid blue; border-radius: 15px; width: 100px; height: 40px; margin: 0 auto;"></div>	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Examples	Non-examples

Definition	Characteristics
<p>A shape with equal length sides and equal angles between each side. They differ from irregular polygons in that they not only cannot have unequal length sides or angles, but they can also not have curved lines.</p>	<p>Enclosed shape of straight sides Sides are equal length Angles are equal between the sides No curved lines Can be drawn on flat surface</p>
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; background-color: #FFD700;">Regular Polygons</div>	
	
Examples	Non-examples

Definition:	Characteristics:
<p>A cold-blooded, air breathing animal that has scales instead of hair or feathers. There are around 6,000 species</p>	<ul style="list-style-type: none"> <li>- Dry, scaly skin</li> <li>- Reproduce by laying eggs</li> <li>- Cold blooded &amp; air breathing</li> <li>- Backbone</li> </ul>
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block; background-color: #FFD700;">Reptiles</div>	
<p><b>Examples:</b> Four existing orders of reptiles: Turtles, crocodiles &amp; alligators, lizards &amp; snakes, and tuatara.</p>	<p><b>Non-examples:</b> - Amphibians e.g. frogs - Mammals e.g. elephants - Fish e.g. sharks</p>
Examples:	Non-examples:

DEFINITION	CHARACTERISTICS
<p>The multiple created when a positive integer is multiplied by the same positive integer</p>	<ul style="list-style-type: none"> <li>• The process of creating a square number is called "squaring" and is shown using an exponent of 2 (<math>c^2</math>)</li> </ul>
<div style="border: 2px solid gray; border-radius: 50%; padding: 10px; display: inline-block;">Square Number</div>	
EXAMPLES	NON-EXAMPLES
<p>4 (<math>= 2^2</math>)    9 (<math>= 3^2</math>) 100 (<math>= 10^2</math>)    454 (<math>\neq 22^2</math>) 1 (<math>= 1^2</math>)    10 000 (<math>\neq 100^2</math>)</p>	<p>2 (<math>\neq 1^2</math>) 10    1000 5 -4    <math>\frac{1}{4}</math></p>

Definition	Characteristics/Features
<p>A change beginning around 1750 where a greater number of goods were produced in large factories rather than in homes or small family businesses.</p>	<ul style="list-style-type: none"> <li>• improved agricultural production</li> <li>• increase in population and number of cities</li> <li>• steam-driven machinery used for transport and goods production</li> <li>• use of coal as an energy source</li> <li>• greater availability of iron</li> </ul>
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Industrial Revolution</div> 	
<ul style="list-style-type: none"> <li>• First mechanical reaper in 1834.</li> <li>• Increase city size and density: London increased from 5 million in 1700 to nearly 9 million by 1800.</li> <li>• Mass production of goods occurs:               <ul style="list-style-type: none"> <li>o Britain: textile manufacture centralised to mills by 1780s</li> <li>o USA: by 1914, the USA was producing more steel than Britain, Germany, France and Austria-Hungary combined.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• isolated communities with a hunter-gatherer economy</li> <li>• people living as subsistence farmers on small plots</li> <li>• people working fields by hand</li> <li>• transport predominately by horse and cart</li> </ul>
Examples	Non-Examples

Have a go at creating a Frayer Model for each of the 6 tier 2 words from this term (blank templates are at the back of the booklet for you to complete this activity).



# Knowledge Goals: Art

## The Mayans

The Mayan civilization lasted from about **500 BC to 1200 AD..**

Examples of the script have been found **carved in stone and written on bark, wood, jade,** ceramics, and a few manuscripts in **Mexico,** Guatemala and northern Belize.

The script was usually written in paired **vertical columns** reading from left to right and top to bottom in a zigzag pattern.



## Overview

Firstly you will research the use of symmetry in branded logo design. You will then research Mayan culture, including hieroglyphs. You will design a symmetrical logo based on their name and create poly prints from it. You will develop your logo design using pen, and create a range of colourful backgrounds for your prints.

Find out more about the Mayans here

<https://www.youtube.com/watch?v=NTCSTUfRTMA>

## Key terms

**Line of symmetry** - An imaginary line that divides an image into two halves causing one half to be the reflection of the other

**Print** – Transferring an image from one surface to another

**Shape** – A 2D or flat element which is defined by line

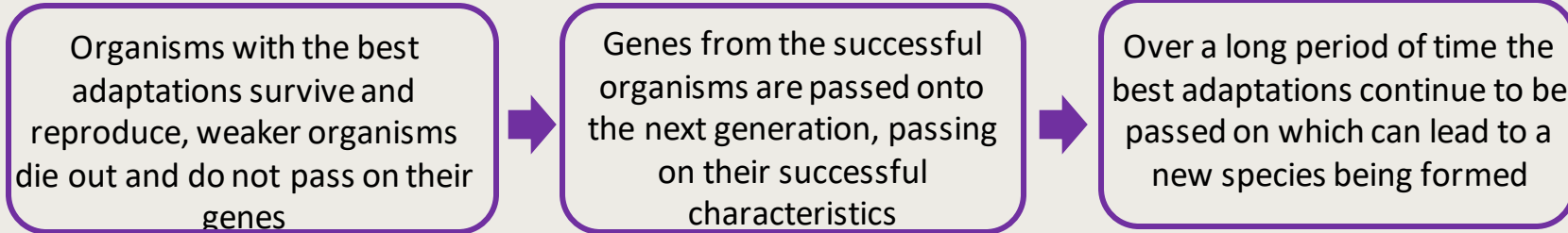
## Symmetry in Letters !



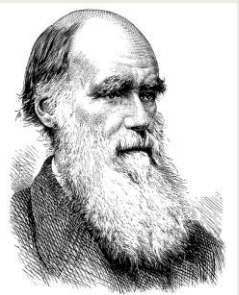
# Knowledge Goals: Biology – Evolution + inheritance

Scientists believe that the organisms which we see on Earth today have gradually developed over millions of years, this is known as **Evolution**.

Charles Darwin came up with the concept of **natural selection**, he said that only the best adapted animals will survive to pass on their **genes**, weaker animals will die out.



One example of natural selection can be seen in giraffes, only the giraffes with the longest necks would be able to eat from trees, the ones with shorter necks would not be able to eat and die out. This would mean that only the gene for long necks would be passed on, leading to all giraffes having long necks.



**Darwin's theory:** organisms evolve as a result of natural selection. People disagreed as this went against the view that God created all life on Earth. Fossil records, observational changes in microorganisms and extinction provided evidence to support his theory.



**Before industrial revolution:** pale moths were camouflaged against tree bark, so populations increased, dark moths were easily seen and eaten reducing their numbers.

**After revolution:** dark moths camouflaged against soot-blackened trees, so their populations increased, and the lighter moths eaten reducing their numbers.

**Extinction:** occurs when all members of a species dies out. **Fossil records** show how many organisms have existed and become extinct.

Extinction can be caused by:

- Changes to the environment
- Destruction of habitat
- New disease
- New predators
- Increased competition
- Human activity

Variety in an ecosystem reduces, this is known as a reduction in **biodiversity**.

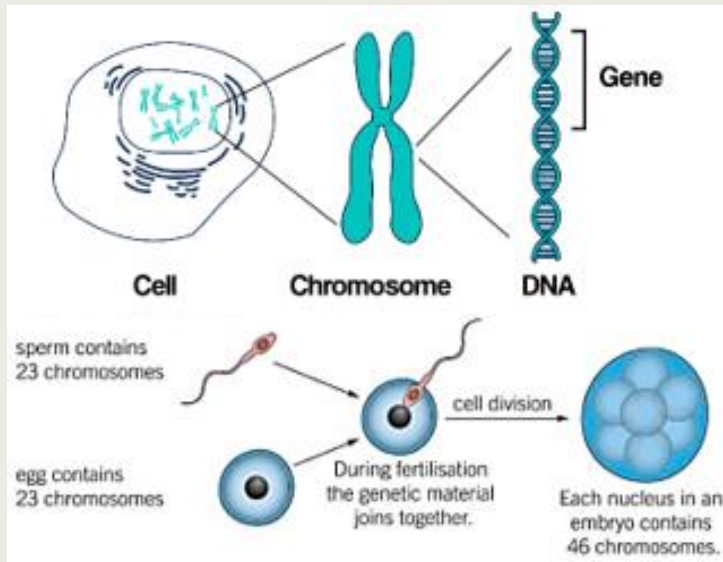
Prevention of extinction:

- Conservation – securing habitats, reduce disruption to food webs
- Captive breeding – support stable, healthy populations to reintroduce into natural habitats (biodiversity difficult to maintain)
- Gene banks – seed and tissue banks (plants), cryobanks (seed/embryo/sperm/egg), pollen banks

# Knowledge Goals: Biology – Evolution + inheritance

Characteristics are passed along from parents to their offspring, half of the genetic information comes from each parent, this is passed on through the sex cells in the process of fertilization

DNA is the material which contains all of this genetic information



*Useful to understand genes for genetic testing, inherited disease, gene therapy, human evolution, personalised medicines*

**Mutations** in DNA occur randomly and may be passed on to offspring. Some can be beneficial for organism's others can be harmful

- **DNA** – 2 strands, joined by 4 bases forming a **double helix**
- **Chromosomes** – long strands of DNA, hold many genes
- **Genes** – section of DNA coding for a specific characteristic

**Gene modification** is the process scientists can use to alter genes of an organism

Improve food production, pest resistant plants  
GM bacteria for vaccines/antibiotics

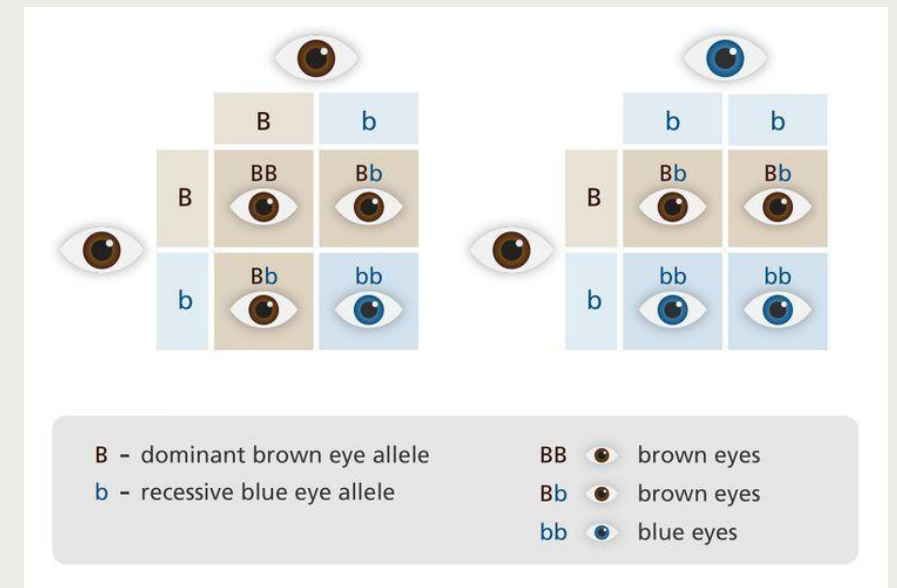


Unethical to interfere with genes  
Risks of GM organism, allergies  
New pathogen can arise



Each characteristic has 2 versions of the same gene called alleles, one from each parent

**DOMINANT** alleles are given a CAPITAL letter and there only needs to be **one allele** present to see the characteristic  
**recessive** alleles are given a lower-case letter, and **both alleles** need to be present to see the characteristic  
**PUNNET** squares can predict the inheritance of characteristics







# Knowledge Goals: Chemistry – Chemical reactions

When a chemical reaction happens, **energy** is transferred to or **from** the **surroundings**.

When energy is transferred to the surroundings, this is called an **exothermic reaction** and usually feels hot.

When energy is taken in from the surroundings, this is called an **endothermic reaction** and usually feel cold.

## Exothermic reactions

are chemical reactions which release energy from the chemicals into the surroundings. This energy is usually released as heat, so the surroundings get hotter.

Handwarmers are an example of an exothermic reaction.



## Endothermic reactions

absorb energy from the surroundings. This energy is usually absorbed as heat, so the surroundings get colder.

Ice packs are an example of an endothermic reaction.

A **catalyst** is a substance that speeds up a chemical reaction. The catalyst is **not** used up or chemically changed during the reaction.

**Combustion** is another name for burning.

In a combustion reaction, **fuel** is burned and reacts with **oxygen** to release energy.

## Complete combustion

Fuel + oxygen → Carbon dioxide + Water

## Incomplete combustion

Fuel + oxygen → Carbon monoxide + Carbon + Water



Thermal means heat. Decomposing is the process of breaking down.

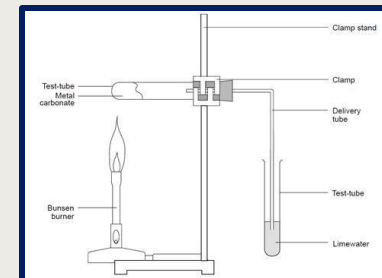
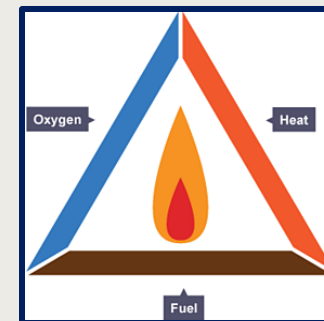
**Thermal decomposition** is a chemical reaction that happens when a compound breaks down when heated.

The starting **compound** is the **reactant**. It breaks down to simpler substances, which could be **elements** or they could be **compounds**.

Thermal decomposition reactions are examples of **endothermic** reactions.

## Example

copper carbonate → copper oxide + carbon dioxide





# Knowledge Goals: Computing

Hexadecimal (or hex) is a number system which uses base 16  
As we only have 10 digits, it uses 0-9 and then letters A to F

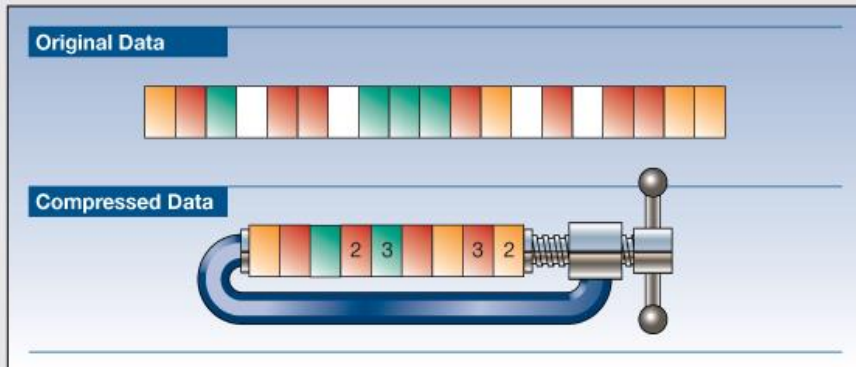
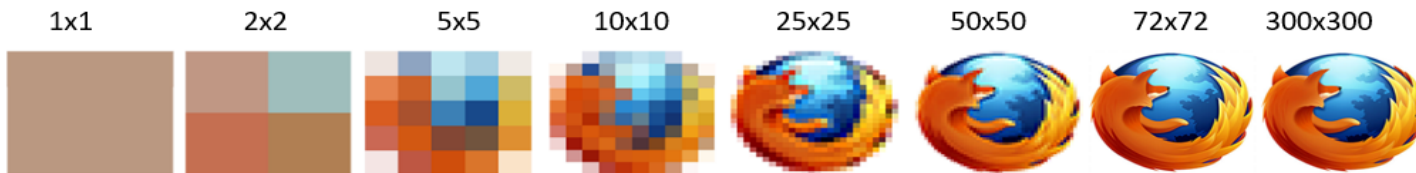
Denary	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Hexadecimal	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	10	11

Resolution is the concentration of pixels within a specific area

The area is defined by the image width and height in pixels e.g. 3264x2448

72dpi = screen resolution

300 dpi = print quality resolution



We can compress data by looking for repeats in the same element, like colour and instead of repeating the colour, we can simply add the amount of times it should appear. This usually allows us to reduce the file size

File	Size
One character of text	1 byte
A full page of text	30 KB
One small digital colour photograph	3 MB
Music CD	600 MB
A DVD	4.5 GB
Hard disk	1 TB

0	0	0	0	1	0	0	0	0	0
0	0	0	1	1	0	0	0	0	0
0	0	1	1	1	0	1	0	0	0
0	1	1	1	1	0	1	1	0	0
1	1	1	1	1	0	1	1	1	0
0	0	0	0	1	0	1	0	0	0
1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	0
0	0	1	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0	0

This is a basic image of a boat. Each pixel in this boat image is given a binary value. Each value represents a different colour. Using one bit per pixel allows only 2 values, 0 and 1  
1 = black, 0 = white









# Knowledge Goals: Electronics

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

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


## Symbols to recognise

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


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

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

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



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



Solder- using a soldering iron it attaches two components together

**KEY TERMS**

## Types of plastics

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

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

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

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


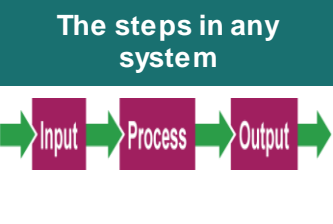
Think of the word "set" what does it mean?  
(Put something in a set position)

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

**CAM**  
Computer Aided Manufacture

**Laser cutter**

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



## Knowledge Goals: English Language

### Text Selection

A Monster Calls  
 Frankenstein  
 Robin Hood  
 The Sword and the Stone  
 Theseus and the Minotaur  
 IT

### Home Learning Tasks:

- 1) Complete 15 minutes of reading every night, using your AR book.
- 2) Complete the vocabulary acquisition quizzes, set on Teams every fortnight.
- 3) Using this knowledge organiser, learn and review the key ingredients of crafting effective narratives.
- 4) Read at least one text from the wider reading list!

### CORE ASSESSMENT SKILLS AND WHAT STUDENT ARE EXPECTED TO WRITE

- Application of language techniques (ALT)
- Application of structural techniques (AST)
- Effective paragraphing (EP)
- Sentence variety (SV)
- Mood / atmosphere (MA)

'Frankenstein' by Mary Shelley

I had selected his features as beautiful. Beautiful! Great God! His yellow skin scarcely covered the work of muscles and arteries beneath; his hair was of a lustrous black, and flowing; his teeth of a pearly whiteness; but these luxuriances only formed a more horrid contrast with his watery eyes, that seemed almost of the same colour as the dun-white sockets in which they were set, his shrivelled complexion and straight black lips.

The different accidents of life are not so changeable as the feelings of human nature. I had worked hard for nearly two years, for the sole purpose of infusing life into an inanimate body. For this I had deprived myself of rest and health.

Sentence Types		
Simple sentence	For short sentences you want to emphasise.	She was lost.
Compound sentence	Two sentences connected with a coordinating conjunction = FANBOYS: for, and, nor, but, or, yet, so.	She was lost, <b>but</b> she was not beaten.
Complex sentence	Needs a <b>comma!</b> Opens with a subordinating conjunction: because, if, although, since, until, and while.	<b>While</b> the sun was setting, the creatures swarmed out of their holes.
Embedded clause	Extra information in the middle of a sentence, behaving like brackets. You could also use brackets!	His eyes, <b>although twitching and fogged</b> , spotted the movement of her dress like a hawk.
Holophrastic sentence	A one-word sentence; great for emphasising short phrases or words (because you are banned from words all in capital letters)	She darted into the woods for cover, losing herself deeper and thicker and mindlessly lower into the cold forest. <b>Darkness.</b>
Triad	3 adjectives.	His <b>cracked, blood-shot and untamed</b> eyes scanned the silent room.
Staccato	A series of short sentences to build up tension or panic.	She let out the whisper of a gasp. <b>His eyes darted. She froze. A scurry. A snap. Footsteps? Silence.</b>



Language Techniques (imagery)		
Metaphor	A comparison: a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable.	<b>Speckled, marquise diamonds</b> began to illuminate the night sky. Nettles: a curious name for those green <b>spears</b> .
Metaphor - personification	A comparison: giving <b>any</b> human attribute to objects. Focusing on <b>human actions</b> might simplify this.	The vines <b>strangled</b> the <b>gasping</b> roses, <b>creeping</b> stealthily toward the decrepit, crumbling fence.
Metaphor – pathetic fallacy	A comparison: giving <b>emotions</b> to objects. Often effective when linked to the weather.	As the light faded, the <b>dejected</b> and <b>sullen</b> daffodils cocooned into themselves. <b>Tiring</b> of the pressure to perform, the sun crept away in <b>exhaustion</b> .
Simile	An explicit comparison where you make clear that you are making a comparison - often using the words 'like', 'as' or 'than'.	The stars illuminated the sky <b>like</b> speckled, marquise diamonds. The nettles were as sharp and dangerous <b>as</b> spears. The vines were <u>more deadly than</u> a viper looking for its next kill.
Use of the 5 senses	Building a clear sense of place by drawing on what can be seen, heard, smelt, felt and, possibly, tasted. Avoid 'I could hear...I could see...etc.' – try and be more creative and less obvious. Maybe a full paragraph focused on sounds for example.	Before I opened my eyes, the <b>harsh light pricked</b> my eyelids. My tongue, like <b>sandpaper</b> after 24 hours without water, <b>felt swollen</b> and obtrusive in my mouth. <b>Rustlings</b> of unknown voices coupled with a <b>crunching</b> of distant leaves forced me to face facts: I was not alone. A <b>fetid</b> and <b>putrid stench</b> of death seemed to have consumed the air.
Sibilance (helps create onomatopoeic words)	Type of alliteration: repetition of soft consonants to create a hissing sound or gentle, whistling effect (depending on the atmosphere being created). 'c..sh...ss...sc.....tion...'	The <b>shrieking</b> and <b>screaching</b> of the icy winds pierced my ears. The <b>sweet</b> smell of honeysuckle, drowsily swam through the shafts of sunlight.
Plosives (helps create onomatopoeic words)	Sounds in words which are aggressive and explode through the mouth: t, k/c, p, d, g, and b. Think of swear words which you can really spit out of your mouth with anger!	The <b>pounding</b> clatter of <b>dank, tepid</b> rain on the <b>cracked</b> and <b>shuddering</b> fence echoed loudly around the <b>desolate</b> yard.

Structural Techniques		
Zooming in	Focus in on a description of a particular detail or action.	Draw attention to something meaningful, symbolic or relevant to plot.
Zooming out	Focus on a description of the setting or action on a broader scale.	Frame the bigger picture for the reader – perhaps to gain perspective or focus on a detail of the weather (maybe to reflect the atmosphere or mood using pathetic fallacy. Maybe weather based).
Shift in focus	Where the writer moves from focusing on one idea and moving onto another.	Draw our attention to an important detail. Perhaps moves the plot forward.
Flashback	Jump back to an earlier period in time.	Provide relevant details for the reader needed to understand events – perhaps after starting in the middle of the action to create lots of unanswered questions.
Shift in atmosphere	Move from one tone, feeling or mood to another.	To indicate a change – perhaps in characters' feelings or to introduce a threat.
Shift in pace	Move from slow paced to a faster pace or vice-versa.	Build tension. Decrease tension.

Suggested Reading List		
<b>Old Gods New Tricks</b> By Thiago de Moraes	<b>Goddesses and Heroines: Women of Myth and Legend</b> By Xanthe Gresham-Knight	<b>South Asian Folktales, Myths and Legends</b> By Sarah Shaffi
<b>The Girl Who Fell Beneath the Sea</b> By Axie Oh	<b>Lore</b> By Alexandra Bracken	<b>Curse of the Night Witch</b> By Alex Aster
<b>The Chocolate Touch</b> By Patrick Skene Catling	<b>Dragon Pearl</b> By Yoon Lee	<b>Mister Creecher</b> By Chris Priestley

# Knowledge Goals: Food Technology

## Seasonality and Food Miles

### What are seasonal foods?

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

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

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

Food - a fact of life 2012



## Micronutrients

Needed in small amounts to help the body function properly

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

## Macronutrients

Needed in large amounts to help the body to function properly

**Fat**

**Function:** Energy, Warmth, Protection of organs

**Sources:**

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

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

**Carbohydrates**

**Function:** Energy

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

**Sugars:** Cakes, Sweets, Fizzy drinks

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

**Protein**

**Function:** Growth and Repair, Energy

**Sources:**

<b>Plant:</b> Nuts, Quorn, Beans, Lentils	<b>Animal:</b> Eggs, Fish, Meat
---	---------------------------------

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

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

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

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

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

## Vegetarianism

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

+ Yes, they eat these foods

- No, they do not eat these foods

## Food Poisoning

### Types of Food Poisoning

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

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





# Knowledge Goals: French

## Mots

Je vais à Paris.	<i>I am going to Paris.</i>	À Paris	<i>In Paris</i>
Pour combien de temps?	<i>For how long?</i>	Je vais voir ...	<i>I am going to see ...</i>
les vacances	<i>holidays</i>	la gare du Nord	<i>the main station for trains from the UK</i>
Quand?	<i>When?</i>	la tour Eiffel	<i>the Eiffel tower</i>
Je vais passer une semaine à Paris.	<i>I am going to spend a week in Paris.</i>	l'Arc de triomphe	<i>the Arc de Triomphe</i>
Il/Elle va à Paris du ... au ...	<i>He/she is going to Paris from ... to ...</i>	le musée du Louvre	<i>the Louvre museum</i>
juillet	<i>July</i>	la Grande Arche de la Défense	<i>the big arch at La Défense</i>
août	<i>August</i>	le Centre Pompidou	<i>Pompidou centre: (a library and cultural centre)</i>
Comment y vas-tu?	<i>How are you going?</i>	le Sacré-Cœur	<i>the cathedral of the Sacred Heart</i>
J'y vais ...	<i>I am going ...</i>	l'avenue des Champs Élysées	<i>Champs Élysées</i>
en avion	<i>by plane</i>	la Cité des Sciences et de l'Industrie	<i>the museum of Science and Industry</i>
en car	<i>by coach</i>	la Seine	<i>the river in Paris</i>
en ferry	<i>by ferry</i>	ce matin	<i>this morning</i>
en train	<i>by train</i>	cet après-midi	<i>this afternoon</i>
à vélo	<i>by bike</i>	ce soir	<i>this evening</i>
en voiture	<i>by car</i>	aujourd'hui	<i>today</i>
Pourquoi?	<i>Why?</i>	<b>Prenez le métro</b>	<i>Take the metro</i>
parce que c'est ...	<i>because it is ...</i>	la ligne	<i>line</i>
confortable	<i>comfortable</i>	direction ...	<i>in the direction of ...</i>
intéressant	<i>interesting</i>	changez à ...	<i>change at ...</i>
pratique	<i>practical</i>	descendez à ...	<i>get off at ...</i>
rapide	<i>fast</i>	un carnet de tickets	<i>book of 10 tickets</i>
moins cher	<i>good value</i>		

Qu'est-ce que tu as fait?	<i>What have you done?</i>	faire	<i>to do/make</i>
J'ai acheté ...	<i>I bought</i>	je fais	<i>I do</i>
des cartes postales	<i>postcards</i>	j'ai fait	<i>I did/made</i>
des souvenirs	<i>souvenirs</i>	voir	<i>to see</i>
J'ai vu ...	<i>I saw ...</i>	je vois	<i>I see</i>
la tour Eiffel	<i>the Eiffel tower</i>	j'ai vu	<i>I saw</i>
les peintures	<i>the paintings</i>	acheter	<i>to buy</i>
les artistes de mime	<i>the mime artists</i>	j'achète	<i>I buy</i>
les monuments	<i>the sights</i>	j'ai acheté	<i>I bought</i>
Où es-tu allé(e)?	<i>Where have you been?</i>		
Je suis allé(e) ...	<i>I went ...</i>		
Je suis rentré(e) ...	<i>I went back/ returned ...</i>		
Des verbes utiles	<i>Some useful verbs</i>		
aller	<i>to go</i>		
je vais	<i>I go</i>		
je suis allé(e)	<i>I went</i>		
jouer	<i>to play</i>		
je joue	<i>I play</i>		
j'ai joué	<i>I played</i>		

# Knowledge Goals: French

## Half Term 3: Tier 3 Vocabulary

#	Key word	Example
1	Connective	Et, aussi, mais, car, parce que, par contre, cependant
2	Opinion Verbs	J'aime, j'adore, je préfère, je n'aime pas, je déteste
3	Justifications	parce que / car c'est / ce n'est pas...
4	Qualifier	un peu, assez, très, vraiment
5	Adjective	Intéressant, rapide, confortable, pratique, barbant, ennuyeux, lent, cher
6	Time Phrase	Ce matin, cet après-midi, ce soir, aujourd'hui, le week-end prochain
7	Tenses	Je suis allé / Je vais / Je vais aller





# Knowledge Goals: Sleeping Giant Awakens - ASIA



## The Regions in Asia

**Southeast Asia** – countries rely mainly on agriculture. They export rice and other foodstuffs, and also have rubber industries.

**Central Asia** – overall, these countries are not rich, and Central Asia has several large, sparsely populated countries like Kazakhstan and Turkmenistan. These countries do have oil, gold and minerals they are starting to exploit.

**Western Asia, including the Middle East** – this area includes many of the world's Arabic speaking nations. Has a large share of the world's oil and gas reserves, which has made some nations (e.g. Qatar) extremely rich. Dubai has the Burj Khalifa – world's tallest skyscraper.

**Eastern Asia** – main industrial area. China is the most populous country in the world; and is known for its exports, particularly electronics for the home. Japan is technologically advanced and has the world's highest life expectancy. North and South Korea are here.

**South Asia** – overall, the poorest region. India is the world's second most populous country and is a Newly Emerging Economy with a significant service industry. Exports from South Asia include textiles and foodstuffs, e.g. Bangladesh is known for its textiles industry

**Northern Asia** - dominated by Russia, largest country in the world by area. Russia sells oil and gas to other countries by pipeline, and is mostly sparsely populated. Some parts of Russia, e.g. Siberia, are very cold. Russia also has a coastline to the Arctic Ocean.

## Physical Characteristics of Asia

Asia contains some of the most extreme temperatures on the planet. The temperature has reached 53.9°C in Israel, and has been as low as -67.8°C in Siberia, Russia. Asia has a mix of climate regions. Polar, subarctic, and temperate climates occur along the continent's northern and north-eastern areas. Arid (dry) and highland (high areas – varied because temperature drops with altitude) zones are found in the continent's middle and south-eastern areas. A mix of grassland and tropical rainforest climates are found in the southern areas of

## Asia's Ecosystems

**Tundra** – A cold region in the north where the ground is deeply frozen. Only the top layer thaws in the summer. Only small plants found here.

**Taiga** – coniferous forest, found between Tundra and Steppes. Long cold winters; short, hot and damp summers.

**Steppes** – large flat area of treeless grassland, characterised by low precipitation. Found in the middle of the continent. Hot summers and cold winters.

**Temperate forest** – region of deciduous trees. Found between Steppes and the coast. Hot summers and cold winters.

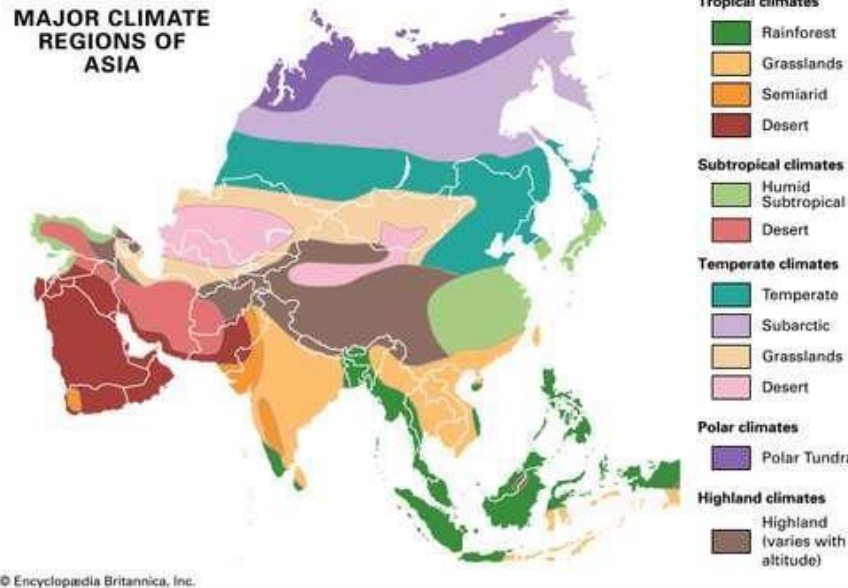
**Cold desert** – found north of the Steppes. Very dry. Summers are hot; but cloudless skies mean cold nights. Winters very cold (-40°C). Little vegetation.

**Hot desert** – found south of the cold deserts. Usually very hot during the day and cold at night. Little vegetation.

**Mountainous** – temperature falls with altitude, so the higher you go the colder it gets. At high altitudes trees no longer grow and there are glaciers.

**Warm moist forest** – furthest south, in and near the tropics. Includes tropical rainforests and mangrove swamps.

## MAJOR CLIMATE REGIONS OF ASIA



© Encyclopædia Britannica, Inc.

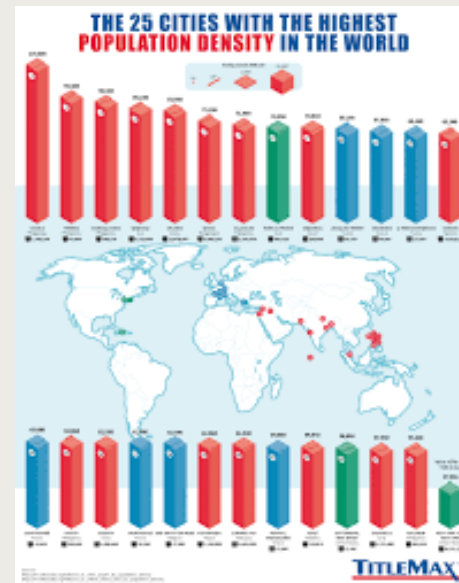
## The Palm Oil Issue

Southeast Asia is the centre of global palm oil production – with Indonesia and Malaysia producing around 85% of the world's supply. But oil palms did not arrive there until 1848, when Dutch botanists planted four seedlings in the botanic gardens in Bogor (then Buitenzorg) on the



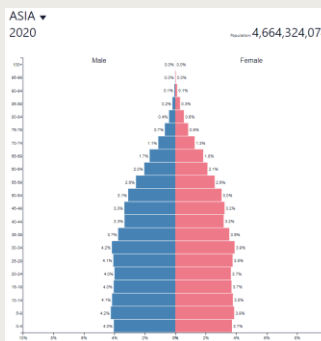
## Growing Urban Population

In 2020, around 2.36 billion people across Asia lived in cities. The urban population across Asia was projected to increase continuously over the next years and is on track to reach an estimated 3.48 billion by 2050.



## Population Structure

The 'make up' or composition of a population. Looking at the population structure of a place shows how the population is divided up between males and females of different age groups. The population structure is often shown in a population pyramid either showing percentage of the population in each group, or the total number of people in each age group.





# Year 8 Knowledge Goals – Industrial Revolution

<b>1712—First steam engine invented.</b> <b>1759—Wedgwood company is founded.</b> <b>1764—Invention of the Spinning Jenny.</b> <b>1771—Arkwright's first factory opens.</b> <b>1776—US Declaration of Independence.</b> <b>1829—Rainhill (locomotive) Trials. 1876—Patent granted for the telephone.</b>	1833, 1842, 1847	Factory Acts passed to control children's hours of work.	1856	Law passed to enforce all cities and counties to set up police forces.
	1851	The Great Exhibition showcased Britain's industrial successes.	1870, 1880, 1899	Education Acts made education compulsory (1880) and free (1899) for working-class children.
			1867, 1884	Working men given the vote.

## What was the Industrial Revolution?

Industrial Revolution, in modern history, is the process of change from an agrarian (farming) economy to one dominated by industry and machine manufacturing. These technological changes introduced new ways of working and living and fundamentally transformed society.

## What was life like during the Industrial Revolution?

### **Housing:**

Poor quality housing: houses were built very close together so there was little light or fresh air inside them. They did not have running water and people found it difficult to keep clean. Houses often suffered from damp due to their thin walls and roofs made out of cheap materials. Many households had to share a single outside toilet that was little more than a hole in the ground.



### **Children:**

**Parish apprentices:** orphans from workhouses were "apprenticed" to factory owners, supposedly to learn the textiles trade. They worked 12-hour shifts, and slept in barracks attached to the factory in beds just vacated by children about to start the next shift. **Children were often chosen to perform the most dangerous jobs because they were smaller and able to get under machinery.** They were employed as machine cleaners, in mines, chimney sweeps.

**Factories: Long working hours:** normal shifts were usually 12-14 hours a day, with extra time required during busy periods. Workers were often required to clean their machines during their mealtimes. □ **Low wages:** a typical wage for male workers was about 15 shillings (75p) a week, but women and children were paid much less, with women earning seven shillings (35p) and children three shillings (15p). For this reason, employers preferred to employ women and children. Many men were sacked when they reached adulthood; then they had to be supported by their wives and children. □ **Cruel discipline:** there was frequent "strapping" (hitting with a leather strap). Other punishments included hanging iron weights around children's necks, hanging them from the roof in baskets, nailing children's ears to the boards and dowsing them in water butts to keep them cool. □ **Lack of fresh water:** people could get water from a variety of places, such as streams, wells and stand pipes, but this water was often polluted by human waste. **Pollution:** coal was used to heat houses, cook food and heat water to produce steam to power machines in factories. The burning of coal created smoke, which led to terrible pollution in the cities. **Overcrowding:** due to large numbers of people moving to the cities, there were not enough houses for all these people to live in. Low wages and high rents caused families to live in as small a space as possible. Sometimes whole families lived in one room.

## What progress was made during the Industrial Revolution?

### Public Health

- **Edwin Chadwick** set up Boards of Health in cities across Britain to investigate the cleanliness and hygiene of towns. He sent teams of doctors out around the country to figure out what was causing disease. He then wrote a report to the government that recommended cleaning up the streets!
- **John Snow** discovered the cause of cholera. He realised that people who were getting sick were all using the same water pump. When the water pump was shut off, cholera stopped. Snow realised it was contaminated water.
- **Joseph Bazalgette** solved the problem of the Great Stink by designing and building 134km of sewers under London in 1870. A canal is a long, narrow, man-made channel of still water. Canals were used to transport heavy goods such as coal and steel to factories. They were quicker and more efficient than using horse drawn methods on roads.

### Transport

- **Railways** – locomotives were invented from as early as 1804 but the first use of widespread passenger train services was in 1829-30. Railways connected towns all over Britain and allowed for better trade but also for people to go on holiday!
- **Roads** – Turnpike Trusts were formed to improve Britain's roads – they charged a toll to travel on them and the

### Inventions

- **Richard Arkwright** invented the water frame to speed up textile production.
- **James Watt** designed a steam engine that moved a wheel – steam could now be used to power machines.
- **George Stephenson** designed the first steam locomotive (engine)
- **Michael Faraday** discovered how to generate electricity.
- **Charles Babbage** designed the first 'computer' – a machine that could perform calculations.
- **Isambard Kingdom Brunel** was a master engineer who designed and built the Clifton Suspension bridge and the Great Western Railway.

### Medicine

- **Louis Pasteur** discovered germs were living things and heating would kill bacteria.
- **Florence Nightingale** was a nurse during the Crimean war. She advocated for cleaning the wards, washing hands and improving the cleanliness of wards. Death rates fell from 40% to 2%.
- **Edward Jenner** invented the first vaccine. He realised milk maids did not get Smallpox because they had already been exposed to cow pox.
- **Joseph Lister** realised that his patients were dying due to infection. He trialled using carbolic acid as an antiseptic and spraying all instruments with it. This massively reduced infection and led to

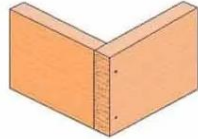
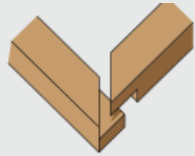
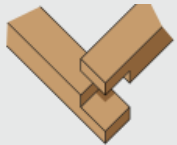
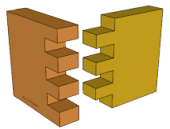




# Knowledge Goals: Materials

## Wood Joints

Finger      Half-Lap      Half-Lap Mitre      Butt



## Scales of production

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

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

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

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

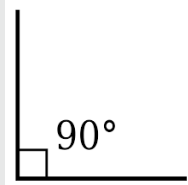
**Just in time production (JIT)** – This scale of production relies on the product been manufactured to a time schedule. This allows raw materials to be delivered at an exact time for production and then manufactured and are shipped straight to distribution /retailers. Apple INC uses JIT production.



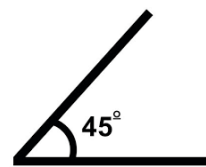
**Plan of Manufacture:** The steps to manufacture the product in order including health and safety and Quality Control

## Maths

90 degrees



45 degrees



## Saws

Tenon Saw  
For straight lines



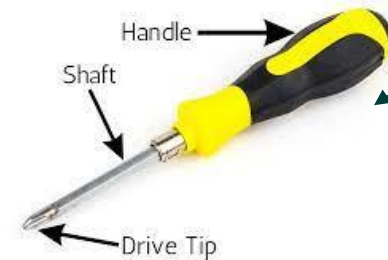
Mitre Saw  
Sawing 45 degrees



## Health and Safety

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

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

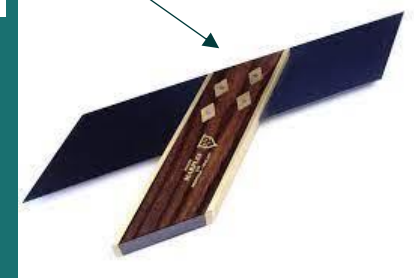


Cross-headed screwdriver

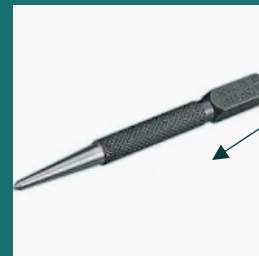


Engineers square

Mitre-Square



Scribe



Router







# Knowledge Goals: Maths

Unit 5 – Statistics		
Topic	Video	Resource
Averages	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>
Averages from a Frequency Table	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>
Stem and Leaf Diagrams	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>
Pictograms	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>
Bar Charts	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>
Scatter Graphs	<a href="#">Watch this</a>	<a href="#">Complete</a> <a href="#">Check your work</a>

### Averages from lists R

**The Mean**  
A measure of average to find the central tendency... a typical value that represents the data

Find the sum of the data (add the values)  
55  
Divide the overall total by how many pieces of data you have  
 $55 \div 5$  Mean = 11

**The Mode (The modal value)**  
This is the number OR the item that occurs the most (it does not have to be numerical)

24, 8, 4, 11, 8  
This can still be easier if the data is ordered first  
Mode = 8

**The Median**  
The value in the center (in the middle) of the data

Put the data in order: 4, 8, 8, 11, 24  
Find the value in the middle: 4, 8, 8, 11, 24  
24, 8, 4, 11, 8 Median = 8  
NOTE: If there is no single middle value find the mean of the two numbers left

**For Grouped Data**  
The modal group – which group has the highest frequency

### Averages from a table R

**Non-grouped data**

Number of Siblings	0	1	2
Frequency	6	8	6
Subtotal	0	8	12

Overall Frequency: 20  
Total number of siblings: 20

The data in a list: 0,0,0,0,0,1,1,1,1,1,1,1,1,2,2,2,2,2,2,2

$$\text{Mean} = \frac{\text{total number of siblings}}{\text{Total frequency}} = 1$$

**Grouped data**

x Weight(g)	Frequency	Mid Point	MP x Freq
40 < x ≤ 50	1	45	45
50 < x ≤ 60	3	65	195
60 < x ≤ 70	5	65	325

Overall Frequency: 9  
Overall Total: 565  
Mean: 62.8g

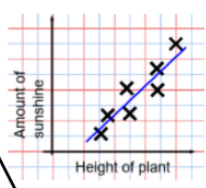
The data in a list: 45, 55, 55, 55, 65, 65, 65, 65, 65

### The line of best fit

The Line of best fit is used to make estimates about the information in your scatter graph

**Things to know:**

- The line of best fit **DOES NOT** need to go through the origin (The point the axes cross)
- There should be approximately the same number of points above and below the line (It may not go through any points)
- The line extends across the whole graph



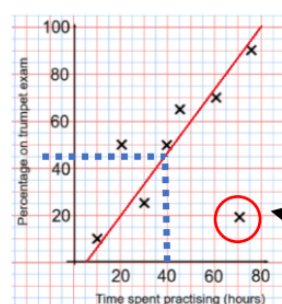
It is only an estimate because the line is designed to be an average representation of the data

It is always a straight line.

### Using a line of best fit

**Interpolation** is using the line of best fit to estimate values inside our data point

e.g. 40 hours revising predicts a percentage of 45



**Extrapolation** is where we use our line of best fit to predict information outside of our data  
\*\*This is not always useful – in this example you cannot score more than 100%. So revising for longer can not be estimated\*\*

This point is an "outlier" It is an outlier because it doesn't fit this model and stands apart from the data



# Knowledge Goals: Maths

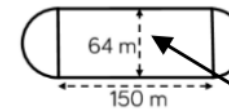
Unit 6 – Length and Area		
Topic	Video	Resource
Area of rectangles and triangles	<a href="#">Watch this</a> <a href="#">And this</a>	<a href="#">Complete this</a> <a href="#">And this</a>
Perimeter of shapes	<a href="#">Watch this</a>	<a href="#">Complete this</a> <a href="#">Check your work</a>
Area of parallelogram	<a href="#">Watch this</a>	<a href="#">Complete this</a> <a href="#">Check your work</a>
Area of trapezium	<a href="#">Watch this</a>	<a href="#">Complete this</a> <a href="#">Check your work</a>
Area and circumference of circles	<a href="#">Watch this</a>	<a href="#">Complete this</a> <a href="#">Check your work</a>

## Compound shapes including circles

Circumference  
 $\pi \times \text{diameter}$

Compound shapes are not always area questions.  
For Perimeter you will need to use the circumference

### Spotting diameters and radii



This dimension is also the diameter of the semi circles

$$\begin{aligned} \text{Arc lengths} &= \pi \times 64 \\ &= 64 \pi \end{aligned}$$

Don't need to halve this because there are 2 ends which make the whole circle

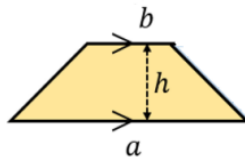
Arc lengths + Straight lengths = total perimeter

$$\begin{aligned} &= 64 \pi + 150 + 150 \\ &= (300 + 64 \pi) \text{ m} \\ \text{OR} &= 501.1 \text{ m} \end{aligned}$$

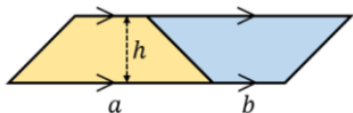
Still remember to split up the compound shape into smaller more manageable individual shapes first

## Area of a trapezium

$$\text{Area of a trapezium} = \frac{(a+b) \times h}{2}$$



Why?



- Two congruent trapeziums make a parallelogram
- New length  $(a + b) \times \text{height}$
- Divide by 2 to find area of one

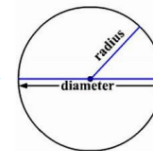
## Area of a circle (Calculator)



SHIFT  $\times 10^x$

How to get  $\pi$  symbol on the calculator

Area of a circle  
 $\pi \times \text{radius}^2$

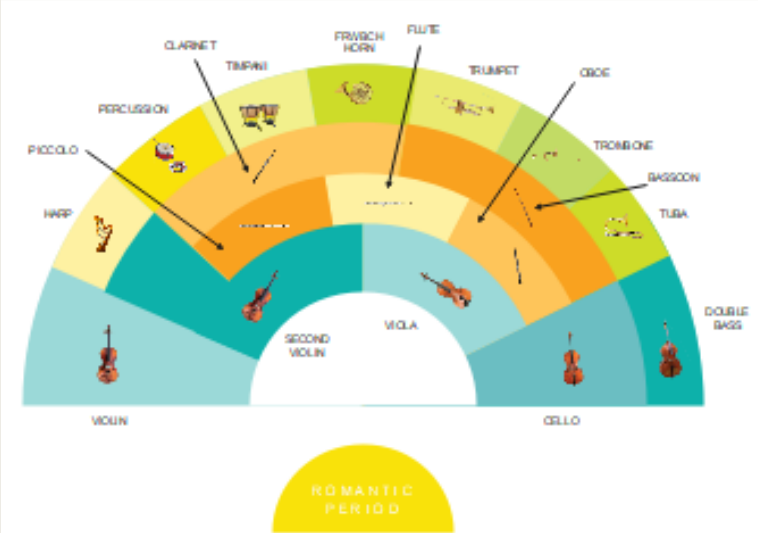












It is important to round your answer suitably – to significant figures or decimal places. This will give you a decimal solution that will go on forever!

# Knowledge Goals: Music

## Half Term 1: Tier 3 Vocabulary

#	Key word	Definition
1	Conductor	The person who keeps the orchestra in time and provides musical guidance
2	Leader	The lead 1st Violin Player
3	Romantic Period	The years between C.1820 and 1900 CE
4	Programme Music	Music which is composed to paint an audio picture
5	Through-composed	A piece of music whose structure is beginning to end and not binary, ternary etc. Like a music story
6	Absolute Music	Instrumental music not associated with a story, poem, idea or scene; non program music.
7	Etude	A piece designed to help a performer master specific technical difficulties.
8	Exoticism	Use of melodies, rhythms, or instruments that suggest foreign lands.
9	Leitmotif	A musical theme or idea assigned to a main character or idea of an opera: credited to Wagner.
10	Nationalism	Inclusion of folk songs, dances, legends, to associate it with the composer's homeland.
11	Symphonic Poem	Music for orchestra in one movement. It may have a traditional form or an original irregular form.

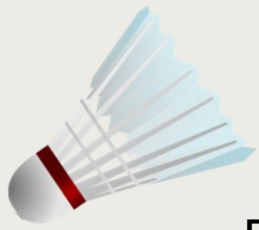


NAME	LENGTH	SYMBOL	REST
Semibreve	4 beats		
Minim	2 beats		
Crotchet	1beat		
Quaver	1/2 beat		
Semiquaver	1/4 beat		

Great Composers:  
Mendelssohn, Holst, Wagner,  
Liszt







## Badminton

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



## Hockey

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

# Knowledge Goals: PE

## Football



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



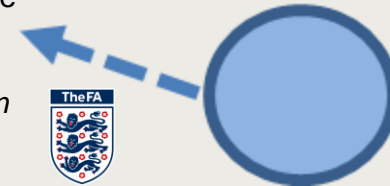
## Netball

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

## Gymnastics



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



## Rugby

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





# Knowledge Goals: PDev

## CONSENT



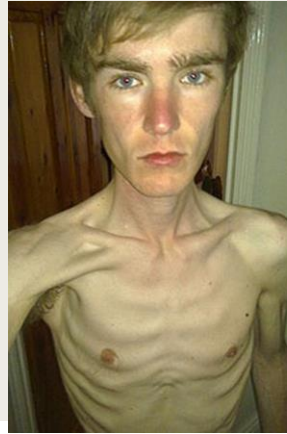
Freely Given  
Reversible  
Informed  
Enthusiastic  
Specific

Planned Parenthood\*

**PSYCHOLOGISTS**

**“What is Sexting?”**

It refers to the act of transmitting text messages, photographs, images, or films that are sexually provocative through a digital device, such as a computer or a cell phone. Sexting is done consciously with people sending sexts about themselves.



NO

Maybe another time, but not right now.

Do you want to kiss me?

I would like to try...

Everyone has different ways to say “yes” or “no,” but **CONSENT** means nothing less than an enthusiastic **YES!**

This isn't working for me.

YES

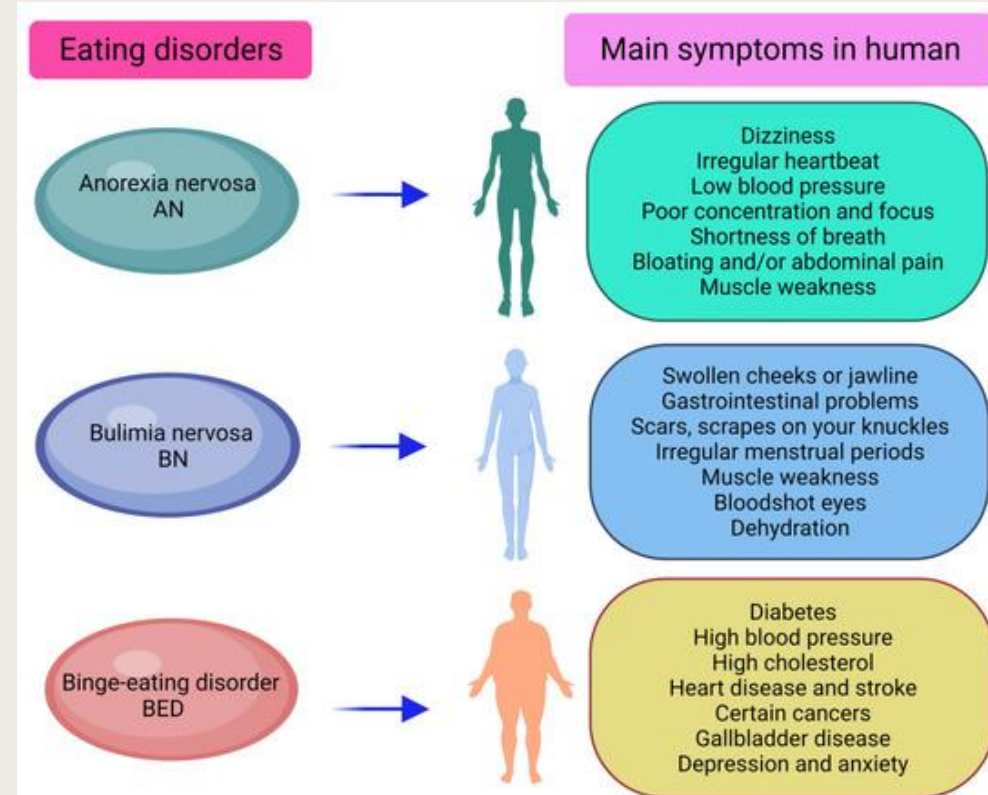
I like it when you do that.

It feels great when you...

Find out more at [fpa.org.uk/ConsentYesYesYes](http://fpa.org.uk/ConsentYesYesYes)

**fpa**  
the sexual health charity

The Family Planning Association is a registered charity, number 255187, and a limited liability company registered in England, number 887632. FPA, 23-25 Penn Street, London N1 5DL.



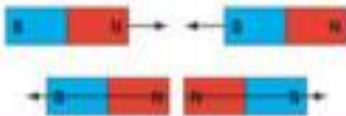




# Knowledge Goals: Physics – Magnetism and electromagnetism

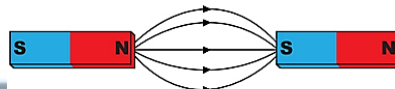
## Magnets

- A **magnet** has two poles, a north and a south pole
  - North poles **attract** south poles
  - South poles **attract** north poles
  - South poles **repel** south poles
  - North poles **repel** north poles

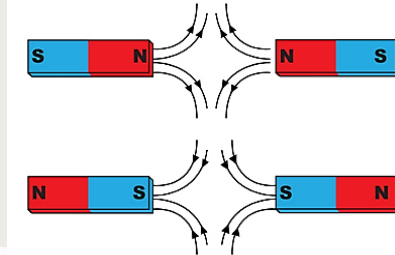


- **Magnetic materials** will experience a magnetic force when placed near a magnet, this is a type of non-contact force as the materials do not have to touch for the force to be apparent
- The three magnetic metals are iron, nickel and cobalt

Unlike poles attract



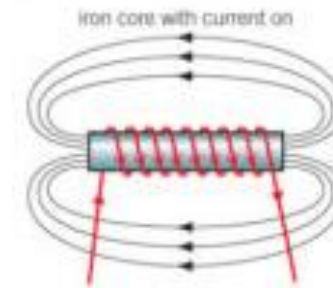
Like poles repel



Magnetic materials are always made of metal, but not all metals are magnetic. Iron, steel, cobalt and nickel will experience a magnetic force.

## Electromagnets

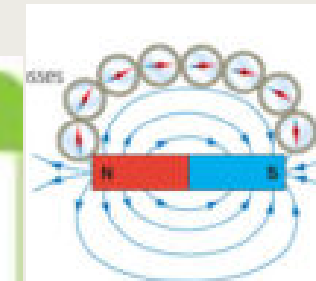
- **Electromagnets** are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet



- You can increase the strength of an electromagnet by:
  - Increasing the number of turns on the coil around the core of the electromagnet
  - Increasing the current which is flowing through the coil of wire
  - Using a more magnetic material for the core, e.g. iron rather than aluminium

## Magnetic fields

- A **magnetic field** is an area where a magnetic material will experience a force
- A **permanent magnet** will have its own magnetic field
- **Magnetic field lines** represent the field, these always travel out of the north pole of the magnet, and into the south pole





# Knowledge Goals: Year 8 Christianity

Christianity is one of the world's major religions. It is the world's largest religion, with about 2.4 billion followers.

Christians (like Jews and Muslims) believe in one God, who created the world and all that is in it.

Christians believe in the teachings of Jesus Christ, who was a middle-eastern preacher and healer who lived around 2,000 years ago.

Christians believe that Jesus Christ was sent down to earth to save people, by taking their punishment and dying on the cross.

The holy book in Christianity is called the Bible. A church is a building designed for Christian worship.



## Christian Beliefs

### God's Creation

- Christians believe that God created the Earth and everything in it in 6 days, resting on the 7th.
- The story of creation tells Christians that at first everything was dark, until God intervened and created matter.
- Details about this are found in the Bible in Genesis 1 and 2.

### The Holy Trinity

- Christians believe that God can be seen in three ways, known as the Holy Trinity:
  - The Father – Creator of the world;
  - The Son – Who came to Earth as Jesus;
  - The Holy Spirit – God's power within Christians

### The Ten Commandments

- In the Bible, ten 'commandments' are shared, which Christians should aim to live their lives by:
  1. You shall have no other Gods but me.
  2. You shall not make for yourself any idol.
  3. You shall not misuse the name of the Lord your God.
  4. You shall remember and keep the Sabbath day holy.
  5. Respect your father and mother.
  6. You must not commit murder.
  7. You must not commit adultery.
  8. You must not steal.
  9. You must not give false evidence against your neighbour.
  10. You must not be envious of your neighbour's goods.

### The Life of Jesus Christ

- Christians believe that Jesus was the son of God. He was born to ordinary parents, Mary and Joseph, in Bethlehem. Christians celebrate the birth of Jesus on 25th December – Christmas Day.
- Jesus travelled around, teaching people about God and helping the sick. He chose 12 men to travel with him. They were his special companions and are known as the disciples.
- Jesus was sentenced to death for calling himself the son of God. He had a final meal with his disciples (known as 'The Last Supper') before being crucified. He is said to have died for the sins of man.

## Answers to Important Questions

### Where do Christians worship God?



- Christians can pray in any place, but the most common location is in a purpose-built building called a church. Churches can be very different – old, new, plain or highly decorated. Often, the floor plans of churches are shaped in a cross.
- Church services often include hymns, prayers, and readings from the Bible.
- Common church features include altar tables, lecturns, pulpits, fonts and stained glass windows

### What is the Bible?



The Bible is the holy book of Christians. It contains the Old and New Testaments. The Old Testament is similar to the Jewish Bible and was written before Jesus' birth. The New Testament contains stories about Jesus, written by those who knew him.

### How do Christians believe that people should live their lives



- Christians believe that people should be compassionate to one another, and show respect to God, themselves and one another.
- Christians believe that praying to God helps them to say sorry for the things that they have done wrong, and thank them for the blessings given to them.
- Christians believe that God wants them to carry on the good work that Jesus did in the world.

### How many different types of Christians are there?



There are many different denominations (types) of Christians. All Christians were once Catholics, but other groups branched off many years ago.

- The biggest Christian denomination is still Catholicism. To Catholics, the Pope is Christ's representative on earth. Other major groups include Protestants (including Anglican/Church of England faiths) and Orthodox.

## Top 10 Facts

1. Christians believe that God is everywhere, and sees and knows everything.
2. About 1/3 of the world's population are Christian.
3. The word Christ comes from the Greek word meaning Messiah – God's chosen one.
4. Although Christmas is celebrated on December 25th, no one knows exactly what date Jesus was born on.
5. Sunday is the holiest day in Christianity – many people meet to worship on Sunday.
6. There is very little written about Jesus before the age of about 30, when he began preaching
7. Jesus knew that he was going to be betrayed, and that he would die. He tried to warn his disciples of this at the Last Supper.
8. Jesus was buried in a tomb, but the tomb was found later. He then appeared to the disciples.
9. Jesus eventually went back up to heaven to be with God – this is called the ascension.
10. The cross is the symbol of Christianity – a reminder that Jesus was crucified.





# Knowledge Goals: Spanish

<b>Mis vacaciones</b>	<b>My holidays</b>
Generalmente ...	Usually ...
Normalmente ...	Normally ...
me quedo en casa	I stay at home
salgo con mis amigos por la noche	I go out at night with friends
vamos a la cafetería	we go to the café
voy a España	I go to Spain
<b>Pero el año pasado ...</b>	<b>But last year ...</b>
fui a Cuba	I went to Cuba
fuimos en avión	we went by plane
fuimos a un restaurante italiano	we went to an Italian restaurant
hice excursiones muy interesantes	I went on very interesting outings
jugué al fútbol	I played football
pinté	I painted

<b>¿Adónde fuiste?</b>	<b>Where did you go (to)?</b>
el año pasado	last year
Fui a ...	I went to ...
Alemania	Germany
Argentina	Argentina
Cuba	Cuba
Escocia	Scotland
España	Spain
Francia	France
Gales	Wales
Grecia	Greece
India	India
Inglaterra	England
Irlanda	Ireland
Italia	Italy
México	Mexico
Pakistán	Pakistan
Portugal	Portugal
República Dominicana	the Dominican Republic

<b>¿Cómo fue?</b>	<b>What was it like?</b>
Fue ...	It was ...
estupendo	fantastic
genial	brilliant
guay	great, cool
aburrido	boring
horrible	awful
un desastre	a disaster

<b>Palabras muy útiles</b>	<b>Very useful words</b>
a	to
con	with
en	in, by
¿cómo?	how?, what ... like?
¿adónde?	(to) where?
¿quién?	who?, whom?
¿qué?	what?

<b>¡Buen viaje!</b>	<b>Have a good trip!</b>
¿Adónde fuiste de vacaciones?	Where did you go (to) on holiday?
Fui a Madrid.	I went to Madrid.
¿Cómo fuiste?	How did you go?
Fui ...	I went ...
a pie	on foot
en autocar	by bus
en avión	by plane
en barco	by boat
en bicicleta	by bike
en coche	by car
en monopatín	by skateboard
en tren	by train
<b>El invierno pasado ...</b>	<b>Last winter ...</b>
<b>El verano pasado ...</b>	<b>Last summer ...</b>

<b>¿Con quién fuiste?</b>	<b>Who did you go with?</b>
Fui ...	I went ...
con mi familia	with my family
con mis padres	with my parents
con mis amigos	with my friends

<b>¿Cuánto tiempo pasaste allí?</b>	<b>How much time did you spend there?</b>
Pasé ...	I spent ...
diez días	ten days
una semana	a week
dos semanas	two weeks
un mes	a month

<b>¿Qué hiciste?</b>	<b>What did you do?</b>
Bailé.	I danced.
Descansé.	I had a rest/break.
Escuché música.	I listened to music.
Fui de excursión.	I went on an outing.
Jugué al voleibol en la playa.	I played volleyball on the beach.
Mandé mensajes.	I sent messages.
Monté en bicicleta.	I rode my bike.
Saqué fotos.	I took photos.
Tomé el sol.	I sunbathed.
Visité monumentos.	I visited monuments.

<b>¿Qué tal lo pasaste?</b>	<b>What sort of time did you have?</b>
¡Lo pasé bomba!	I had a fantastic time!
¡Lo pasé fenomenal!	I had a wonderful time!
¡Lo pasé guay!	I had a great time!
¡Lo pasé bien!	I had a good time!
¡Lo pasé mal!	I had a bad time!

## Estrategia

### Mnemonics

A mnemonic helps you to remember a difficult word or expression. A common type of mnemonic is a made-up phrase consisting of words whose first letters spell the word you want to remember. For example, to remind you how to spell **Inglaterra**, you could try using this mnemonic:

I  
Never  
Get  
Long  
At  
Teatime  
Eating  
Ripe  
Red  
Apples

- Choose a word from Module 3 that you want to learn to spell and make up a mnemonic for it.











