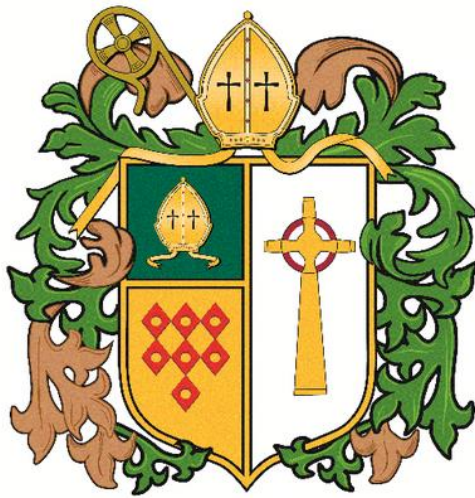


# St Wilfrid's RC College

## Year 7 Module 1

### Knowledge Organisers



#### Instructions for using your Knowledge Organiser

Self-testing You can use your KOs and book in a number of different ways but you should not just copy from the Knowledge Organiser into your book. Below are some possible tasks you could do in your workbooks

#### What can you use them for?:

- Self quizzing – retrieval
- Getting someone to quiz / test you
- Look, cover, write, check
- Creating revision tools: flash cards, mind maps, revision clocks
- Creating summary notes: Cornell notes
- Spelling tests
- Definition tests
- Knowing what knowledge you have looked at so far and what knowledge is going to be studied – connecting your learning
- Connect your previous module/topics learning with your current learning.
- Carry out additional research
- If you are absent, you need to get work from your teacher and use your Knowledge Organiser to identify the knowledge that you need to study.

#### Expectations

- Bring them to every lesson
- Presentation – keep them neat and tidy.
- You can annotate them but do not graffiti them with notes/images that are not learning annotations
- Use them in lessons when directed to
- Use them as part of your homework

**Name:**

**Form Group:**

**Form Tutor:**

# Knowledge Organisers

## What are they?

What are they?  
Some examples:

### Diagrams

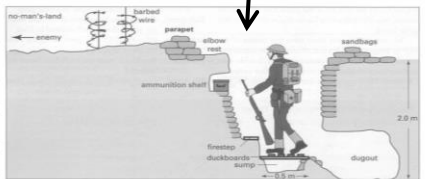
Timelines

Triple Alliance	Triple Entente
<ul style="list-style-type: none"> <li>Germany</li> <li>Austria-Hungary</li> <li>Italy (until 1915)</li> </ul>	<ul style="list-style-type: none"> <li>Britain</li> <li>France</li> <li>Russia (until 1917)</li> <li>USA (1917+)</li> </ul>

First World War Timeline	
Date	Event
28.6.1914	Assassination of Franz Ferdinand
4.8.1914	Britain declares war on Germany
15.8.1914	Kitchener's Army recruitment
19.10.1914	First Battle of Ypres
22.4.1915	Second Battle of Ypres
27.1.1916	Military Service Act
1.7.1916 – 18.11.1916	Battle of the Somme and first use of the tank
8.3.17	Russian Revolution – Tsar abdicates
9.4.1917	Battle of Arras
24-25.10.1918	Communist Russian Revolution
20.11.1917	Battle of Cambrai
1.1.1918	Rationing introduced
9.11.1918	Kaiser Wilhelm II abdicates
11.11.1918	Armistice signed

Weapons	Injuries
<b>Lee Enfield Rifle</b> .15 rounds a minute. Accurate to 600m	<b>Shell shock.</b> Shaking, mental breakdown
<b>Vickers machine gun.</b> 10 bullets per second. Caused 40% wounds	<b>Trench fever.</b> Caused by lice: fever, rash, aches.
<b>Tanks.</b> 8mph. First used at the Battle of the Somme. 400 used at Battle of Cambrai,	<b>Trench foot.</b> Gangrene of feet, caused by damp
<b>Artillery.</b> Used to bombard the enemy for hours before an attack. Could fire 13 miles.	<b>Shrapnel wounds.</b> 58% wounds - 41,000 amputated limbs.

Key features of the trench system	
Sandbag	Protective. Absorbs bullets, absorbs water – maintains trench walls.
Fire step	Stand on to fire over the top of the trench. Trenches were 2.5 m in height
Parapet	Low protective wall
Duckboards	Wooden boards to stop men standing in water. To prevent trench foot.
Dugout	Area dug into the side of the trench where men could take protective cover.
No Man's Land	Area between the two enemy trenches

Enquiry Question: How did the pillars of 19th civilisation crumble into the flames of war? (Hobsbawm)

Key words and definitions

Home Front	
DORA 1914	Personal restrictions: censorship, daylight savings time
Censorship	Government powers to censor/hide information. Only letters by GHQ/ government could be published. Letters censored.
Propaganda	Boost morale. Communicate messages e.g. rationing. To recruit soldiers and female workers.
Rationing 1.1.1918	German unrestricted submarine warfare – Britain 6 weeks from starving out. Sugar rationed, then tea, jam and butter. Ration cards
Increased female employment	Munitionettes – munitions workers, nickname canary girls. Land Girls – 13,000 Transport workers. Engineers and mechanics. 1.2 million joined - start of war.
Contract workers (additional labour)	Empire -100,000 Egyptians, tens thousands Indians. Other workers: Chinese workers 100,000, refugees - Birtley Belgians
Total war	Zeppelin raids – 57 in 1915. Whitby, Hartlepool. Gotha bombers 1917. Defensive measures: barrage balloons, underground shelters

### Basic overviews

**Chemistry Knowledge Organiser**  
**The periodic table**

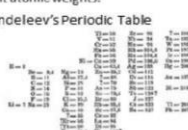
**The History of the Periodic Table**

- Throughout history scientists have tried to classify substances and many scientists attempted to construct a Periodic Table.
- Before the knowledge of protons, neutrons and electrons, scientists arranged the Periodic table by **atomic weight**. This meant the groups were not always correct.
- In 1869 **Dimitri Mendeleev**, a Russian Scientist, published his Periodic Table. It was slightly different to those that had been before. He still arranged elements by atomic weight but he also left gaps for where he predicted elements would be.
- He very accurately predicted the properties of elements that were not discovered until many years later; for example, Gallium.
- Mendeleev's Periodic Table is still different from the modern one as some of his masses were wrong due to the existence of **isotopes**
- Isotopes are elements with same number of protons and electrons but a different number of neutrons and therefore different atomic weights.

**Isotopes of Carbon**

Carbon-12 (6 protons, 6 neutrons), Carbon-13 (6 protons, 7 neutrons), Carbon-14 (6 protons, 8 neutrons)

**Mendeleev's Periodic Table**

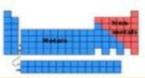


Key Terms	Definitions
Dimitri Mendeleev	A Russian Chemist, who in 1869 published a Periodic Table containing gases.
Periodic Table	The table which organises the 118 elements based on atomic structure
Isotope	Two atoms with the same number of protons and electrons but a different number of neutrons
Metal	An element which loses electrons to form a positive charge
Non Metal	An element which gains electrons to form a negative charge
Ion	An element with a positive or negative charge

**Metals and Non-Metals**

- Metals are found on the left hand side of the Periodic Table, the majority of elements are metals.
- When metals react, they lose an electrons to form positive ions.
- Non metals gain electrons to form a negative charge.



Key groups

Groups in the Periodic Table	Physical properties	Chemical Properties	Equation	Trends/Explanation
Group 1 (Alkali metals)	Soft, low density	React vigorously with water releasing hydrogen	Sodium + Water → Sodium Hydroxide + Hydrogen	More reactive as you go down, outermost electron further from the nucleus so it's easier to lose
Group 7 (Halogens)	Low melting point, exist as pair (Cl <sub>2</sub> )	React with group 1 metals to form compounds. Can carry out displacement reactions	Sodium + Chlorine → Sodium Chloride Sodium Bromide + Chlorine → Sodium Chloride + Bromine	Higher melting point as you go down the group (higher molecular mass). Less reactive as you go down the group.
Group 0 (Noble Gases)	Low melting point/boiling point eight electrons in outer shell (except helium)	Unreactive, as they have a full outer shell	N/A	Higher melting point and boiling point as you go down the group (due to increase in density)

# Knowledge Organisers Contents Page

Page number	Subject
4-6	English
7	RE
8-10	Science - Biology
11-12	Science - Chemistry
13-15	Science - Chemistry
16-17	History
18	Geography
19-22	Spanish
23	Music
24	IT
25	Art
26	PE
27-29	Design Technology
30+	Starter for 5 – Self Quizzing templates

Gothic Features	
Technique	Example
Atmosphere	cold, dark, stormy, thunderstorm
Setting	hidden rooms, mazes, ancient buildings.
Dark character	a character with an unexplained past
Vulnerable character	a damsel in distress
Heightened emotions	romance, anxiety, fear
The Supernatural	ghosts, ghouls, magic, monsters
Mysterious Object	an old book, a locked chest
Multiple points of view	letters, diary entries
Death	of a character or the threat of death

Language Techniques			
Technique	Definition	Example	
Verb	a word you can 'do'	run, skip, sing, laugh	
Adjective	a describing word	beautiful, ugly, funny, kind	
Noun	name of a thing, such as an object, a place, or a person.	chair, Newcastle, Mother	
Adverb	A word which describes the action	Quickly, elegantly, cautiously	
Simile	a descriptive technique that compares two things using 'as' or 'like'	The trees stood as tall as towers.	
Metaphor	a descriptive technique that names a person, thing or action as something else.	The circus was a magnet for the children	
Onomatopoeia	words that sound a little like they mean.	crash, boom, bang	
Personification	a metaphor attributing human feelings to an object.	The sun smiled at the hills	
Pathetic fallacy	when the weather reflects the mood of a character	The clouds crowded together suspiciously overhead as the sky darkened.	
Alliteration	words that start with the same sound	precious pictures and paintings	
Repetition	Repeating a word, phrase or idea for effect.	IT was unthinkable, absolutely unthinkable.	
Hyperbole	a use of obvious exaggeration for rhetorical effect.	The sun scorched through the day.	
Foreshadowing	receiving a warning of a future event	the family notices a small dark spot on the ceiling, but ignores it. The pipe later bursts	

Key Vocabulary			
Key Word	Definition	Example	
solemnly	in a formal and dignified manner	I solemnly swear that I am up to no good.	
silhouettes	the dark shape and outline of someone or something	The silhouette of the bare tree on the hill was clear.	
emanate	to give out	Warmth emanated from the fireplace.	
conspiratorial	showing that you share a secret	They gave a conspiratorial laugh.	
retorted	to answer someone quickly in an angry or funny way	'That's not your business!' she retorted.	
vigilant	always being careful to notice things	Following the robbery, staff have been extra vigilant.	
elude	to not succeed in achieving something	The gold medal continued to elude her.	
nebulous	not being clear	She had a few nebulous ideas about her future career.	
euphorically	to do something with great excitement	He jumped in the air euphorically after England scored.	
penetrating	very loud	The dog's cry was penetrating.	
bewilderment	a state of confusion	He stared at his teacher in bewilderment.	
abyss	a deep hole that seems to have no end	She found herself at the edge of an abyss.	
spectre	a ghost	The spectre's presence was apparent.	
riveted	to hold something firmly	Immediately, his gaze riveted on hers.	
luminous	to produce or reflect the light	The yellow jacket was luminous in the dark.	
prodigiously	something that is done with great strength or ability	He was a prodigiously gifted artist.	
tranquil	calm and peaceful	During the six weeks, the school was tranquil.	
malicious	intended to harm or hurt other people	The started a malicious rumour about the girl.	
idly	without any particular purpose	The dog idly watched the tourists walking past.	
meticulously	in a way that shows great care or attention to detail	The teacher checked the homework meticulously for errors	
sentry	a soldier who guards something, usually outside its entrance	The platoon were on sentry duty outside of the palace.	
corrupt	to use a position of power to get advantage	The whole department was corrupt, I couldn't trust anyone.	
refuge	protection or shelter from danger	She fled to her car for refuge from the storm.	



## Useful Context

Literary	<ul style="list-style-type: none"> <li>Taste shifted from tales of romance and adventure to terror in the mid-18<sup>th</sup> century</li> <li>A wide-ranging genre, including Frankenstein, Dracula and Wuthering Heights.</li> </ul>
Historical	<p><b>WWII</b></p> <ul style="list-style-type: none"> <li>The story opens in 1943 in an unnamed city, as war is raging across Europe</li> <li>Approximately 50 million people died in WWII</li> <li>In Britain, approximately three million people were evacuated</li> </ul>
Social	<p><b>Gender</b></p> <ul style="list-style-type: none"> <li>In the 1940s, gender roles were restrictive</li> <li>Men made a living and were either bachelors or head of the household</li> <li>Women usually filled the roles of housewife, mother and homemaker, or were single but always on the lookout for a husband.</li> </ul>

## The Prince of Mist

### English Module 1 Knowledge

#### Organiser



## Themes

**Theme:** An idea that is repeated in a text.

	<b>Links to Novel</b>
<b>Theme</b>	
<b>Evil and retribution</b>	This book is ultimately a reworking of the traditional tale of bargaining with the Devil known as a <b>Faustian bargain</b> . The Devil, however, always returns to collect his due.
<b>Deception</b>	The novel is full of <b>plot twists</b> ; characters continually attempt to outwit the Prince of Mist, whilst he tries to deceive his victims.
<b>Time</b>	The Prince of Mist says that 'Time...is an illusion' and he is able to cast his influence and exert his power across generations. Time can not protect those who have a debt with him.
<b>Friendship</b>	Friendship blossoms between Alicia, Max and Roland, only to become plagued by past events involving the Prince of Mist.

## About the...






<b>Writer</b>	Carlos Ruiz Zafón wrote seven novels, including the bestseller <i>The Prince of Mist</i> . His work has been published in more than fifty countries and honoured with numerous awards.
<b>Text</b>	<i>The Prince of Mist</i> was Zafón's debut novel. The mystery and horror young adult novel was originally published in Spanish in 1993.

## Characters

<b>Max Carver</b>	Max is the <b>protagonist</b> (main character). He is the son of a watchmaker, has moved with his family from the city in order to get away from the war.
<b>Roland</b>	After the move, Roland befriends Max. Roland is older than Max and enjoys diving. His grandfather, Victor Kray, is central to the <b>plot</b> .
<b>Alicia</b>	Alicia is the eldest of Max's siblings (the younger being Irina). She is drives the <b>romantic subplot</b> and, to some extent, can be seen to embody <b>gender stereotypes</b> , especially in <b>Gothic literature</b> .
<b>The Prince of Mist</b>	The Prince of Mist goes by numerous names and is infamous for his wickedness. He is the <b>supernatural villain</b> and is often depicted using <b>Satanic imagery</b> ; he is <b>evil personified</b> .



## *Gothic Conventions*

<b>Literary Convention:</b> Features of certain genres that readers understand, recognise and accept as techniques to facilitate the plot.		
<b>Feature</b>	<b>Definition</b>	<b>Examples</b>
<b>Stock Characters</b>	A fictional character based on a common literary or social stereotype: an <b>archetype</b> .	
<b>Setting</b>	The surroundings or place in which something is put.	
<b>Mysterious Object</b>	An unusual object which is central to the <b>plot</b> .	
<b>Multiple Perspectives</b>	A story told from different points of view—this is often due to the use of the <b>epistolary form</b> (inclusion of letters).	
<b>The Supernatural</b>	Forces beyond scientific understanding often haunt Gothic texts.	

<i>Word Types</i>		
Type	Definition	Examples
<b>Verb</b>	A word you can 'do'	Run, skip, sing, laugh
<b>Adjective</b>	A describing word	Beautiful, ugly, funny, kind
<b>Noun</b>	Name of a thing, such as an object, a place, or a person.	Chair, Newcastle, Mother
<b>Adverb</b>	A word which describes the action	Quickly, elegantly, cautiously

## *Language Techniques*

Technique	Definition	Examples
<b>Alliteration</b>	Words that start with the same sound	Precious pictures and paintings
<b>Foreshadowing</b>	Receiving a warning of a future event	A family notices a small dark spot on the ceiling, but ignore it. The pipe later bursts
<b>Metaphor</b>	A descriptive technique that names a person, thing or action as something else.	The circus was a magnet for the children
<b>Onomatopoeia</b>	Words that sound a little like they mean.	Crash, boom, bang
<b>Personification</b>	A metaphor attributing human characteristics to an object.	The sun smiled at the hills
<b>Pathetic fallacy</b>	When the weather reflects the mood of a character	The clouds crowded together suspiciously overhead as the sky darkened.
<b>Simile</b>	A descriptive technique that compares two things using 'as' or 'like'	The trees stood as tall as towers.

## *Antithetical Vocabulary*

Word	Definition	Examples
<b>Abyss</b>	A deep hole that seems to have no end	She found herself at the edge of an abyss.
<b>Bewilderment</b>	A state of confusion	He stared at his teacher in bewilderment.
<b>Corrupt</b>	To use a position of power to get advantage	The whole department was corrupt, I couldn't trust anyone.
<b>Malicious</b>	Intended to harm or hurt other people	The started a malicious rumour about the girl.
<b>Refuge</b>	Protection or shelter from danger	She fled to her car for refuge from the storm.
<b>Solemnly</b>	In a formal and dignified manner	I solemnly swear that I am up to no good.
<b>Spectre</b>	A ghost	The spectre's presence was apparent.
<b>Tranquil</b>	Calm and peaceful	During the six weeks, the school was tranquil.



# Year 7 Module One Knowledge Organiser



## Who am I?

A Community is "a unified body of individuals" such as people with shared common interests or people who live within the same area

### Examples of communities:

- School community
- Religious community
- Sport community



## Saint Wilfrid

To become a saint you need to:

- Have died
- Performed 2 miracles
- Intercede prayers



### Saint Wilfrid:

- Was the he was the Bishop of York
- Was imprisoned by the King of Northumbria who was jealous of Wilfrid's power.
- Persuaded the church to celebrate Easter on the same day as in Rome

## How people join the Catholic Community – Baptism

### Community – Baptism

Sacrament: A sacrament is a religious ritual/ceremony performed in the life of the Christian which makes them holier.

### Reasons for Baptism:

- Join the Christian faith
- Follow in the footsteps of Jesus

### Symbols of Baptism:

- Water – Wash away sin
- Oil – chosen by God
- Candle – Jesus is the light of the world

SOWA: Baptism of Jesus



## How people join the Catholic Community – Eucharist

### – Eucharist

What is the Eucharist:

- is a sacrament of initiation, another step you take into to Christian faith.
- The Eucharist takes place during Mass.
- Bread and Wine

### Importance of the Eucharist:

- the bread and wine transforms into the actual body and blood of Jesus.
- it is a reminder of the Last Supper and the sacrifice that Jesus made for us.

SOWA: Luke 22:7-23 "do this in memory of me"

## Old Testament – Abraham

Bible: New and Old Testament

- Old Testament – 39 books
- New Testament – 27 books
- Word of God



### Covenant with Abraham:

- To look after the land of Car
- Father of many Nations



- SOWA: "You will have as many descendants as stars in the sky"

## Old Testament – Moses

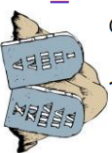
- God appeared to Moses – Burning Bush
- God wanted the Israelites to be free
- God sent 10 plagues to Egypt



- Moses parted the Red Sea

- God protected his people in the desert
- God gave Moses the Decalogue (10 Commandments)

- SOWA: Out of all nations, you will treasure possession. Exodus 19



## How do people worship – Parts of the Mass

### Mass

Parts of the Mass:

- Introductory Rite
- Liturgy of the Word
- The Eucharist
- Blessing and Dismissal

### Importance to Catholics:

- Pray to God
- Sacrament of the Eucharist
- Remembers the Last Supper



## How do people worship – Prayer

Prayer is communicating with God

Types of prayer:

- Adoration
- Petition
- Repentance
- Intercession
- Thanksgiving

### The Lord's Prayer

- Given to the disciples
- Communicate with Jesus after his death

SOWA: "Lord teach us how to pray"



## Canonisation: Becoming a Saint

Sacrament: A religious ritual/ceremony performed in the life of the Christian which makes them holier.

Baptism: A Sacrament that allows the person to enter the Christian community.

Eucharist: A sacrament which takes place during Mass where Christians consume the body and blood of Jesus.

## Key Words

Passover/Pesach: The Jewish festival that was being celebrated at the Last Supper  
Transubstantiation – The bread and wine transforms into the actual body and blood of Jesus.

Covenant: A promise made between two people  
The Exodus – The story of the Israelites escaping/exiting Egypt  
Decalogue - 10 Commandments given by God to Moses.



# Biology

<https://www.youtube.com/watch?v=8BYCU2Jn668> a video explaining how to use simple techniques to use these key questions

## Staff instructions:

*These questions are what we want ALL students to grasp.*

*We should be adding extra questions into lessons for those who need more challenge. Upper ability students may cover more key questions in a lesson than LA but ALL students cover these questions (and skills)*

## Cells, Tissues, Organs and Organisms - Year 7- Key Questions

Key Questions	Key Answers
1. What can ALL living things do?	Move, Respire, Sensitivity, Grow, Reproduce, Excrete & require Nutrition. (MRS GREN)
2. What are cells?	Are the small units that all plants and animals and other living things are made from.
3. Why are cells needed in plants and animals?	Cells contain DNA which allows them to make proteins to help the plant or animal grow or repair itself. Cells take in nutrients and carry out important functions.
4. What organelles are present in both plant and animal cells?	Cytoplasm, Nucleus and Cell Membrane
5. What are the main parts of a cell and their function	Nucleus- Contains genetic information, Cytoplasm- most of the chemical reactions occur here, Cell membrane- semi-permeable to control what enters and leaves a cell. Mitochondria- Site of aerobic respiration and releases energy to the cell. Chloroplasts- contain chlorophyll that absorb sunlight for photosynthesis. Cell Wall- Contains cellulose to provide support for the cell. Ribosomes – site of protein synthesis. Plasmids- contain genetic information that can help enhance the survival of the organism. It also facilitates replication in bacteria.
6. Name as many organelles in plant/ animal cells and explain their functions	Nucleus- Contains genetic information, Cytoplasm- most of the chemical reactions occur here, Cell membrane- semi-permeable to allow the passage of small and soluble substances to and from the cell. Mitochondria- Site of aerobic respiration and releases energy to the cell. Chloroplasts- contain chlorophyll that absorb sunlight for photosynthesis. Cell Wall- Contains cellulose to provide support for the cell.
7. Identify the 5 organelles in an animal cell	Nucleus, Cytoplasm, Cell Membrane, Mitochondria, ribosomes
8. What organelles are found in a plant cell only?	Cell Wall, Chloroplasts and a permanent vacuoles
9. Why do plant cells have a cell wall?	It is made out of cellulose which strengthens the cell
10. What is diffusion?	The net movement of molecules from an area of high concentration to an area of low concentration
11. Which substances will diffuse INTO an animal and plant cell for aerobic respiration?	Oxygen
12. What is a microscope?	A device used to look at parts of an organism
13. What are microscopes used for?	Can be used to study parts of an organism or look at very small organism. It gives us an idea of the structure.
14. How did the invention of the microscope help develop science?	It helped mankind understand that organisms were made up of cells and that plants and animals are made up from very small cells with genetic material.
15. What are the different types of microscopes?	Optical or Light microscopes and electron microscopes
16. What are the main parts of the microscope and what is their function?	Stage- Part where the slide is placed and clipped in using the stage clips to keep the slide in place Eyepiece lens- When we are ready to view the sample we look down the eyepiece lens to see the image. Mirror or Light- This is used to focus light onto the sample so we are able to see the structures of the cells



<https://www.youtube.com/watch?v=8BYCU2Jn668> a video explaining how to use simple techniques to use these key questions

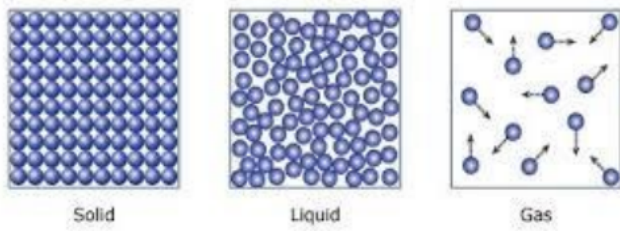
	<p>Coarse focus wheel- Used to find the cells and bring the image into focus</p> <p>Fine focus wheel- Used to sharpen the image so it is clear</p> <p>Objective lens- These have different magnifications, you always start with the lowest magnification as this creates the largest field of view. The ones with higher magnification can be used if you want to enlarge the image.</p>
17. Why do we use standard form in microscopy?	When we deal with very small numbers it is easier to express them in standard form so instead of saying 0.00000001 we say $1 \times 10^{-8}$
18. What can we see with a microscope?	Cells and their internal structures. Parts of organisms that cannot be seen with the naked eye
19. In what types of job/career may a person be required to use a microscope?	Microbiologist, Technician, Forensic scientist, Zoologist, Wildlife biologist, Chemist, Biologist.
20. How can you prepare a sample to view under a microscope?	You take a thin layer of tissue (one cell thick) and put a drop of water onto the middle of a glass slide. You then put a drop of stain (like Iodine) on and gently lower a cover slip onto the specimen at a 45 angle. This ensures there are no air bubbles on the slide
21. How do you use a light microscope?	You select the objective lens with the <u>lowest magnification</u> , put the slide on the stage and clip in position. Turn the coarse focussing wheel so the lens is as close to the slide as possible being careful not to break the glass slide. Then look down the eyepiece whilst turning the coarse focussing wheel and moving the stage down until you can see the cells. Then use the fine focus to make the image sharper/clearer. If you want to look at the cells in more detail you can select an objective lens with a higher magnification. Once you've done this sharpen the image again with the fine focus only
22. How do you calculate magnification, actual size and image size?	Magnification = Image size / Actual size
23. What is a specialised cell?	A cell that has a particular function or job to do; for example red blood cells carry oxygen around the body.
24. How are sperm cells specialised to their function?	Sperm cells have a tail so they can swim towards the egg cell. sperm cells have many mitochondria in their tail so they can release energy to swim towards the egg. Sperm cells have half the normal number of chromosomes in their nucleus (they have a haploid nucleus) to combine with the egg cell nucleus.
25. What is meant by unicellular?	Organisms made from only one cell – e.g bacteria
26. How do plant, animal and bacterial cells differ?	Bacterial cells do not have a nucleus, they are called prokaryotic cells. Plant and animal cells have their DNA in an enclosed nucleus within the cell. Bacterial cells and plant cells have cell walls and animal cells do not. Plant cells have chloroplasts and a vacuole- animal and bacterial cells do not.
27. Why do cells need to be organised and what levels are they organised into?	Cells need to be organised in order to work together when performing a function. Cells group into tissues, which group into organs, organ systems and then organisms.
28. Give three examples of organ systems in animals	Any from: Digestive, circulatory, nervous, skeletal, hormone, muscular, reproductive, respiratory, urinary.
29. What is the circulatory system?	The system in the body that is responsible for delivering oxygen and glucose to the tissues and carrying waste products so they can be removed from the body. It consists of the heart and blood vessels.
30. What is the function of the heart?	The heart is an organ that pumps blood – around the body in a double circulatory system
31. What are the major blood vessels in the body?	Capillaries Veins Arteries
32. How do bacterial cells differ from animal/plant cells?	Much smaller in comparison. They have a cell wall, no nucleus but a single DNA loop and/or one or more small rings of DNA called plasmids.
33. Put the following in size order (Biggest to smallest): 5000nm, 12mm, 0.03cm, 1350µm, 0.0004cm	12mm, 1350µm, 0.03cm, 0.0004cm, 5000nm.

<https://www.youtube.com/watch?v=8BYCU2Jn668> a video explaining how to use simple techniques to use these key questions

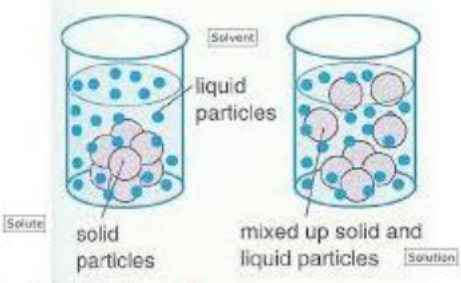
34. Name some examples of specialised animal and plant cells	Animal cells include- sperm cells, muscle cells, nerve cells, red blood cells, white blood cells Plant cells include- root hair cells, palisade cells, xylem and phloem
35. Why do cells become specialised?	Specialised cells can perform specific function, so this makes the body much more efficient
36. How do you express 1250000000000 in standard form?	$1.25 \times 10^{12}$
37. What are the 3 types of blood vessels?	<ul style="list-style-type: none"> <li>• Arteries</li> <li>• Veins</li> <li>• Capillaries.</li> </ul>
38. What are the functions of the 3 main blood vessels?	Arteries- Deliver oxygenated blood to tissues Veins-Take de-oxygenated blood back to the heart Capillaries- One cell thick to allow substances in and out (e.g. Oxygen and CO <sub>2</sub> and urea)
39. Where do we find the following bones? a) Femur b) Sternum c) cranium d) patella e) humerus	The femur is the thigh bone The sternum is the chest bone that your ribs attach to The cranium is your skull The humerus is the bone at the top of your arm
40. Muscles can only work in antagonistic pairs. What does this mean?	Muscles can only pull and cannot push. This would be a problem if a joint were controlled by just one muscle. As soon as the muscle had contracted and pulled on a bone, that would be it, with no way to move the bone back again. Muscles work in pairs, so as one muscle is pulling, the other one is relaxing, and then they swap to return the limb to normal.
41. Give an example of an antagonistic pair of muscles	to raise the forearm, the biceps contracts and the triceps relaxes and to lower the forearm again, the triceps contracts and the biceps relaxes
42. What is meant by a joint?	Where two or more bones meet
43. How are muscles attached to bones?	Tendons attach muscles to bones
44. What is the function of a ligament?	Ligaments attach bones to bones
45. What are the four main functions of the skeleton?	<ul style="list-style-type: none"> <li>• to support the body</li> <li>• to protect some of the vital organs of the body</li> <li>• to help the body move</li> <li>• to make blood cells</li> </ul>

# Chemistry

## Particles - Year 7- Key Questions

Key Questions	Key Answers
1. Draw particle diagrams of the three states of matter.	 <p style="text-align: center;">Solid                      Liquid                      Gas</p>
2. Classify the following materials as solid, liquid or gas: a. Water b. Ice c. Iron metal d. Oxygen e. Mercury metal	<p>a) Water – Liquid b) Ice - Solid c) Iron metal - Solid d) Oxygen - Gas e) Mercury metal - Liquid</p>
3. Describe the properties of the three states of matter using particle theory.	<p>Solids – Do not flow, cannot be compressed, shape stays the same, fixed volume Liquids – Flow, cannot be compressed, takes the shape of the bottom of its container, fixed volume Gases – Flow, can be compressed, take the shape of the whole container, no fixed volume</p>
4. Explain the properties of the three states using their particle arrangements.	<p>Solids can't flow, be compressed, change volume or shape as their particles don't move. They are in a fixed position. Liquids can flow and take the shape of the bottom of their containers as their particles are able to move around slightly independently of each other. They can't be compressed and their volumes are fixed as there are no real gaps between the particles despite their movement. Gases can flow, be compressed, take the shape of containers and change their volume as the particles move around completely independently of each other with large gaps in between them.</p>
5. State the names of all of the changes of state	<p>Solid → Liquid = Melting Liquid → Gas = Boiling/Evaporation Gas → Liquid = Condensation Liquid → Solid = Freezing Solid → Gas = Sublimation</p>
6. Describe what happens to the arrangement of particles during state changes.	<p>As substances go from solid to liquid and then to gas, the particles gain more energy, they move around more and leave their fixed positions. Eventually the attractions between the particles fully break and the particles can move independently. As substances go from gas to liquid and then to solid, the particles lose energy, they move around less, and eventually the attractions between the particles are reformed and they come back to fixed positions.</p>
7. Give definitions for <i>melting point</i> and <i>boiling point</i> .	<p>Melting point – the temperature at which a solid fully melts into a liquid (or when a liquid fully turns into a solid). Boiling point – the temperature at which a liquid fully turns into a gas (or when a gas fully turns into a liquid).</p>
8. List the equipment you should use to test the boiling point of different substances, and what you would use each piece of equipment for.	<p>Heatproof mat – to protect the desk from the heat of the Bunsen burner Bunsen burner – to heat up the substance Tripod – to hold the beaker of the substance at a height above the Bunsen burner Gauze mat – to provide a heat-conductive surface for the beaker of substance Beaker – to hold the substance to be tested Measuring cylinder – to measure out a volume of the substance to be tested Thermometer – to measure the temperature of the substance being tested</p>



9. List three materials that can dissolve	Salt, sugar, jelly, stock cubes, coffee, soluble aspirin, vitamin C tablets
10. Describe what is happening to the particles of a solid when it dissolves	<p>The water particles form attractions to the solid particles, and pull them apart, disrupting their fixed shape. The solid particles move into the gaps between the water particles.</p> 
11. Give definitions of the words: a. <i>Solute</i> b. <i>Solvent</i> c. <i>Solution</i> d. <i>Soluble</i> e. <i>Insoluble</i>	<p>a) Solute – the solid that is dissolved. Eg. In salt water it would be the solid salt</p> <p>b) Solvent – the liquid that the solid is dissolved in. Eg. In salt water it would be the pure water</p> <p>c) Solution – the mixture when the solute and solvent are mixed together. Eg. The salt water mixture</p> <p>d) Soluble – a substance that can dissolve. Eg. Salt is soluble in water</p> <p>e) Insoluble – a substance that cannot dissolve. Eg. Sand is insoluble in water</p>
12. Describe the temperature change that occurs when a salt dissolves in water.	When a salt dissolves in water the temperature decreases.
13. Give definitions for: a. <i>Independent variable</i> b. <i>Dependent variable</i> c. <i>Control variable</i>	<p>a) Independent variable is the thing that is changed in an experiment</p> <p>b) Dependent variable is the thing that is measured in an experiment</p> <p>c) Control variables are the things that are kept the same in an experiment</p>
14. State the variables for our dissolving experiment.	<p>Independent variable – Temperature of water</p> <p>Dependent variable – Time taken for salt to dissolve</p> <p>Control variables – volume of water, mass of salt, number of stirs</p>
15. Give two ways you stayed safe during the dissolving experiment	Wearing safety goggles, tying long hair back, keeping watch of the Bunsen burner and hot liquid, not touching hot equipment, keeping equipment in the middle of the bench
16. Explain one way in which you ensured your results were accurate	We repeated the experiment multiple times to calculate an average and ensure there were no anomalous results
17. Describe what we found out from our dissolving experiment	The higher the temperature of the water, the faster the salt dissolved.
18. Give three key things to remember when drawing a scientific graph	<p>-The independent variable goes on the x (across) axis</p> <p>-The dependent variable goes on the y (up) axis</p> <p>-Graphs should be drawn using a pencil and ruler</p> <p>-Axes should be labelled, including units</p> <p>-Numbers along axes should be equally spaced</p> <p>- We should draw a line of best fit rather than a dot to dot</p>
19. Give a definition, in terms of particles, for <i>diffusion</i> .	Diffusion is the movement of particles from an area of high concentration to an area of low concentration
20. Explain how temperature affects the rate of diffusion.	As we increase temperature, the rate of diffusion also increases. This is because the particles gain more energy, so can move around and spread out more quickly.
21. Define, in terms of particles, <i>air pressure</i> .	Air pressure is the frequency at which gas particles collide with the surface of their container.
22. Explain, using air pressure, how a balloon is blown up.	As someone blows into a balloon, the number of particles inside the balloon increases. This means there are more collisions with the inside of the balloon, increases the pressure and pushing it outwards. If we blow it up too much, the air pressure becomes too high and the balloon will pop.
23. Explain, using air pressure, the collapsing can experiment.	As the can is heated up, the water inside turns into a gas and starts to evaporate and escape. Some liquid is left inside. As we flip the can over, the remaining liquid falls to the top of the can, leaving behind a vacuum (no particles at all) in the rest of the can. As the air pressure outside the can is now much higher than inside the can, the can is crushed by the pressure of the air particles outside it.
24. State the names of the three subatomic particles.	Protons, neutrons, electrons
25. State where the subatomic particles are found in an atom.	<p>Protons – in the nucleus</p> <p>Neutrons – in the nucleus</p> <p>Electrons – in shells orbiting the nucleus</p>
26. State the charges on the three subatomic particles	<p>Protons – Positive (+1)</p> <p>Neutrons – Neutral (0)</p> <p>Electrons – Negative (-1)</p>
27. Explain why an atom must have equal numbers of protons and electrons	As protons are positive, and electrons are negative, atoms must have an equal number so that their charges cancel each other out and the atom stays neutral overall.



**Year 7 Module 1 Physics: Key Questions and Key Answers**  
**Forces and Motion**

Question	Answer
1. Define distance	how far apart two objects are
2. Define time	how long an object travels for, duration
3. Define speed	how fast or slow an object is moving
4. Give a typical walking speed	1.5 m/s
5. Give a typical cycling speed	7 m/s
6. Give a typical speed of a car	30 m/s
7. Give a typical speed of an aeroplane	250 m/s
8. State the speed of sound	340 m/s
9. State the speed of light	300 000 000 m/s
10. State 2 pieces of equipment used to measure distance	Any 2 from: <ul style="list-style-type: none"> <li>• ruler</li> <li>• tape measure</li> <li>• trundle wheel</li> </ul>
11. State a piece of equipment used to measure time	stopwatch
12. State the standard units for distance	metres (m)
13. State the standard units for time	seconds (s)
14. State the standard units for speed	metres per second (m/s)
15. What equation can we use to calculate speed?	speed = distance ÷ time
16. What does a distance-time graph show?	how the distance moved by an object from its starting point changes over time
17. On a distance-time graph, on what axis do we plot distance?	Y axis (vertical)
18. On a distance-time graph, on what axis do we plot time?	X axis (horizontal)
19. What does the gradient (steepness) of the line on a distance-time graph show?	speed
20. Describe the relationship between the gradient (steepness) of the line on a distance-time graph and speed	the steeper the line, the faster the speed
21. What does a horizontal line represent on a distance-time graph?	object is stationary, not moving

22. What does a straight diagonal line represent on a distance-time graph?	object travelling at constant speed
23. What does a diagonal line downwards represent on a distance-time graph?	object returning to starting point
24. What does a line curving upwards represent on a distance-time graph?	object accelerating, getting faster
25. What does a line curving downwards represent on a distance-time graph?	object decelerating, getting slower
26. Define relative motion	the motion of a moving object compared to another moving object e.g. when a train passes a car travelling at high speed on a motorway
27. Define force	a push or pull
28. Where do forces happen?	when two objects interact
29. Do forces act on their own or in pairs?	forces always come in pairs
30. When a force is exerted on an object, what 3 things can it change?	<ul style="list-style-type: none"> <li>• speed of the object</li> <li>• direction of movement</li> <li>• shape of the object</li> </ul>
31. State the units of force	newtons (N)
32. State the equipment used to measure force	newton meter
33. Define contact force	forces between two objects when they are touching
34. Define non-contact force	forces between two objects that not physically touching each other
35. Give 3 examples of a contact force	<ul style="list-style-type: none"> <li>• friction</li> <li>• air resistance</li> <li>• reaction force</li> </ul>
36. Give 3 examples of a non-contact force	<ul style="list-style-type: none"> <li>• gravity</li> <li>• magnetism</li> <li>• static electricity</li> </ul>
37. How do we draw forces?	with an arrow
38. What do force arrows show?	size and direction of a force
39. Define equilibrium	forces acting on an object are balanced
40. Describe balanced forces	forces acting on an object are equal in size and opposite in direction
41. Describe the effect of balanced forces on a stationary object (not moving)	does not move/stays still
42. Describe the effect of balanced forces on a moving object	continues to move at the same speed in the same direction
43. Describe unbalanced forces	forces acting on an object are unequal in size

44. Describe the effect of unbalanced forces on a stationary on a stationary object (not moving)	moves in the direction of the force
45. Describe the effect of unbalanced forces on a moving object	<ul style="list-style-type: none"> <li>• changes speed</li> <li>• changes direction in the direction of the force</li> </ul>
46. Define elastic	materials that return to original size and shape after being stretched or squashed
47. Give 2 examples of elastic materials	<ul style="list-style-type: none"> <li>• springs</li> <li>• elastic bands</li> </ul>
48. Define compression	when a material or object is squashed
49. Define deformation	when a force changes the shape or size of an object
50. Define independent variable	one variable changed during a scientific experiment
51. Define dependent variable	one variable being tested or measured during a scientific experiment
52. Define control variable	a variable kept the same during a scientific experiment to keep results reliable

# Normans Knowledge Organiser

## BATTLE OF HASTINGS & THE NORMAN CONQUEST

Edward the Confessor was king of England between 1042-1066. Edward married but had no children. For a king to die without an heir was a disaster. A strong ruler, preferably with experience, good at fighting and leading armies and related to the king was required. Here are the candidates:



Harold Godwinson	William of Normandy	Harold Hardrada
Anglo-Saxon Earl of Wessex, one of the most powerful men in England Harold's sister was married to King Edward. Harold was a brave and respected soldier with a tough streak. The Witan, wanted Harold to be the next king. Edward promised the throne to William on his deathbed.	Norman Duke of Normandy, France. William came from a fighting family. He was a brave soldier. Edward's cousin. Edward had lived in Normandy from 1016-1042. Edward had supposedly promised that William should become King of England. Harold had promised to support William.	Viking King of Norway Vikings had ruled Britain before Most feared warrior in Europe – Hardrada means 'hardless'. Harold was supported by Tostig, Harold Godwinson's brother who wanted revenge.

- 5 Jan Edward the Confessor died. The Witan elected Harold Godwinson to be the next king of England.
- 6 Jan Harold was crowned as king of England, probably at Westminster Abbey.
- 20 Sep Harold Hardrada and Tostig invaded, with more than 10,000 men in 200 long ships. Anglo-Saxon Earls Edwin and Morcar were defeated at Battle of Fulford.
- 25 Sep Harold Godwinson travelled north to fight Harold Hardrada. In four days he marched 180 miles to surprise Hardrada and Tostig, east of York. Godwinson defeated Hardrada but his army was tired and badly reduced in size.
- 27 Sep William Duke of Normandy set sail with almost 700 ships. His soldiers landed at Pevensey and made a small castle. The Normans pillaged and burned the surrounding area, in order to force Harold to come south. Having heard of William's landing while at York, he raced his army down the old Roman road of Ermine Street
- 12 Oct Harold arrives at London, to recruit more troops
- 14 Oct Battle of Hastings—death of King Harold

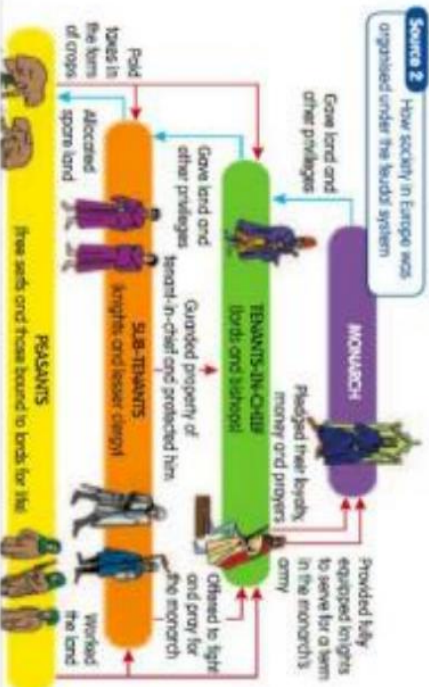




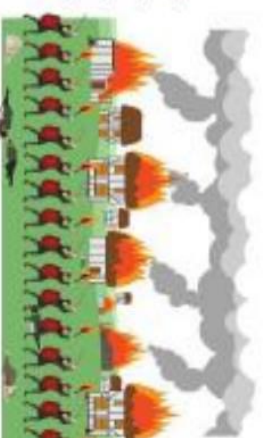
# Normans Knowledge Organiser

## How did William control England?

**Source 2** How society in Europe was organised under the feudal system



**Harrying of the North:** There were a number of rebellions against the Normans which were crushed ruthlessly. A revolt in the north led to William's men burning villages, slaughtering the inhabitants and also killing animals & destroying crops, leading to starvation.



**The Feudal System:** After taking the throne in 1066, William had a few problems: He did not trust the English lords, who did not like him. He had to force the English to accept him as king. Many of the English were rebelling and fighting against William. He had to pay the French knights who helped him to win the throne.

William crushed the rebellions and took the land away from the English lords and gave it to his supporters instead. William now had his supporters helping him to control the whole country. William also set up the **Feudal System**. This forces the English to give William their taxes and promises of loyalty, in return for protection and land to farm. William is at the top of the system, as he holds all the land and money, which he gives to the Barons. They promise William their money, soldiers and loyalty. They give the land to the knights in return for loyalty and military service. Finally the knights give the land to the peasants. The peasants farm the land and give food, money and services to the knights.

**The Domesday Book:** was drawn up in 1086 to tell William how much property was owned by the people of England to allow him to tax them more heavily.





# 7.1

Year 7 Module 1

## Water on the land



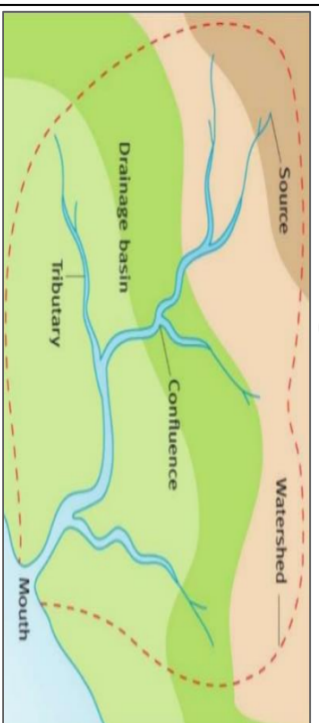
### Geography Knowledge Organiser

#### 7.1.3 - River processes

##### Erosion processes

<b>Hydraulic action</b>	The sheer force of the water hitting the banks (sides) of the river
<b>Abrasion</b>	The stones and pebbles (load) carried by the river hits and scrapes the banks of the river
<b>Solution</b>	Slightly acidic river water dissolves some rocks
<b>Attrition</b>	Stones and boulders hit each other in the river and break up becoming smaller and smoother
<b>Transport processes</b>	
<b>Traction</b>	Large boulders and rocks are rolled along the river bed
<b>Saltation</b>	Small pebbles and stones are bounced along the river bed (leapfrogging)
<b>Suspension</b>	Sand grains are carried along in the water
<b>Solution</b>	Minerals are dissolved in the water and carried along in solution

#### 7.1.1 - Drainage basins

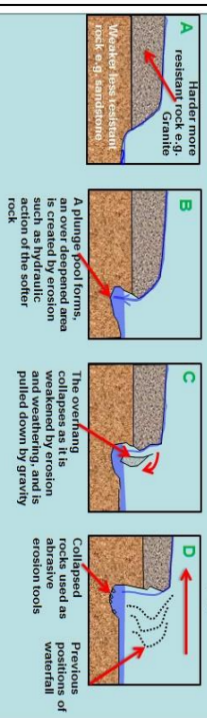


**Drainage Basin**- is the area of land drained by a river and its tributaries  
**Watershed**- the area of high land forming the edge of a river basin

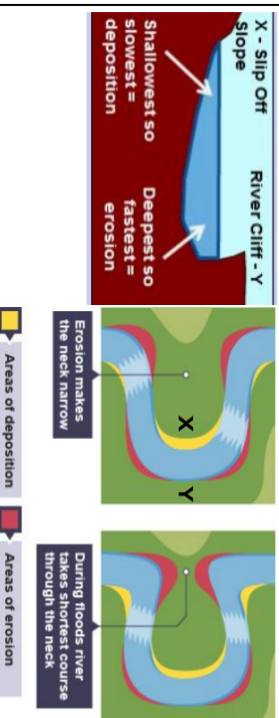
**Source**- where a river begins  
**Mouth**- where a river meets the sea  
**Tributary**- a small river or stream that joins a larger river  
**Confluence**- the point at which two rivers meet  
**Main river channel**- main river flow in the drainage basin  
**Floodplain**- flat land on the sides of the river that takes the overflow water  
**Impact of Glaciation on a Drainage Basin**  
 U and V-shaped valleys form following periods of glaciation, as the temperature drops and snow/rain falls into cracks it freezes, known as freeze thaw, causing the rock to expand and break. This process increases the size of the drainage basin, and leads to higher levels of river discharge.

#### 7.1.4 - River landforms

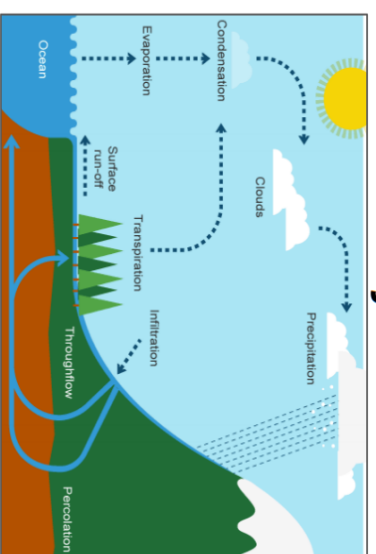
##### The formation of a waterfall



##### The formation of a meander



#### 7.1.2 - Water cycle



**Condensation**- when water vapour cools to form clouds  
**Evaporation**- where water is turned into water vapour (gas)  
**Precipitation**- any water that falls from the sky (rain, snow etc)  
**Interception**- vegetation traps water before it reaches the ground  
**Transpiration**- water is evaporated from the leaves of vegetation  
**Surface runoff**- water runs across the ground to a river  
**Infiltration**- water seeps into the soil in the ground  
**Percolation**- water seeps into rock deeper in the ground  
**Throughflow**- water flows through the soil and rock in the ground

#### 7.1.5 - Flooding

##### Toon Monsoon 2012 Causes

In the summer the jet stream was over us bringing us storms; 2 inches of rain fell and the old drain systems couldn't cope; Storms came over the Pennine mountains creating more rain.

##### Toon Monsoon 2012 Effects

**[Health/People]** 500 homes were flooded;  
**[Health/People]** People were evacuated from their homes some were in temporary housing and B&Bs for months;  
**[Health/People]** Drivers abandoned their cars and walked home;  
**[Infrastructure]** Some roads collapsed and were closed off;  
**[Infrastructure]** The Tyne Tunnel was flooded and closed;  
**[Infrastructure]** The metro lines were flooded;  
**[Economy]** £8 million damage for the local councils;  
**[Economy]** The Hoppins was cancelled;  
**[Economy]** The Swan Pub in Heworth was flooded.

##### Toon Monsoon 2012 Responses

Laying waterproof concrete and putting plug sockets 1m+; In Morpeth they put flood defences in e.g. a flood storage reservoir, flood gates, flood walls; £100 million has been spent on flood defences.

# Spanish Sentence Builders

## ¿Cómo estás? (How are you?)

Verb	Adverb	Connective	Pronoun/verb	Adjective
Estoy (I am)	muy bien (very well) bien (well) regular (OK) mal (bad) fatal (terrible)	porque (because)	estoy	emocionado/a (excited) nervioso/a (nervous) contento/a (happy) enfermo/a (poorly) tranquilo/a (calm)

## ¿Dónde vives?

Verb	Noun	Connective	Time phrase	Verb	Noun
Vivo en (I live in)	South Shields Jarrow Hebburn	Pero (but)	en el futuro (in the future)	quiero vivir en (I want to live in)	Londres Manchester Newcastle

## ¿Qué tipo de persona eres?

Opinion phrase	Verb	Adjective
Pienso que (I think that) Creo que (I believe that) Diría que (I would say that)	soy (I am) es (he/she is)	Sincero/a (sincere) Tímido/a (shy) Tranquilo/a (calm) Divertido/a (fun)
Quando era más joven (when I was younger)	era (I was)	Serio/a (serious) Simpático/a (nice) Tonto/a (silly) Listo/a (clever) Generoso/a (generous) Creativo/a (creative) Amable (friendly) Sociable (sociable)

¿Cuántos años tienes? ¿Tienes hermanos?

Verb	Noun	Noun
Tengo (I have) Tiene (he/she has)	un(o) dos tres cuatro cinco seis siete ocho nueve diez once doce trece catorce quince	años (years)
Tengo (I have) Tiene (He/she has)	un hermano (one brother) una hermana (one sister) un hermanastro (a step-brother) una hermanastra (a step-sister)	que se llama (who is called)
	dos hermanos (two brothers) dos hermanas (two sisters)	que se llaman (who are called)
Soy (I am)	hijo único (an only child – boy) hija única (an only child – girl)	

¿Cuándo es tu cumpleaños?

Mi cumpleaños (my birthday)	Es (is)	El (the)	Dieciseis Diecisiete Dieciocho diecinueve Veinte Veintiuno Veintidós Veintitrés Veinticuatro Veinticinco Veintiséis Veintisiete Veintiocho Veintinueve Treinta Treinta y uno	De (of)	Enero Febrero Marzo Abril Mayo Junio Julio Agosto Septiembre Octubre Noviembre Diciembre
El cumpleaños de mi hermano (My brother's birthday)					



## ¿Tienes mascotas?

Verb	Pronoun	noun	adjective
Tengo (I have) Tiene (He/she has)  En el futuro, voy a tener (In the future, I am going to have)	un	gato (cat) perro (dog) conejo (rabbit) caballo (horse) pez (fish) ratón (mouse)	Blanco (white) Gris (grey) Amarillo (yellow) Marrón (brown) Azul (blue) Negro (black) Rojo (red) Rosa (pink) Verde (green) Naranja (orange)
	una	serpiente (snake) cobaya (guinea pig)	Blanca (white) Gris (grey) Amarilla (yellow) Marrón (brown) Azul (blue) Negra (black) Roja (red) Rosa (pink) Verde (green) Naranja (orange)
	dos	gatos	blancos
	dos	serpientes	negras

## ¿Qué te gusta hacer?

Opinion	Verb	Connective	Intensifier	Adjective
Me encanta (I love)	jugar al fútbol (to play football)	porque es (because it is)	muy (very)	interesante (interesting)
Me gusta mucho (I really like)	jugar al baloncesto (to play basketball)		bastante (quite)	divertido (fun)
Me gusta (I like)	hacer gimnasia (to do gymnastics)		un poco (a bit)	emocionante (exciting)
No me gusta (I don't like)	hacer natación (to do swimming)			gracioso (funny)
No me gusta nada (I really don't like)	ir al cine (to go to the cinema)			aburrido (boring)
Odio (I hate)	ir de compras (to go shopping)			una pérdida de tiempo (a waste of time)

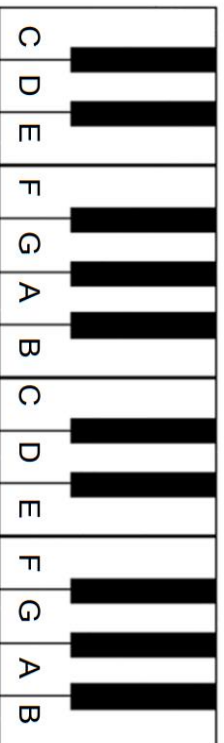
¿Qué haces en tu tiempo libre?

Frequency phrase	Verb		
<p>Todos los días (every day)</p> <p>A veces (sometimes)</p> <p>De vez en cuando (from time to time)</p> <p>Nunca (Never)</p>	<p>Juego al fútbol (I play football)</p> <p>Juego al baloncesto (I play basketball)</p> <p>Hago gimnasia (I do gymnastics)</p> <p>Hago natación (I do swimming)</p> <p>Voy al cine (I go to the cinema)</p> <p>Voy de compras (I go shopping)</p>	<p>porque es (because it is)</p>	<p>interesante (interesting)</p> <p>divertido (fun)</p> <p>emocionante (exciting)</p> <p>gracioso (funny)</p> <p>aburrido (boring)</p>
<p>Cuando era más joven (when I was younger)</p>	<p>jugaba al fútbol (I used to play football)</p> <p>jugaba al baloncesto (I used to play basketball)</p> <p>hacía gimnasia (I used to do gymnastics)</p> <p>hacía natación (I did swimming)</p> <p>iba al cine (I used to go to the cinema)</p> <p>iba de compras (I used to go shopping)</p>	<p>y era (and it was)</p>	<p>una pérdida de tiempo (a waste of time)</p>
<p>Mañana (tomorrow)</p>	<p>Voy a jugar al fútbol (I am going to play football)</p> <p>Voy a jugar al baloncesto (I am going to play basketball)</p> <p>Voy a hacer gimnasia (I am going to do gymnastics)</p> <p>Voy a hacer natación (I am going to do swimming)</p> <p>Voy a ir al cine (I am going to go to the cinema)</p> <p>Voy a ir de compras (I am going to go shopping)</p>	<p>y va a ser (and it is going to be)</p>	

# Y7 Music Module 1 Knowledge Organiser

## The keyboard

- C is to the left of the 2 black keys
- The notes go through the musical alphabet and back to A:
- ABCDEFGABCDEF G etc...



## Chords in C major

A scale = a fixed order of notes going in pitch order (low – high or high - low)

## C major Scale Ascending (getting higher in pitch)



## The chords in C major

C	Dm	Em	F	G	Am
---	----	----	---	---	----

## Key Words

- Pitch - High/Low
- Dynamics – Volume
- Tempo - Speed
- Texture – layers of sound
- Instrumentation - Instruments used (strings, brass, woodwind, percussion)
- Melody – Tune
- Accompaniment – the background/supporting music

## Notation

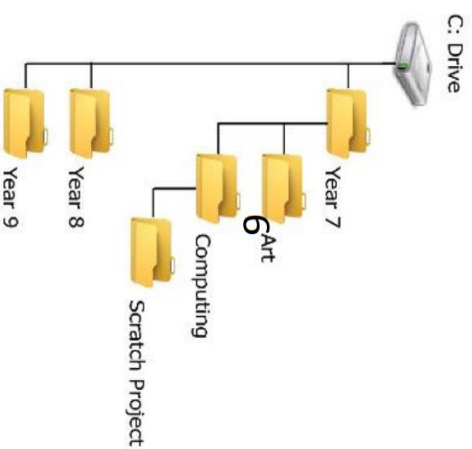
British note names	Note symbols	Note value
Semibreve		4 beats
Minim		2 beats
Crotchet		1 beat
Quaver		1/2 of a beat
Semiquaver		1/4 of a beat



## Naming Conventions

- Stuff.jpg ❌
- Homework\_2014\_Nov.xls ✓
- ResearchTaskOnFrogspawn.doc ✓
- Document1.doc ❌

## Directory Structure



## Security Methods

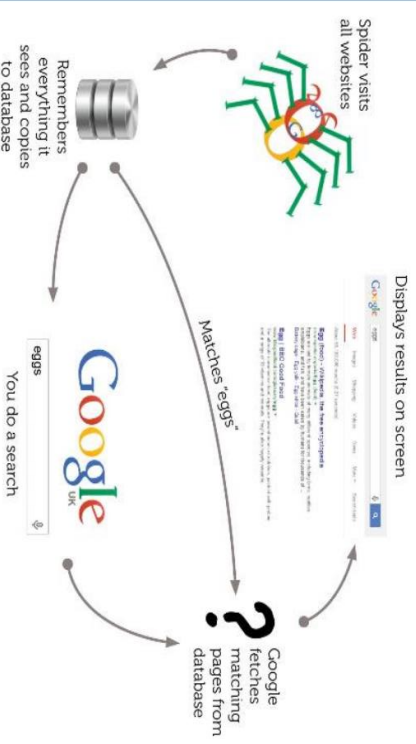
- Biometrics
- Physical security
- Anti-virus updates
- Encryption



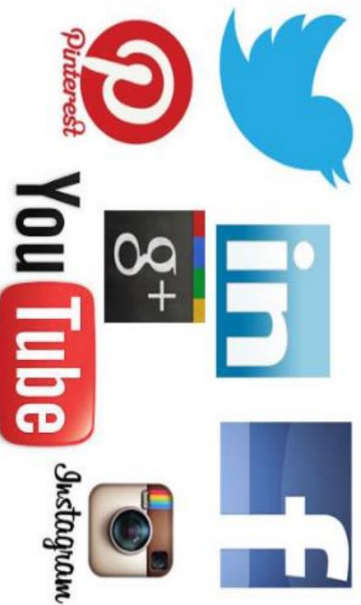
# Year 7 ICT & Computing

## Module 1 Knowledge Organiser

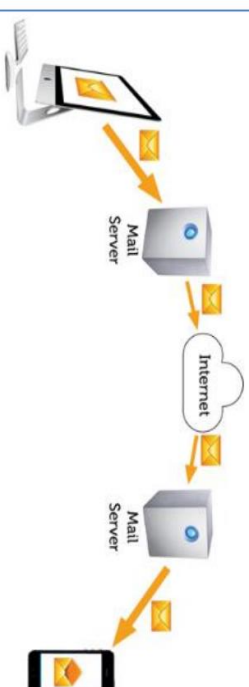
### How a search engine works



## Social Networking Platforms



### How email works



## File Extensions

Type of file	File extension
A Power-Point presentation	.ppt
An Image or photograph	.jpg .png .gif
An Access database	.accdb (formerly .mdb)
A Word document	.doc
An executable file	.exe
A video	.mp3 .mp4
A spreadsheet	.xls

## Shortcuts

- Copy **Ctrl-C**
- Paste **Ctrl-V**
- Save **Ctrl-S**
- Undo **Ctrl-Z**

## AUP

An Acceptable Use Policy (AUP) is a document saying what a user can and can't do when using computers



## Browsers





# St. Wilfrid's RC College - Knowledge Organiser

## Year 7 - Art & Design - Module 1: Insects

In this project you will learn how to improve your drawing skills by:

- Learning how to produce an accurate outline drawing.
- Learning a range of different shading techniques.
- Learning how to create tone and texture in your work

### The Visual Elements:

There are 8 visual elements that can be used to create a piece of artwork. Think of them as the building blocks to creating something in art. They are:

- Line
- Tone
- Shape
- Form
- Space
- Colour
- Pattern
- Texture

### Top tips for success

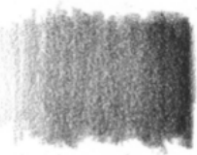
#### Things to remember to create a successful drawing:

- Don't press too heavy when drawing. (No hard outlines).
- Make sure the shape and proportion is correct before adding the shading. (Check your accuracy).
- Make sure your pencil is sharpened before you start and re-sharpen continually
- Create a wider range of tones. Especially dark tones to create a higher contrast between light and dark (Carefully pick out the darkest areas).
- Use the shading techniques to create the definition without using outlines.
- (Make it look more 3D but putting the techniques closer together or further apart).
- Make sure you are using the most appropriate shading technique to create the tones and textures.

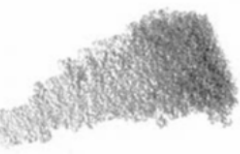
### Key Words:

Visual elements, line, tone, shape, form, space, colour, pattern, texture, shading techniques, hatching, crosshatching, scribbled hatching, pointillism, soft blending, 3-dimensional, 2-dimensional, proportion, outline, symmetry, symmetrical, highlight, light direction, size, pencil pressure, pencil grades.

### Pencil Grades

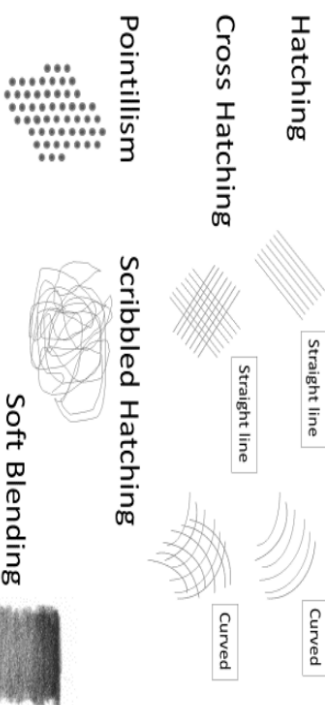


Using the point of the pencil to shade



Using the side of the pencil to shade

### Shading Techniques



### Symmetry:

**Definition of Symmetry.** Symmetry means the image/drawing is the same on both sides.

Symmetry is when a shape looks identical to its original shape after being flipped or turned. Symmetry is thus a mirror image. Symmetry exists everywhere in our life.



## Health Related Fitness (HRF)

Physical Components of Fitness	
<b>Aerobic Endurance</b>	The heart and lungs working for a long period of time to supply oxygen to working muscles during physical activity.
<b>Muscular Endurance</b>	The muscles working for a long period of time against a fixed resistance.
<b>Muscular Strength</b>	The maximum force that can be generated by a muscle.
<b>Speed</b>	Distance divided by the time taken, measured in metres per second (m/s). The faster an athlete runs over a distance, the greater their speed.
<b>Flexibility</b>	The ability to move a joint fully and smoothly through its complete range of movement.
<b>Body Composition</b>	The ratio of fat mass to fat-free mass (vital organs, muscle, bone) in the body.
Skill Components of Fitness	
<b>Agility</b>	The ability of a sports performer to change direction at speed without losing balance or time.
<b>Balance</b>	The ability to maintain centre of mass over a base of support, which can be dynamic (on the move) or static (stationary).
<b>Co-ordination</b>	The ability to use two parts of the body to perform a task smoothly and accurately, e.g. hand-eye co-ordination.
<b>Power</b>	An action that is a product of speed and strength, so it is fast and strong.
<b>Reaction Time</b>	The time taken for a sports performer to respond to a something occurring, e.g. starting gun in the 100m and the athlete sprinting.

## Warm Up &amp; Cool Down

<b>Warm Up</b>	<p>Light continuous physical activity to prepare the body for exercise...</p> <ul style="list-style-type: none"> <li>• Dynamic stretches (stretches whilst moving).</li> <li>• Pulse raising activities, e.g. gentle jogging, knees up, side steps etc.</li> <li>• Sport specific activities, e.g. passing for football/netball/basketball.</li> </ul>
<b>Cool Down</b>	<p>Light, continuous physical activity to reduce heart rate and remove lactic acid from the muscles.</p> <ul style="list-style-type: none"> <li>• Static stretches (stretches whilst stationary).</li> <li>• Pulse reducing activities, e.g. gentle jogging to steady breathing.</li> </ul>



Carotid

Radial

## Heart Rate – Test Sites

## Heart Rate (measured in beats per minute... 'bpm')

**During exercise...** Your working muscles require oxygen therefore your heart rate increases so that the oxygen within the blood can be supplied to the muscles.

**Heart Rate Maximum (bpm) = 220 – age (years).**

**To estimate your heart rate...** You can use the 'Borg Scale' which is a rating from 6-20 (with 6 being low and 20 being high). You use this to estimate how hard you are working... multiply it by 10 and that is an estimate of your heart rate.

**When exercising...** it is recommended that an individual's heart rate is between 60–85% of their maximum heart rate to improve cardiovascular health and fitness.



# Knowledge Organiser: KS3 Food Technology

## Food Groups and Hygiene



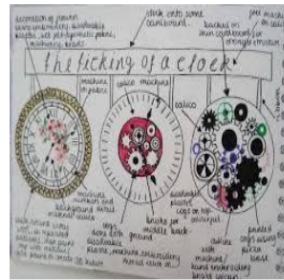
### Key words

Specification  
Design  
Criteria  
Development  
Hygiene  
Food Groups  
Microbes  
Poisoning  
Carbohydrate  
Protein  
Water  
Fat  
Vitamin  
Mineral  
Fibre

### Key skills

**Product Specification:** The 'specification' is probably the most important part of the design process because it makes sure your product is going to do what it needs to do. It is a list of points which outline the design criteria for the product, with each point referring to research work you have done. You can organize your points so you don't miss anything using ACCESS FM and expand your writing using PEE chains.

**Design idea development:** First develop a range of initial ideas and compare them with your specification. You can then see any areas which are less good and look at how to improve them to produce a final idea. Annotation helps explain designs fully and using 3D sketching and ACCESS FM for your annotation will make your ideas clear. Improving and developing designs based on feedback is called iterative design.



**Healthy diets:** This is an eat well plate. The Eatwell Plate is a pictorial summary of the main food groups and their recommended proportions for a healthy diet. It is the method for illustrating dietary advice by the Department of Health. Use the eat well plate to help balance your diet.



**Practical Pizza** is a dough base that uses yeast similar to bread.

### Curriculum Links

**Literacy:**  
specification  
writing, design  
communication,  
key words.  
**Numeracy:** Portion  
control, weighing,  
measuring,  
budgeting,  
**Careers/Cultural  
Capital:** Looking at  
local and cultural  
foods, hospitality  
and catering skills.  
**BBC Bitesize links  
Hygiene in pizza!**  
<https://www.bbc.co.uk/bitesize/clips/zxfqxnbnb>  
**Pre cooked rice**  
<https://www.bbc.co.uk/bitesize/clips/zh8fb9g>  
**Low Fat  
Mayonnaise**  
<https://www.bbc.co.uk/bitesize/clips/zdy76sg>

### Key knowledge

Microbes are extremely tiny and are all around us. There are many different types, and some are **Good** and some are **Bad** for us.

<b>Good Microbes</b>	Live in yoghurts and probiotic foods	Live in our intestines.	Help us fight infections	Help us digest our food properly.
<b>Bad Microbes</b>	Causes food poisoning.	Grow on dirty surfaces.	Found on raw meat.	Make us ill - cause infections

**Carbohydrates** are starchy or sugary foods which give lots of energy. Examples of this food type are bread, potatoes and pasta. Try to eat more starchy foods than sugary ones!

**Proteins** help the body to make and repair muscle. Too little of this food group can cause slow growth. Examples of this food type are meat and fish.

**Water** is vital to keep our bodies hydrated. Recommended you drink 8 glasses a day! Its also in fruit juices.

**Fats** give some energy but less than carbohydrates. They are used to keep the body warm. Examples of this food type are butter and oil.

**Vitamins and Minerals** keep our bodies healthy and protect us from illness. Lots of these are found in fruit and vegetables or you can take them as a tablet too!

**Fibre** helps to keep your gut healthy and make sure you absorb the nutrients in your food. You can get lots of Fibre from foods such as cereal and brown pasta.

# Knowledge Organiser: KS3 Food Technology

## Planning and Mass Production



### Key skills

**Manufacturing:** Using key manufacturing skills safely and practicing to develop your skill and accuracy so that the products you make are high quality. In Food Technology this includes knife skills, using a range of heating equipment such as cookers, hobs and microwaves as well as measuring equipment to manufacture different recipes.



**Pathogens and food preparation:** A pathogen in the oldest and broadest sense, is anything that can produce disease. A pathogen may also be referred to as an infectious agent, or simply a germ. The 4 C's can help to minimise pathogens.

**Chilling:** Leftover food needs to be handled and stored safely so that it does not pose a food safety risk, if there are leftovers after serving, place on a clean plate, cover and refrigerate within two hours.

**Cooking:** As all raw meats can carry harmful bacteria on the outside, it is important to cook all meat properly to kill the bacteria that can cause food poisoning.

**Cleaning:** Regular cleaning of worktops, chopping boards and any surfaces that come into contact with food is important to prevent the spread of bacteria. Proper cleaning requires hot soapy water and a good scrub.

**Cross contamination:** When bacteria is spread by other foods or dirty hands from one surface to another.

**Production lines:** A production line is a set of sequential operations in a factory where components are assembled to make a finished product that is suitable for onward consumption.



**Practical:** Chicken should be white in the middle when fully cooked.

### Key knowledge

#### Function of ingredients

Oats	Adds texture or crunchiness, bulks out the mixture, good source of carbohydrates and fibre, help to give a feeling of fullness, promote growth of good bacteria in gut.
Butter	Provides flavour, Keep products moist and extend shelf-life Add colour to foods and binds mixture together. Hold air when creamed with sugar and provide energy, Vitamins A and D.
Self raising Flour	Provides fibre (especially if wholemeal), makes mixtures rise. Thickens sauces, forms the bulk of bread, pastry and cake mixes. If wholemeal, provides colour and texture, gluten in flour produces a stretchy dough, provides carbohydrate, vitamin B, calcium and iron.
Brown sugar	Provides sweetness, provides colour and texture. Caramelises to produce a brown colour. Retains moisture, Helps to trap air in cake mixtures, Provides carbohydrate.
Chocolate /fruit	Provides sweetness, flavour, provides colour and texture.
Honey	A natural sweetener, honey extends a product's shelf life by keeping it moister longer, honey inhibits mould growth in baked products. Honey helps to bind the ingredients.

### Key words

Manufacture  
Quality  
Production  
Pathogens  
The 4 C's  
Chilling  
Cooking  
Cleaning  
Cross  
Contamination  
Texture  
Jobs  
Function  
Flavour  
Vitamins  
Moisture

### Curriculum Links

**Literacy:** specification writing, design communication, key words.  
**Numeracy:** Portion control, weighing, measuring, budgeting,  
**Careers/Cultural Capital:** Looking at local and cultural foods, hospitality and catering skills.

**BBC bitesize links**  
Automated production of bottles  
<https://www.bbc.co.uk/bitesize/clips/z2v2tfr>  
Chilling Broccoli  
<https://www.bbc.co.uk/bitesize/clips/z4pd7ty>



# Knowledge Organiser: KS3 Food Technology

## Designing and Evaluating



### Key skills

**Testing and Evaluating:** By comparing your finished product with the specification and also by asking for 3<sup>rd</sup> party feedback, you can identify strengths and weaknesses with the design and manufacture of the item. You can use this information to suggest ways it could be improved or developed in the future.



#### Appreciating cultural foods.

Some of the UKs favourite food comes from all over the world  
**Italy** – pizza , pasta and coffee. **China** – peking duck, prawn crackers and sweet and sour. **France** – macarons , cakes and baguttee. **India** - curry, nan bread and dal. **America** – burgers, fries and BBQs.  
 Imagine how boring our food choices would be without the influences we take from other cultures.



#### Cost analysis

The weekly food allowance for a single person in their latest report is £46.31. I try and budget for around £40 per week, out of a total household allowance of £60.  
 Portion control is important because it allows you to have a tight handle on how many calories you are consuming. This way, you eat what your body needs, instead of mindlessly overindulging.

**PRICE FLUCTUATIONS.**  
**SEASONALITY.**  
**CONTAINER SIZE.**  
**STORAGE TEMPERATURE.**  
**TRANSPORT COSTS.**  
**FUEL COSTS.**  
**LOCATION OF FOOD.**

**Practical** When cooking curry the spice content can be altered to taste as well as the thickness of sauce by adding cream.

### Key words

Cultures  
 Testing  
 Evaluating  
 Feedback  
 Taste  
 Texture  
 Cost  
 Developing  
 Reflecting  
 Food miles  
 Savoury  
 Sweet

### Curriculum Links

**Literacy:** specification writing, design communication, key words.  
**Numeracy:** Portion control, weighing, measuring, budgeting,  
**Careers/Cultural Capital:** Looking at local and cultural foods, hospitality and catering skills.  
**BBC bitesize links**  
 How noodles are made. <https://www.bbc.co.uk/bitesize/clips/zjbxpv4>  
 How prawn crackers are made. <https://www.bbc.co.uk/bitesize/clips/zmchfg8>

### Key knowledge

**Being able to describe the taste and texture of food is very important. Here are some examples.**  
**Bitter** - Having a strong, often unpleasant taste e.g. coffee, dark chocolate. **Sweet** - Usually an enjoyable taste of sugar, **Dry** - Not wet. **Moist** - A little wet. **Bland** - Boring, not interesting. **Spicy** - Having strong flavours from spice. **Savoury** - Not sweet e.g. bread. **Rich** - Rich food has a lot of butter, cream, or eggs in it. **Salty** - Tastes of salt. **Tasty** - Good flavour and is nice to eat. **Sugary** - Tastes of sugar. **Greasy** - Containing or covered with fat or oil. **Scrumptious** - delicious. **Sour** - Having a sharp taste e.g yogurt, lemon. **Piping hot** -Very hot. **Crunchy** - Firm and making a loud noise when it is eaten.

Often many of our foods have come from lots of different countries.  
**9 Tips to Reduce Your Food Miles**  
 Shop Local  
 Eat Seasonally  
 Think About the Transport Method  
 Use Farmer's Markets and Local Small Stores  
 Buying in bulk  
 Cook From Scratch  
 Eat Less Meat  
 Don't Drive to the Shops  
 Grow Your Own food

**FOOD MILES**  
 WHAT ARE THEY AND HOW DO THEY AFFECT OUR WORLD?

Time + distance FROM THE POINT & TIME WHERE FOOD IS *grown* TO WHERE IT IS *consumed*. THE SMALLER THE BETTER!

AMERICAN FOOD TRAVELS AN **average** OF 1,500 TO 2,500 MILES MILES FROM FARM TO TABLE

60-70% OF THE COST OF YOUR FOOD GOES TO *production inputs* (FERTILIZER, OIL/GAS, WATER, ETC.), TRANSPORTATION, AND STORAGE THAT USE *limited* RESOURCES, PETROCHEMICALS, & GENERATE GREENHOUSE GASSES

FRUITS AND VEGETABLES ALLOWED TO *grow to full ripeness* HAVE MORE NUTRITIONAL VALUE THAN CONVENTIONAL PRODUCE HARVESTED EARLY AND RIPENED WITH CHEMICAL GASSES IN TRANSPORT AND STORAGE

GROWING FOOD CLOSER TO *home* ALLOWS US TO HAVE FRESHER FOODS, AND MORE VARIETIES OF FOODS

FOOD MILES ARE AMONG THE FASTEST-GROWING SOURCES OF GREENHOUSE GAS EMISSIONS *worldwide*



# Starter for 5

Date	
Subject	
Question / Word	Answer / Definition

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