Knowledge Organisers
Year 7
Autumn 2021

Knowledge Organisers

Autumn Term Knowledge Organisers still need to be brought to school every day, alongside this one.

Some subjects like Design Technology organise the curriculum on a carousel, as such all the organisers for that subject are in the Autumn Term booklet.

Contents

An Introduction to Knowledge Organisers

What is a Knowledge Organiser?

A knowledge organiser is a document, usually one side of A4, occasionally two, that contains key facts and information that children need to have a basic knowledge and understanding of a topic, or in some cases a series of topics.

Students are expected to bring their Knowledge Organiser Booklet to school every day. Students will be issued with a new booklet each term. However, it is import they keep the booklets to help with revision for end of year exams.

What are the benefits of knowledge organisers?

The main benefit of knowledge organisers is that they give students and parents the 'bigger picture' of a topic or subject area. Some topics can be complicated, so having the essential knowledge, clear diagrams, explanations and key terms on one document can be really helpful.

Research shows that our brains remember things more efficiently when we know the 'bigger picture' and can see the way that nuggets of knowledge within that subject area link together. Making links, essentially, helps information move into our long-term memory.

How can the students use them?

As mentioned earlier, students are expected to bring their Knowledge Organiser Booklet to school everyday. In lessons they can be used in a number of ways, for example, to look up the meaning of key words, spell words correctly and do some additional work if they have finished classwork.

At home knowledge organisers can be used to support homework, independent work and revise for tests and exams. Two quick and easy ways to do this are:

1. Look, cover write, check – look at part of the knowledge organiser, cover it, write as much as you can remember and then check it
2. Word up – Pick out any words you don't understand. Use a dictionary or thesaurus to find the meaning. If they don't help as your teacher.

The more often you do this the better. YouTube has some clips on them; search 'Mr Garner look, cover, write, and check 'and 'Mr Garner word up'

How can parents use them?

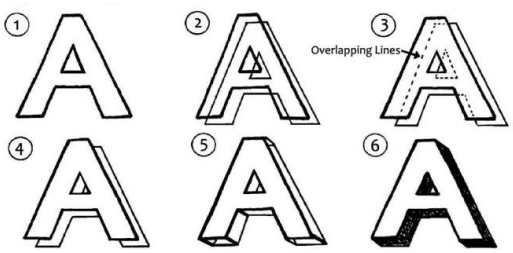
- Read through the organiser with your son/daughter – if you don't understand the content then ask them to explain it to you – 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words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

How the booklet is organised

The knowledge organisers are in alphabetical order by subject.

YEAR 7 ART TEXT AS ART

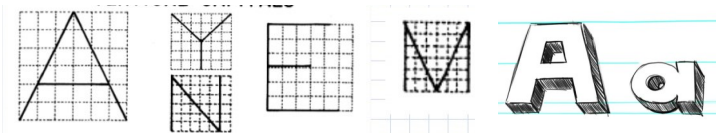
Knowledge Organiser - Term 1 & 2



Plan lettering using guidelines, this helps the letter form and shape.

Use feint pencil lines to plan work, so it can easily be rubbed out

Font styles can be developed from a basic lettering shape by adding additional shape and decoration



SKILLS

Can plan and draw letter forms

-showing proportion and scale of different style letter forms and sources

Take inspiration from artists

-Understand how & why they create their work

-Apply ideas and techniques of the artist

Create a painted outcome

-Using artist style, following plan

-Controlling application/ presentation

KEY WORDS

- Proportion
- Shape
- Feint
- Guide lines
- Serif
- Sans-serif
- Light
- Shade
- Tone
- Shape
- Outline
- 3D
- Font
- Style

SERIF— is an additional to the form of the letter at the end of the letter form

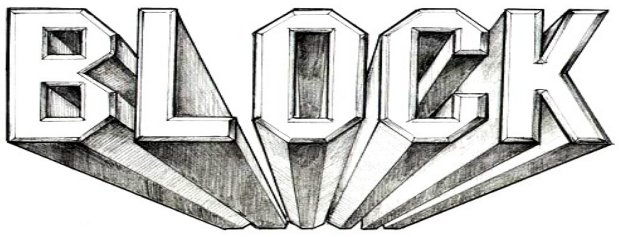
SANS- SERIF font—has no flourishes, plain letter forms, clean in style and line

DECORATIVE font—has a lot of embellishment and detail qualities

HAND DRAWN font—shows the artist input into it, with subtle imperfect qualities

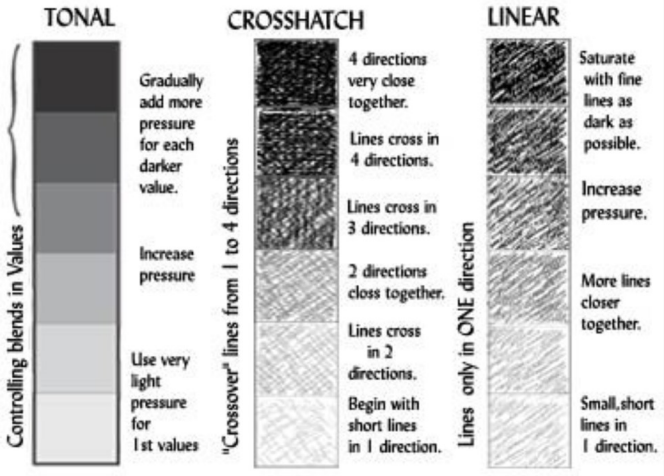
GRAFFITI is a hand drawn, exaggerated letter form, often made using spay paint

ILLUMINATED— is a font style where the initial letter form is illustrated and highly decorative



Artists known for using text in their work;

- Ed Ruscha
- Robert Indiana
- Barbara Kruger
- Ben Eine
- Bruce Nauman
- Jenny Holzer



Make sure you have a

PENCIL

RUBBER

SHARPENER

Build on your drawing skills & techniques with a

2B PENCIL

Cyber Security: *"All the things we do to protect our digital devices and ourselves."*

Cyber Security Measures

Anti-malware software checks for malware on your device.

Firewalls protect against unwanted data entering or leaving a computer on a network.

Passwords should be at least 8 characters in length. Don't use real words or your username.

They should include:

- Upper and lower case letters
- Numbers
- Other characters

Report spam messages. Don't open messages from untrusted sources.

Update apps and operating systems when prompted.

CAPTCHA, **2FA** and **biometrics** are ways to authenticate users.

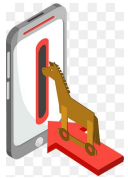
Social engineering

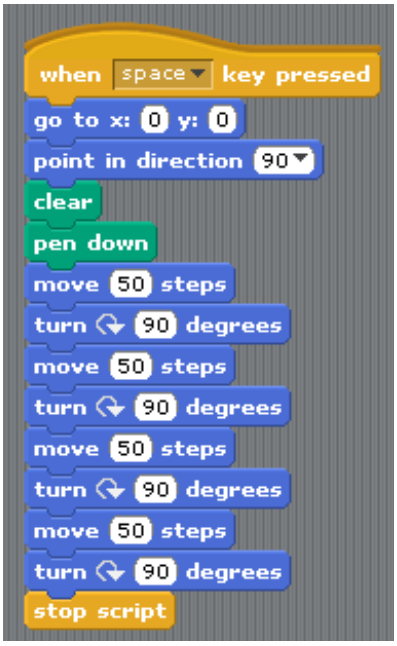
"The manipulation of people into giving up personal data, which can be used for malicious purposes."

Phishing takes the form of electronic messages that look like they come from a genuine company, asking users to confirm security details. Links to the user to hoax websites where the details are gathered.

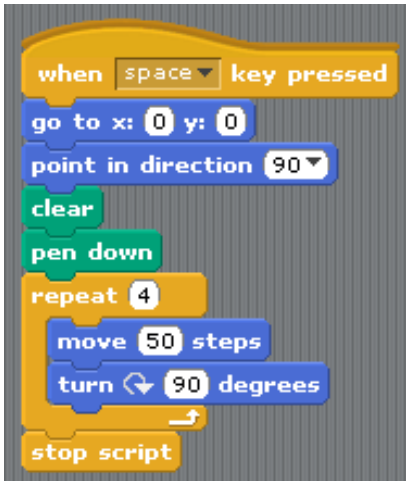
Blagging is a con where a criminal uses an invented scenario to extort money. Messages may come from a hacked account.

Shouldering is hackers observing users entering their login details, perhaps over the user's shoulder. Distraction techniques are used to mask this activity.

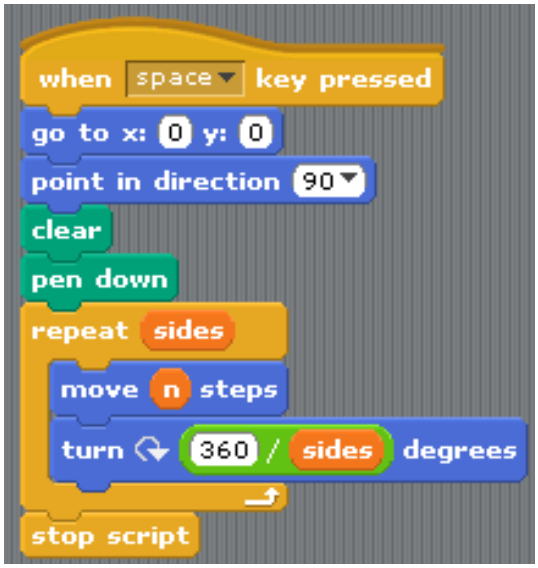
Malware	*A term to describe **mal**icious soft**ware**. This is computer programs that have a negative impact on computer users or their devices. There are three main types:*
Virus 	• Usually comes embedded in other files. When people open these files, the virus is activated. • Capable of copying itself and sending itself to other devices. • Can destroy data on your computer.
Worm 	• Needs no human interaction to be activated. • They travel around networks, looking for unprotected computers. • Stand alone program, not embedded with a host file.
Trojan horse 	• Malware that gives hackers access to a computer. • Often disguised as useful software. • Has to be installed by a human



This program draws a square. The **sequence** of instructions is important. If they are in a different order, the outcome of the program will be different.



This program does exactly the same thing. However, it uses a loop to repeat instructions, making it shorter and therefore easier to edit if necessary. This is known as **iteration**.

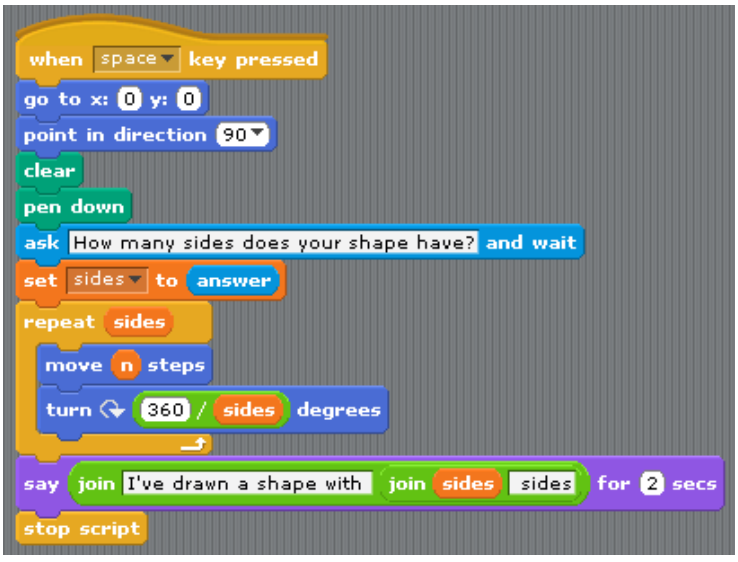


The program has been improved further here. It uses two **variables**, *sides* and *n*.

This makes the program more flexible, by being able to draw shapes of different number of sides.

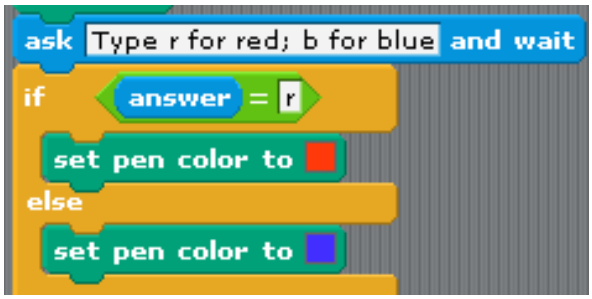
The number of degrees to rotate has been calculated by an **arithmetic operation**: 360 ÷ sides. We use '/' as the division operator (instead of ÷) in computing.

Computing: Programming with Scratch



This time the program asks the user how many sides the shape should be. This is known as **user input** and the answer is stored in the variable *sides*.

Once the shape has been drawn, the program **outputs** text to the screen. It joins some text with the value of the variable *sides*. This is known as **concatenation**.



Finally, the user is given a choice of colours. This part of the program uses a **Boolean expression** to compare the user input with 'r'.

If this is *true* (the users types 'r'), the pen colour is red.

If this is *false* (the user doesn't type 'r'), the pen will be blue.

If... else statements are known as **selection**.

DRAMA KNOWLEDGE ORGANISER: YEAR 7

CHARLIE AND THE CHOCOLATE FACTORY

- Students to perform in 'stereotype' linking to the main characters in the book – Charlie Bucket, Mike TV, Augustus Gloop, Violet Beauregarde and Veruca Salt.
- Using strong physicalisation to represent characters.
- Using and understanding scripts to perform in an effective way to fully embody the characters.
- Using role on the wall to fully create and develop a character.
- Developing the skill of Tableaux.

ROALD DAHL

- Students will different Roald Dahl stories, The BFG, The Twits, Georges Marvellous Medicines, Matilda and James and the Giant Peach.
- Using the skills of Physical Theatre, Hot Seating, Conscience Alley, Choral Speaking, Tableaux and Script.
- Understanding the themes and messages within the different stories.

HARRY POTTER

- Students to use physical theatre (performing using your body with gesture and movement).
- Looking at key characters from the book – Harry Potter, Ron Weasley, Hermione Granger, The Dursleys, Snape.
- Understanding different types of genre within theatre.
- Looking at stereotypical characters.
- Marking the moment – showing a significant moment within performance.
- Using exaggerated movement and gestures to show characters personalities and feelings.

PANTOMIME

- Inspired by Commedia Del Arte and clowning.
- Originated in Italy.
- Commedia means "the comedy"
- Very popular in Shakespearian time.
- Actors using no script – Improvisation – making up performance on the spot.
- Started by being performed on the street.
- Comedic in style – characters are very physical and over the top.
- Main Characters – Prince, Princess, Dame, Evil
- Choral elements are vital to this performance style – talking in unison.
- Singing, dancing and acting are involved.

SPY SCHOOL

- Introduction to practitioner Konstantin Stanislavski and his 'System.'
- Stanislavski – Father of Modern Theatre born in 1863 from Russia – created Method Acting.
- Teacher in Role – teacher performing in character to create sense of realism.
- Naturalism – performance that is like real life.
- Physical Apparatus – actors voice and body.
- Hot Seating – questioning actors in role.
- Magic If – how the actor would feel IF they were in the characters situation.
- Emotion Memory – Using a past memory to influence your acting.

KEY WORDS

- Tableaux
- Characterisation
- Body Language
- Slap stick
- Marking the moment
- Stereotypes
- Physical Theatre
- Comedy
- Chorus/Ensemble
- Naturalism
- Magic If
- Emotion Memory
- Teacher in role
- Cross-cutting
- Over exaggeration
- Setting
- Script/Plot

IMPORTANT PRACTITIONERS:

- Stanislavski
- Commedia Del Arte

EMPLOYABILITY:

Team work, Collaboration, Listening skills, Creative thinking, Leadership, Focus, Concentration, Positivity, Confidence, Self-belief, Self-discipline

Year 7 Cooking & Nutrition Knowledge Organiser – Developing Preparation Skills

Practical Skills

Skill Group	Techniques
Knife skills	Fruit and Vegetables—bridge hold, claw grip, peel, slice, dice and cut into even pieces.
Weigh and measure	Be able to demonstrate accurate measurement of liquids and solids.
Use of equipment	Use a blender, grater, vegetable peeler and potato masher.
Using the hob	• boiling and simmering • stir frying
Using the oven	• baking
Make sauces	Make a reduction sauce (pasta sauce)
Test for readiness	Use a knife/skewer, finger or poke test, bite or visual colour check to establish whether a recipe or ingredient is ready.
Judge and manipulate sensory properties	Demonstrate: • how to taste and season during cooking • presentation and food styling—use garnishes & decorative techniques.

Nutrition – The Eatwell Guide

Key Messages:

- Eat at least 5 portions of fruit and vegetables per day.
- Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates.
- Have some dairy or dairy alternatives.
- Eat some beans, eggs, fish, meat and other proteins.
- Choose unsaturated oils and spreads and eat in small amounts.
- Drink 6-8 cups/glasses of fluid per day.

Equipment


Masher


Kitchen Scales


Measuring Jug

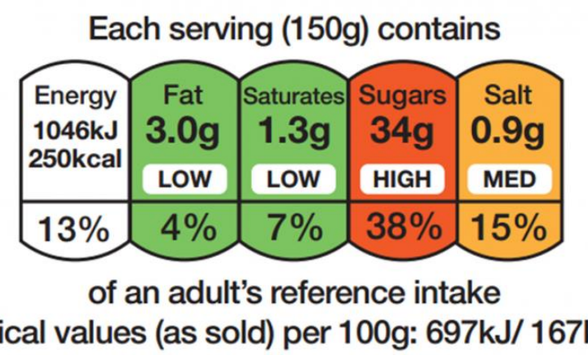

Fish Slice


Vegetable knife

Hygiene & Safety Rules
Tie up long hair
Wear an apron
Tuck tie in
Wash hands
No running
Use oven gloves when necessary
Clean practical equipment thoroughly

Key abbreviations: Weights and Measurements		
L	Litres	
g	Grams	
ml	millilitres	1000ml =1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml

Food Labelling



Year 7 Textiles Knowledge Organiser

Mobile Phone Stand

Key Skills

- Responding to a Design Brief
- Analysing existing products
- Identifying a target audience
- Designing & annotating to include a range of decorative and construction techniques
- Demonstrating ability to complete a range of decorative by techniques by hand:
  - Embroidery stitches (running & blanket)
  - Appliqué
  - Adding components e.g. sequins & buttons
- Using a sewing machine to complete a range of construction techniques:
  - Seams
  - Hems

Product features	
Creative design that is personalised	A theme that is identifiable and original
Hand embroidery	Consideration of a specified target market
Hand appliqué	A variety of textured fabrics
Components used as decoration	Machine sewing

Health & safety
Follow teacher instructions
Move slowly around the room do not run
Tie long hair back
Hold scissors or shears correctly when walking around the room.
Only one person operating a sewing machine or overlocker at one time
Never use a sewing machine or overlocker unless supervised by a teacher/ technician
Turn off all machines when not in use.
Report any injuries or breakages to the teacher immediately.

Key vocabulary	
Decorative	Being aesthetically pleasing to the eye.
Materials	What something is made from?
Components	The parts/materials/threads needed to make a product.
Function	What a product does, how it works and what it will be used for?
Aesthetics	How a product or design looks .
Target Audience	The person or people most likely to be interested in your design or product.
Embroidery	Even stitch widths and lengths completed by hand sewn stitches.
Overlocking	A machine that prevents the raw edges of fabric fraying.
Appliqué	A decorative technique whereby one material is sewn on top of another by hand.
Design Brief	An written outline which explains the aims and objectives and milestones of a design project.

Year 7 Product Design Knowledge Organiser

design technology

Catamaran Boat Design

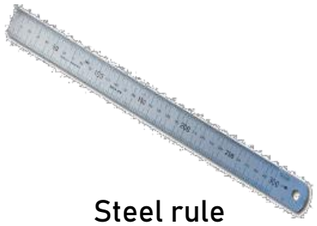
Key Skills

- Responding to a Design Brief
- Identifying a target audience and product function
- Applying Health & Safety procedures and PPE in the workshop environment
- Developing practical skills to create housing & dowel joints to join materials
- Identifying specific workshop tools and equipment
- Manufacturing a prototype model
- Finishing materials
- Presentation skills
- Evaluating the manufacturing process

Tools for working with Timber

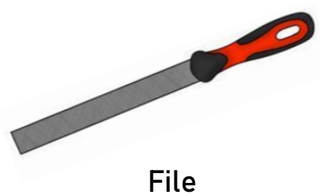

Try square


Bench vice


Steel rule


Marking gauge


Tenon saw


File


Belt & Disc Sander


Coping Saw


Bench hook


Pillar drill

Timber is a natural material with imperfections, knots and grain. Remember always sand with the grain	
Softwood 	From coniferous trees that are evergreen, which are faster to grow and are less expensive than hardwoods. Softwoods are a sustainable material as the resource can be regrown and not depleted. Softwoods are strong and easy to work with.

Health & safety in the workshop

Tie long hair back
Wear an apron
Wear safety goggles must be worn when using machinery
Move slowly around the workshop
Be aware of where the emergency stop buttons
Ensure the ventilation is switch on prior to using a machine
Only one person operating a machine at one time
Report any injuries or breakages to the teacher immediately

Key vocabulary

Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Function	What a product does, how it works and what it will be used for?
Target Audience	The person or people most likely to be interested in your design or product.
Materials	What something is made from.
Finishing	The process of applying a finish to preserve or protect a material & improve aesthetics.
Wood grain	Wood grain is the pattern made by the wood fibres in trees when it grows.
Modelling	To present ideas in 2D & 3D to the user (target audience) or client.
Prototype	A prototype is a model that is built to test to see if it is successful or whether it needs further modification or improvements.
PPE	Personal protective equipment are items such as goggles and aprons.

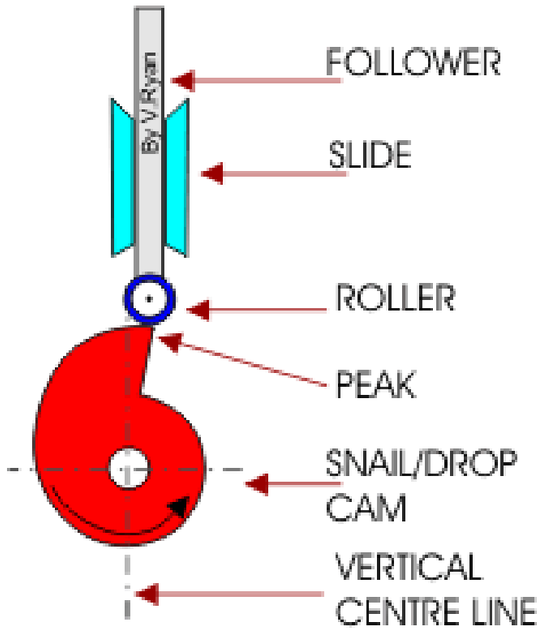
Year 7 Graphic Products Knowledge Organiser

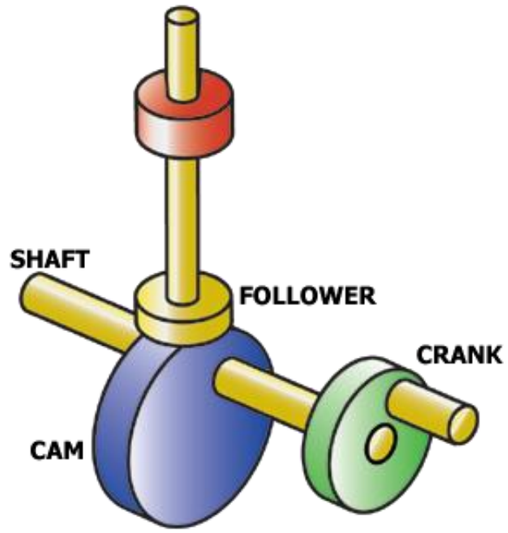
Automata Project

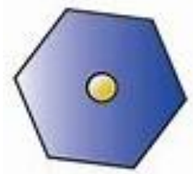
Key Skills

- Responding to a Design Brief
- Analysing & researching information
- Creating a suitable idea for a target audience
- Isometric drawing techniques
- Developing CAD drawing skills using:

  Serif Draw / Techsoft Design
- Rendering techniques
- Presentation skills
- Developing & testing
- Manufacturing with modelling materials (card & paper)
- Evaluating the design & making process





Cams	
 ROUND	 EGG-SHAPED
 ELLIPSE	 ECCENTRIC
 HEXAGON	 SNAIL

Key vocabulary	
Design Brief	An written outline which explains the aims and objectives and milestones of a design project.
Target Audience	The person or people most likely to be interested in your design or product.
Function	What a product does, how it works and what it will be used for?
Mechanism	A system of parts working together in a machine.
Motion	Something moving or being moved.
Cam	A rotating or sliding piece used to transfer rotary motion into linear motion or vice versa.
Modelling	To present ideas to the user (target audience) or client.
Evaluating	To judge or calculate the quality, importance, amount, or value of something
Linear Motion	Motion moving along a straight line.
Rotary Motion	Motion moving clockwise or anti-clockwise.

ENGLISH KNOWLEDGE ORGANISER: ENGLISH HEROES

YEAR: 7 UNIT: 1

LANGUAGE TERMINOLOGY FROM THIS UNIT

simile	Phrase with 'as' or 'like' to suggest similarity
metaphor	Suggesting something is something else
personification	Given an inanimate object human qualities like movement or emotion
alliteration	Repetition of consonant sounds
pathetic fallacy	Where the weather or setting reflects a mood

READING TERMINOLOGY AND SKILLS

explicit information	Information that is obvious or stated
implicit information	Knowledge that can be implied from explicit information
quotation	A direct use of language from a text. Use "__"
*embedding quotations	Blending quotations into your analytical sentence structure
*judicious quotations	Keeping quotations short and focused on the most significant words
*zooming-in (analysis)	Analysing the effects of specific language choices

SENTENCE FORMS

simple	A main or independent clause
compound	Two main clauses linked with a conjunction
complex	A sentence made of a main and a subordinate clause
declarative	A statement – most sentence types
imperative	A command beginning with a verb
interrogative	A question – direct or rhetorical. Use ?
exclamation	Emotion or humour. Use !

SENTENCE STARTERS – REMEMBER COMMAS!

connective	Begin with a linking word to add, develop, change or emphasise ideas
fronted adverbial	Begin a sentence with an – ly word or other adverb (word that describes a verb)
2 x adjective starter	Begin with two adjectives; use a conjunction between them like 'and'
preposition starter	State where the subject is to begin the sentence
*litotes	Begin with the negative: use 'Nothing…' or 'Never…' for example
*simile starter	Begin with 'Like….' to begin with a simile

ADVANCED PUNCTUATION

*semi-colon	**Used to replace 'and' in a compound sentence:** *Like an angel, the sun shone; there wasn't a cloud to be seen.*
*colon	**Means 'Here's my evidence' and follows a simple statement:** *Majestically, the princess created a stir: she was beautiful!*
*dash	**Single: Used to emphasise a description at the end of a sentence:** *Happily, the sun shone – its rays reached across the whole land.* **Double: Used to emphasise a description with further emphasis:** *The sun's rays – its burning, radiant rays – shone across the kingdom.*

FAMOUS WRITERS

Charles Dickens (1812-1870)	• Famous Victorian novelist who also championed the causes of the poor • Famous for the novels *A Christmas Carol, Oliver Twist* and *Great Expectations* amongst many others
William Wordsworth (1770-1850)	• Famous Romantic poet • Lived a lot of his life in the Lake District – you can visit his cottage • Was Poet Laureate • Famous for the poem *I Wandered Lonely as a Cloud*
Charlotte Brontë (1816-1855)	• Famous gothic romance novelist • Lived in Haworth, Yorkshire • Wrote under a male pen name, Currer Bell • Famous for the novel *Jane Eyre*

ENGLISH KNOWLEDGE ORGANISER: LANGUAGE FOR ANALYSIS: CLASS READER

YEAR: 7 UNIT: 2

KEY TERMINOLOGY FOR ANALYSING PROSE

prose	Continuous writing with no metre
mood	The feelings/emotions of a novel
tone	The attitudes of writing
context	The influence of the time a novel is read or written
dialogue	Conversation between at least two characters
characterisation	How a character is constructed
setting	Where the action takes place
first person narration	Perspective using 'I'; allows for emotional insight
third person narration	Perspective using 'He'/'She'/'They
*omniscient narration	Ability of a narrator to understand the emotions of all characters
*withholding	What the writer isn't allowing us to know
*foreshadowing	Events that suggest future ones

ADVERBS AND VERBS FOR ANALYSING EFFECTS

ADVERB	VERB
deliberately	implies
intentionally	infers
purposefully	suggests
arguably	creates
possibly	chooses/uses
cleverly	highlights
effectively	emphasises
powerfully	evokes
*emphatically	conveys
*dramatically	develops
*vividly	describes
*passionately	intensifies
*emotively	establishes
*subtly	builds-up
*skilfully	illustrates
*sensitively	explores

LANGUAGE TECHNIQUES YOU WILL ENCOUNTER

lexis	Impressive word for 'word'!
simile	Phrase with 'as' or 'like' to suggest similarity
metaphor	Suggesting something is something else
figurative language	Any non-literal language that is used for effect
alliteration	Repetition of consonant sounds
onomatopoeia	Words that are spoken as they sound
pathetic fallacy	Where the weather or setting reflects a mood
personification	Given an inanimate object human qualities like movement or emotion

CONNECTIVES TO ADD AND DEVELOP SPEEDY PARAGRAPHS

Furthermore,...	However,...
Moreover,...	Yet,...
Meanwhile,...	Conversely,...
In addition,...	On the other hand,...

COMMON THEMES IN CHILDREN'S FICTION

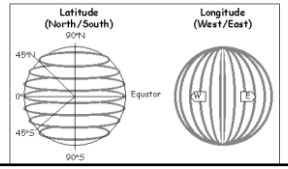
maturity	discrimination	parent-child relationships	romance	personal challenges

Year 7 Geography
Unit 1: A Sense of Place

Lesson 1-3
A **continent** is a continuous area of land. The **7 continents** of the world are North America, South America, Africa, Asia, Antarctica, Europe and Oceania (Australasia). An ocean is a very large expanse of water.

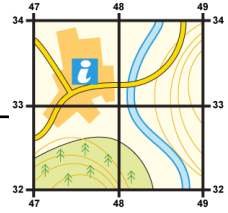
There are 5 main **oceans** around the world including the Indian, Pacific, Atlantic, Southern and the Arctic.

Lesson 4
Latitude varies from 0-90° north and south at the poles. They are **horizontal**.
Longitude varies from 0-180° East and West from Grenwich. They are **vertical**.

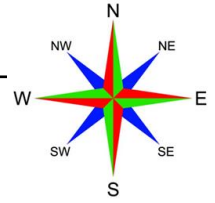


Lesson 5
Europe is a **continent** located in the **Northern Hemisphere** and mostly in the **Eastern Hemisphere**.

It is bordered by the **Arctic Ocean** to the north, the **Atlantic Ocean** to the west and the **Mediterranean Sea** to the south.



Lesson 8
The **main mountain ranges** in Great Britain are the Cambrian mountains, the Pennines and the Scottish Highlands (Grampian, Southern Uplands and North West Highlands).
The main **cities** in Great Britain are London, Birmingham, Manchester, Glasgow, Leeds, Liverpool and Newcastle (in population size order).



Lesson 9
Greater Manchester is a county.
It is made up of 10 boroughs.
You live in the borough of Trafford.

Lesson 10-11

To write a six figure grid reference you need to:
1. **Read along the corridor** until you get to the easting crossing through the **bottom-left-hand corner** of the square you want. **Write this number down.**
2. **Estimate** or measure how many **tenths** across your symbol lies. **Write this number after the first two digits.**
3. Read up the stairs until you get to the **northing** crossing through the **bottom-left-hand corner** of the square you want. **Write this number down.**
4. **Estimate** how many **tenths** your symbol is from the northing. **Write this number down.**

Lesson 12 - 14
Spot heights - Numbers that show the exact height of a place
Layer colouring - Using bands of different colours to show areas of different heights
Contours - Lines on a map which join up places which have the same height

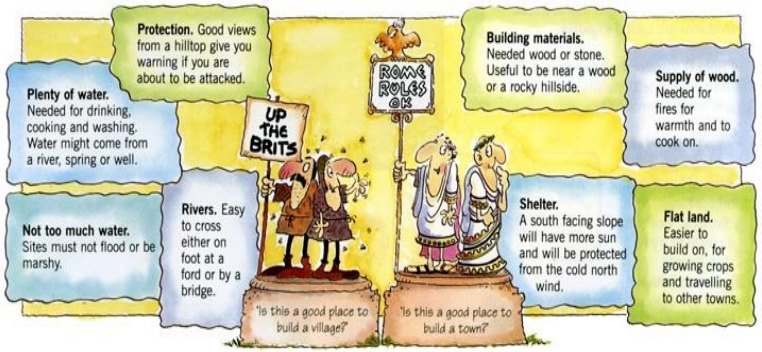
Lesson 15 -16
To measure distance you can use either string or a ruler depending on whether the route is straight or not. Compare the number of centimetres travelled to the scale.

Lesson 17-18
GIS - geographic information system. This is a system on a computer which allows you to present data in different ways.
Digimap for schools log in:
Username: WA157RH
Password: loaths36
http://digimapforschools.edina.ac.uk/

	Definition
Human geography	The study of the natural processes of the Earth, such as climate and plate tectonics.
Physical geography	The study of the impact and behaviour of people and how they relate to the physical world.
Environmental geography	The study of the interaction between humans and the natural environment.
Northing	A figure or line representing northward distance on a map. These are the horizontal lines on an OS map.
Easting	**A** figure or line representing eastward distance on a map. Theses are the vertical lines on an OS map.

Year 7 Geography
Unit 2: Settlement

Early settlers often looked for certain features in an area to make life easier:



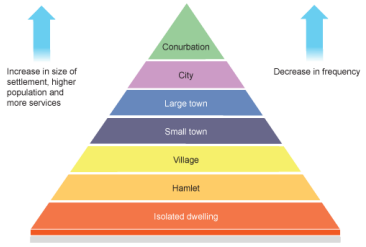
Settlement size:

Hamlet – a small group of homes

Village – larger than a hamlet. It contains more services, e.g. post office

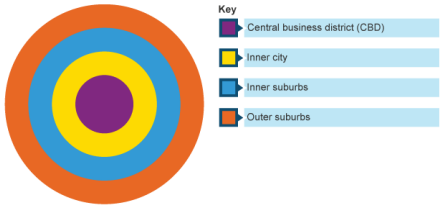
Town – this may contain tens of thousands of people. Usually has a range of functions, such as shopping centres and secondary schools

Cities – these have the widest variety of functions. In the past, cities were identified as having cathedrals.



Land use zones

Towns and cities are often complex but it may be possible to see how some land uses group together in **zones**. The **Burgess model** shows a simple land use pattern that can be identified in some towns and cities, particularly in countries like the UK.



CBD – site of shops, entertainment and offices

Inner city (old industry) – this is where old factories built during the industrial revolution are being developed into new offices or apartment blocks

Suburbs – Over time cities spread out and this is where the suburbs were created. Here houses are often semi-detached.

Outer suburbs/rural-urban fringe – this zone is on the edge of the city and contains large, detached homes.

Urban change and regeneration

As towns and cities have grown, some areas have become run down. This is particularly true of some old inner-city areas. Governments have tried to improve conditions in these areas.

Problems of old inner-city areas and the city centre include:

overcrowding
poor-quality housing
traffic congestion

Redesigning urban areas

Urban areas need to be:

- Clean
- Well lit
- Open with some greenery
- Close to shops and services
- Safe

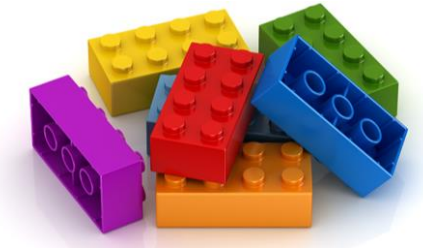
It is also important for urban areas to have furniture and other features which make it attractive, e.g. fountains.

KEYWORDS

	Definition
Site	This is the place where the settlement is located, eg on a hill or in a sheltered valley.
Situation	this describes where the settlement is in relation to other settlements and the features of the surrounding area, eg is the settlement surrounded by forest or is it next to a large city?
Urban sprawl	The unplanned growth of urban areas into the surrounding countryside.
Urban greening	The process of increasing and preserving open space such as public parks and gardens in urban areas.
Regeneration	The revival of old parts of the built-up area.

Wellington History
Year 7 HT 1 Knowledge Organiser

What can we learn about History from the Ancient World?
Did Roman rule improve life in Britain?
Who are the British?



- ✓ **What and why?** You will learn how to become an excellent Historians through studying the Ancient World and Roman Empire.
- ○ **Stop, think and link:** Back to Primary School!
- ❖ **Change and continuity assessment – Did Roman rule change England for the better?**

❖ **Want to explore further?**

Book: Truth or Busted: Fact or Fiction Behind the Romans
Book: Horrible Histories – The Rotten Romans
Website: https://www.bbc.com/education/topics/zwmpfg8

Key Questions

- What is History?
- What is chronology?
- How do you use source to learn about the past?
- Why did the Romans want an Empire and how did it grow?
- What are causes and consequences?
- Why was the Roman Army so important?
- How do you write a great History essay?
- What was life like for ordinary Romans?
- How was the Republic governed?
- How did the Romans change Britain?
- Why did the Roman Empire collapse?
- How has British History been shaped by migration?

Key events and Key People

753BC Rome is founded by Romulus
55BC Julius Caesar attempts an invasion of Britain
44BC Julius Caesar is murdered
27BC Augustus becomes the first Roman Emperor
43AD Romans invade Britain
60AD Boudicca leads rebellion against the Romans
80AD Coliseum is built in Rome
122AD Hadrian's Wall is built
312AD Christianity becomes the official religion of the Roman Empire
410AD The last Romans leave Britain

Keywords

Chronology
The study or order of time
Century
100 years
Source
Information left over from the past
Interpretation
How Historians explain the past
Purpose
The reason a source or interpretation is created
Cause
Reasons for something happening
Consequence
The results of an event happening
Empire
When a country control land outside of it's own borders
Citizen
Free adult male who could vote
Invasion
Sending an army to conquer another land
Republic
The early political system of the Rome where there was no King or Emperor
Dictator
A single ruler who has complete power
Plebeian
Poor ordinary Roman
Patrician
Rich Roman that sat in the Senate
Slave
A person with no rights or freedom
Legacy
What you leave behind for future generations

Wellington History

Year 7 HT 2 Knowledge Organiser

Farmers, warriors and the Church? Is this a fair view of Anglo-Saxon England?
Did the Normans bring a truckload of trouble to England?
What was important to Medieval people?

- ✓ **What and why?** You will learn how to become an excellent Historians through studying the Ancient World and Roman Empire.
- ○ **Stop, think and link:** Back to Primary School and your previous study of the Roman empire
- ❖ **Change and continuity assessment – Did the Normans bring a truckload of trouble to England?**

- **Want to explore further?**

Book: G.A Henty, Wulf the Saxon: A Story of the Norman Conquest
Book: Jim Eldridge, 1066 (I Was There)
Website: https://www.bbc.co.uk/bitesize/guides/zsjnb9q/revision/1

Key Questions

- Who were the Anglo-Saxons?
- How sis the Anglo-Saxons come to inhabit England?
- What was life like in Anglo-Saxon England?
- Why was there a struggle for power in 1066?
- What threats did Harold Godwinson face?
- Why did the Normans win the Battle of Hastings and the Anglo-Saxons lose?
- What problems did William the Conqueror face in establishing Norman control of England?
- How did William establish Feudal control over England?
- How did Norman England differ from Anglo-Saxon England?

Key events and Key People

350AD Anglo-Saxons raid English shores and are beaten back by the Romans
410AD The last Romans leave Britain
556AD Seven Kingdoms are created across Britain
865AD Great Viking Army from Denmark invades England
980AD New Vikings raids on England
1014AD King Canute of Denmark captures the English crown
1042AD Edward the Confessor becomes King
1066AD Edward the Confessor dies causing a power struggle in England. Harold Godwinson becomes King.
1066AD The Normans invade England

Keywords

Battle:
A fight between armed forces

Anglo–Saxon:
Germanic inhabitants of England from the 5th century to the Norman conquest

Cavalry:
Soldiers who fought on horseback

Feudal system:
The social system used in medieval Europe

Domesday book:
A survey of the land of England to determine peoples ownership and value of property

Christianity:
Following the teachings of Jesus Christ

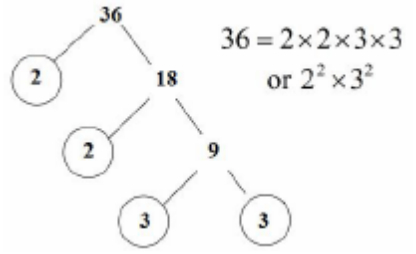
Tax:
Money paid to the government or monarch

Monarch:
King or queen of the country

Harry:
To carry out attacks on an enemy or their territory

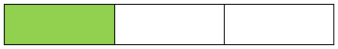
Witan:
The council that advised the king on matters of government

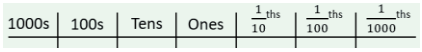
Key Stage 3 Topic 1: The Number System

Topic/Skill	Definition/Tips	Example	Non-example
1. Factors	An integer is a whole number.	2, -6 and 387 are integers.	$\frac{1}{3}$, -0.5 and 5.879 are not integers.
	A factor is a positive integer which divides perfectly into another number – leaves no remainder. It is often easiest to try finding factors in pairs.	The factors of 28 are: 1, 2, 4, 7, 14, 28	12, -2, and $\frac{1}{5}$ are not factors of 28.
2. Prime Numbers	A prime number is defined as having two distinct factors, *1* and itself.	2, 5, 17 and 73 are examples of prime numbers.	4, 24, 27, 0 and 1 are not prime numbers.
3. Prime Factors	A prime factor is a factor which is prime. Use a prime factor tree.	2 and 7 are prime factors of 56.	8 and 3 are not prime factors of 56.
	The product of prime factors shows which prime numbers multiply together to make the original number. Also known as 'prime factorisation'.		48 = 2^3 x 6 is not a complete product of prime factors.

4. Highest Common Factor	When two numbers share a factor, we call this a common factor.	4 is a common factor of 16 and 24.	3 is not a common factor of 16 and 24.
	The largest of these common factors is called the Highest Common Factor (HCF).	8 is the Highest Common Factor (HCF) of 16 and 24.	4 is not the Highest Common Factor (HCF) of 16 and 24.
5. Lowest Common Multiple	A multiple of a number is a number in that number's times table.	The first five multiples of 7 are: 7, 14, 21, 28, 35	1 and 41 are not multiples of 7.
	The Lowest Common Multiple (LCM) of two or more numbers is the smallest number that is a multiple of both numbers.	12 is the Lowest Common Multiple of 4 and 6.	24 is not the Lowest Common Multiple of 4 and 6.

Key Stage 3 Topic 2: Equivalence

Topic/Skill	Definition/Tips	Example	Non-example
1. Equivalent Fractions	A fraction is an equal part of a whole.	The following diagram represents one third: 	The following diagram does not represent one third: 
	Equivalent fractions are two fractions with the same value but with different numerators and denominators. You find equivalent fractions by multiplying/dividing the numerator and denominator by the same number.	$\frac{4}{12}=\frac{1}{3}$ $\frac{1}{5}=\frac{2}{10}$ $\frac{9}{15}=\frac{3}{5}$ $\frac{30}{12}=\frac{10\times\cancel{3}}{\cancel{3}\times 4}=\frac{10}{4}=\frac{\cancel{2}\times 5}{\cancel{2}\times 2}=\frac{5}{2}$	$\frac{5}{12}\neq\frac{7}{14}$ $\frac{4}{7}\neq\frac{8}{21}$
	A fraction is in its simplest form if there is no equivalent fraction with a lower numerator and denominator.	$\frac{1}{7},\frac{5}{9},\frac{24}{37}$ are all in their simplest form.	$\frac{5}{10},\frac{12}{16},\frac{3}{51}$ are not in their simplest form.
	An improper fraction is defined as a fraction where the numerator is greater than the denominator.	$\frac{10}{7},\frac{50}{9},\frac{240}{37}$ are all improper fractions.	$\frac{3}{4},\frac{9}{9},6\frac{1}{2}$ are not improper fractions.
	A mixed number is defined as an integer and a proper fraction.	$5\frac{1}{3},1\frac{3}{7},2\frac{10}{19}$ are all mixed numbers.	$\frac{3}{4},\frac{10}{9},6\frac{3}{2}$ are not mixed numbers.

2. Comparing Fractions	An <u>inequality</u> compares the size of two quantities that aren't equal.	$<$ and $>$ are inequalities. We always read from left to right. $3 < 12$ means 3 is less than 12. $19.5 > 10$ means 19.5 is greater than 10.	$5 = 5,\ 40 < 30,$ $7 > 21$ are all incorrect.
	To compare fractions, we must either have a common numerator or a common denominator.	$\frac{5}{9} > \frac{2}{9}$ $\quad \frac{4}{13} < \frac{7}{13}$ $\frac{1}{5} > \frac{1}{6}$ $\quad \frac{5}{12} < \frac{5}{8}$	$\frac{8}{13} \ngtr \frac{7}{8}$
3. Place Value	Values in different positions within a number indicate their <u>place value</u>.		
	Fraction to decimal conversions should either be known or calculated.	$0.24 = \frac{24}{100} = \frac{6}{25}$	$0.5 \neq \frac{1}{5}$

Key Stage 3 Topic 3: Addition and Subtraction

Topic/Skill	Definition/Tips	Example	Non-example
1. Integers and Laws of Arithmetic	The Associative law is when we add together a pair of numbers within a larger calculation. The associative law works for addition but not subtraction.	$4 + 8 + 2 + 6 = 4 + 10 + 6$	
	The Commutative law allows us to change the order of numbers to simplify a calculation. The commutative law works for addition but not subtraction.	$4 + 8 + 2 + 6 = 4 + 6 + 8 + 2$	
	We can disassociate numbers into separate components to simplify calculations. Disassociation can help with difficult subtractions.	$97 + 88 = 97 + 3 + 85$ $64 - 48 = 64 - 4 - 44$	
2. Negatives	Minus – name of the symbol Subtract – name of the operation Negative – name of the number below zero		
	Adding a negative number is equivalent to subtracting.	$10 + -7 = 10 - 7$	$9 + -1 \neq 9 + 1$
	Subtracting a negative is equivalent to adding.	$12 - -8 = 12 + 8$	$4 - -9 \neq 4 - 9$

3. Algebra	× means multiply x is how we write the letter of the alphabet $3y$ means the value of the letter multiplied by 3.	3×5 $7x$	$10\ x\ 5$ $x13$
	When simplifying expressions, we <u>collect like terms</u>. We can write a subtraction as addition of a negative. This allows us to commute.	$4x + 2 + 6x - 3 = 10x - 1$ $p^2 - 5p + 3p^2 - p = 4p^2 - 6p$	$3x + 5y \neq 8xy$ $q^2 + 3q \neq 5q$
4. Decimals	When adding/subtracting decimals, it is important to consider the <u>place value.</u>	$3.17 + 4.1 = 7.27$	$2.52 + 1.4 \neq 3.56$
5. Fractions	When we add fractions, we must have a common denominator.	$\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$	$\frac{6}{13} + \frac{2}{13} \neq \frac{8}{26}$
	If the fractions do not have a common denominator, we must adjust them.	$\frac{8}{5} + \frac{3}{4} = \frac{32}{20} + \frac{15}{20} = \frac{47}{20}$	$\frac{1}{5} + \frac{7}{8} \neq \frac{8}{13}$
	When adding/subtracting mixed numbers, we must use disassociation.	$1\frac{3}{5} + 2\frac{1}{5} = 3\frac{4}{5}$ $3\frac{1}{6} - 1\frac{5}{6} = 2 - \frac{4}{6} = 1\frac{2}{6} = 1\frac{1}{3}$	$3\frac{2}{9} + 1\frac{4}{9} \neq 4\frac{4}{9}$ $4\frac{1}{8} - 2\frac{5}{8} \neq -2\frac{4}{8}$

Classroom Communication Phrases

Avez-vous ...?	Do you have ? (formal)
As-tu… ?	Do you have ? (informal)
Je peux quitter/enlever ma veste ?	Can I take off my blazer ?
Je peux boire ?	Can I have a drink ?
Je peux emprunter un stylo ?	Can I borrow a pen ?
J'ai oublié…	I have forgotten…
Je n'ai pas de …	I do not have…
Ça s'écrit comment ?	How do you spell that?
Je ne sais pas	I don't know
Je ne comprends pas	I don't understand
Répétez, s'il vous plaît	Repeat, please
Comment dire…en anglais/ français ?	How do you say.. in English/French ?
Désolé d'être en retard je regrette d'arriver en retard	I am sorry I am late

Opinions

J'aime	I like	ennuyeux	boring
Je n'aime pas	I don't like	nul	rubbish
Tu aimes…?	Do you like	essential	essential
Il aime	He likes	important	important
Elle aime	She likes		
Oui, j'aime ça	Yes, I like that		
Non, je n'aime pas ça	No, I don't like that		
Je suis d'accord	I agree		
Je ne suis pas d'accord	I don't agree		
Ce n'est pas bien	It is not good		
C'est	It is		
génial	great		
cool	cool		
bien	good		

High Frequency words

et	and
aussi	also
mais	but
très	very
assez	quite
toujours	always
Qu'est-ce que..?	What?
Qui..?	Who?

Key verb

Avoir = to have

J'ai	I have
Tu as	you have
Il a	he has
Elle a	she has
Nous avons	we have
Vous avez	you have
Ils/ elles ont	they have

Key verb

Être = to be

Je suis	I am
Tu es	you are
Il est	he is
Elle est	she is
Nous sommes	we are
Vous êtes	you are
Ils/ elles sont	they are

Physical Descriptions

Je m'appelle	I am called
J'ai onze/ douze ans	I am 11/ 12 years old
Il/ elle s'appelle	He/ she is called
beau/belle	good-looking
branché (e)	trendy
charmant (e)	charming
curieux/ curieuse	curious
de taille moyenne	average height
drôle	funny
généreux/ généreuse	generous
gentil (le)	nice
grand (e)	tall
impatient (e)	impatient
intelligent (e)	intelligent
modeste	modest
petit (e)	small
poli (e)	polite
mon ami (e) a	my friend has

J'ai les yeux blues/ verts/ gris/ marron

I have blue/ green/ grey/ brown eyes

J'ai les cheveux longs/ mi-longs/ frisés/ raides/ blonds/ bruns/ noirs/ roux

I have long/ medium/curly/straight/blond/brown/black/red hair

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I have long/ medium/curly/straight/blond/brown/black/red hair

Year 7 German Knowledge Organiser: HT1 All about me

Classroom Communication Phrases

Haben Sie ...?	Do you have ? (formal)
Hast du… ?	Do you have ? (informal)
Darf ich meine Jacke ausziehen ?	Can I take off my blazer ?
Darf ich Wasser trinken ?	Can I have a drink ?
Darf ich einen Kuli ausleihen ?	Can I borrow a pen ?
Ich habe mein (e) (en) …….vergessen	I have forgotten…
Ich habe kein (e) (en) …	I do not have…
Wie schreibt man das ?	How do you spell that?
Ich weiß es nicht	I don't know
Ich verstehe nicht	I don't understand
Wie bitte?	Repeat, please ?
Wie heißt ….. auf Englisch/Deutsch?	How do you say… in English/German ?
Es tut mir leid ! Ich bin spät !	I am sorry! I am late

Key verb

HABEN = to have

Ich habe	I have
Du hast	you have
Er hat	he has
Sie hat	she has

Key verb

SEIN = to be

Ich bin	I am
Du bist	you are
Er ist	he is
Sie ist	she is

Key verb

WOHNEN = to live

Ich wohne	I live
Du wohnst	you live
Er wohnt	he lives
Sie wohnt	she lives
Wo wohnst du ?	
Where do you live ?	

Pronunciation Tips

Letters	Sound
ei	eye
ie	ee
v	f
w	v

Numbers 1-31

1 eins	14 vierzehn	27 siebenundzwanzig
2 zwei	15 f**ü**nfzehn	28 achtundzwanzig
3 drei	16 sec**hz**ehn	29 neunundzwanzig
4 vier	17 sie**bz**ehn	30 drei**ß**ig
5 fünf	18 achtzehn	31 einunddrei**ß**ig
6 sechs	19 neunzehn	
7 sieben	20 zwanzig	
8 acht	21 einundzwanzig	
9 neun	22 zweiundzwanzig	
10 zehn	23 dreiundzwanzig	
11 elf	24 vierundzwanzig	
12 zwölf	25 f**ü**nfundzwanzig	
13 dreizehn	26 sechsundzwanzig	

Meeting and greeting

Wie heißt du?	*What's your name?*
Ich heiße …. Und du?	*My name's …. What about you?*
Hallo!	*Hello !*
Guten Tag!	*Good day !*
Tschüs!	*Bye!*
Auf Wiedersehen!	*Goodbye!*
Wie geht's?	*How are you?*
Gut, danke. Und dir?	*Fine, thanks. And you?*
Nicht schlecht, danke.	*Not bad, thanks.*
Nicht so gut.	*Not so good.*

Länder	***Countries***
Wo wohnst du?	*Where do you live?*
Ich wohne in …	*I live in …*
Ich komme aus…	*I come from…*
England.	*England.*
Schottland.	*Scotland.*
Wales.	*Wales.*
Irland.	*Ireland.*
Nordirland.	*Northern Ireland.*
Deutschland.	*Germany.*
Frankreich.	*France.*
Österreich.	*Austria.*
der Schweiz.	*Switzerland.*

Talking about yourself

Wie alt bist du?	*How old are you?*
Ich bin … Jahre alt.	*I'm … (years old).*
Ich habe am … Juni Geburtstag.	*My birthday's on the … of June.*

Hast du Geschwister?

Do you have any brothers or sisters?

Ich bin Einzelkind.	I'm an only child.
Ich habe	I have
einen Bruder	a brother
eine Schwester	a sister
Ich habe …	I have…
keine Geschwister.	**no** brothers or sisters.
einen Bruder	a brother
eine Schwester	a sister
Eltern (pl)	parents
eine Familie	a family
Geschwister (pl)	siblings
Großeltern (pl)	a grandparents
eine Großmutter	a grandmother
einen Großvater	a grandfather
einen Halbbruder	a half-brother
eine Halbschwester	a half-sister
eine Mutter	a mother
eine Oma	a grandmother
einen Opa	a grandfather
einen Stiefbruder	a stepbrother
eine Stiefmutter	a stepmother
eine Stiefschwester	a stepsister
einen Stiefvater	a stepfather
einen Vater	a father
Zwillinge (pl)	twins
einen Zwillingsbruder	a twin brother
eine Zwillingsschwester	a twin sister
ein Familienmodell	a family model
eine Patchworkfamilie	a blended family
eine Regenbogenfamilie	a rainbow family
typisch	typical
zusammen leben	to live together

Year 7 German Knowledge Organiser: HT2 More about me

Alphabet

a ah	**h** ha	**o** oh	**v** fow
b bay	**i** eee	**p** pay	**w** vey
c tsay	**j** yacht	**q** coo	**x** ix
d day	**k** car	**r** air	**y** oopsilon
e ay	**l** ell	**s** ess	**z** tsett
f eff	**m** em	**t** tay	
g geh	**n** en	**u** ooh	

Wie ist dein bester Freund/ deine beste Freundin?

What's your best friend like?

Er/Sie ist…	***He/She is...***
dynamisch	*energetic*
egoistisch	*selfish*
faul	*lazy*
frech	*cheeky*
freundlich	*friendly*
intelligent	*intelligent*
kreativ	*creative*
langweilig	*boring*
launisch	*moody*
lustig	*funny*
optimistisch	*optimistic*
respektvoll	*respectful*
schüchtern	*shy*
treu	*loyal*
negativ	*negative*
positiv	*positive*
sehr	*very*
ziemlich	*quite, fairly*
gar nicht	*not at all*
auch	*also*

Opinions

Ich mag …	I like…
Magst du…. + noun ?	Do you like.. ?

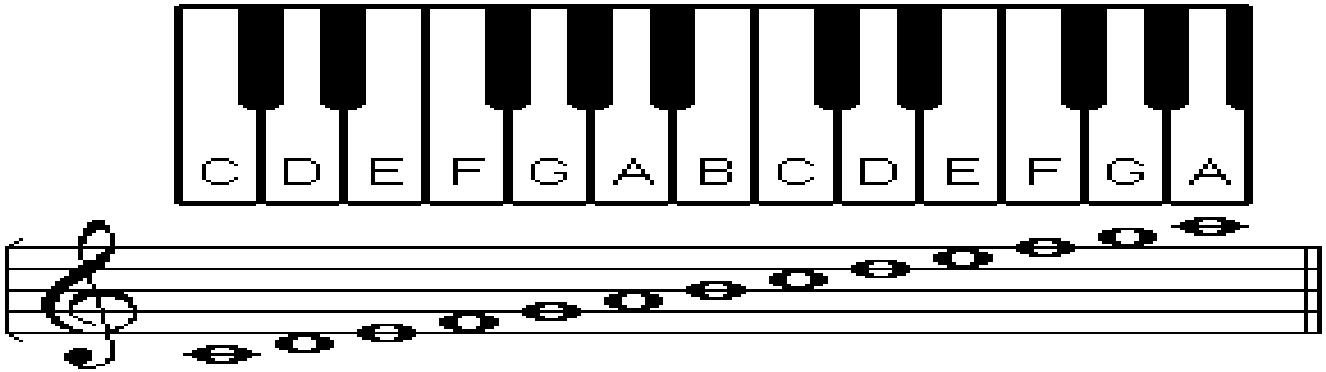
Das Alphabet	***The alphabet***
Wie schreibt man „Apfel"?	*How do you spell 'apple'?*
„Apfel" schreibt man A-P-F-E-L.	*You spell 'apple' A-P-P-L-E.*

Die Monate	***The months***
Januar	*January*
Februar	*February*
März	*March*
April	*April*
Mai	*May*
Juni	*June*
Juli	*July*
August	*August*
September	*September*
Oktober	*October*
November	*November*
Dezember	*December*

How do I learn my German words ?

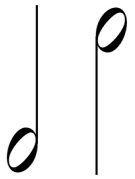
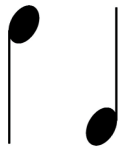
- **'Look Cover Write Check'**
- **Recording myself on my phone**
- **Have someone test me**
- **Making flashcards**
- **Practising 'little and often'**

Music Year 7 Knowledge Organiser: Classical Traditions (Autumn Term)



Instruments (Timbre)				
String	**Wind**	**Brass**	**Percussion**	**Keyboard**
Violin	Piccolo	Trumpet	Timpani	Keyboard
Viola	Flute	French Horn	Tambourine	Piano
Cello	Oboe	Trombone	Triangle	Harpsichord
Double Bass	Cor Anglais	Tuba	Castanets	Organ
Harp	Clarinet		Side Drum	Synthesiser
	Bassoon		Xylophone	

Baroque (1600-1750)	Classical (1750-1820)	Romantic (1820-1899)
Bach Handel	**Mozart Haydn Beethoven**	**Tchaikovsky Chopin Liszt**
• Harpsichord • Small ensembles • Mainly string • Vocal Music • Continuo bass part (string & keyboard) • Mainly polyphonic • Limited dynamics	• Piano • Mainly string orchestra with some wind and brass • More use of dynamics • 4 bar phrases	• Larger orchestra • Lots of wind and brass • More extreme dynamics • Chromatic chords • Use of Rubato (playing freely)

LOOKS LIKE	SOUNDS LIKE	DURA-TION	NAME
	LI-I-I-ME 	4	SEMIBREVE
	GRA-PE 	2	MINIM
	PEAR 	1	CROTCHET
	APP-LE 	1/2 EACH	QUAVER (USUALLY GROUPED IN 2S)

Unit 1: Healthy Relationships
Year 7

Skills

- Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
- Can express and explain opinions through discussion and written work.
- Develop empathy with others and an understanding of how to safely and respectfully interact.

Knowledge

1. That there are different types of committed, stable relationships and how these relationships might contribute to human happiness.
2. What marriage is, including its legal status and why marriage is an important relationship choice for many couples and why it must be freely entered into but also the characteristics and legal status of other types of long-term relationships.
3. The roles and responsibilities of parents with respect to raising children, including the characteristics of successful parenting. This element also includes unsafe practises within the family e.g. female genital mutilation.
4. How to determine whether relationships with adults and peers are safe or unsafe.
5. How stereotypes, in particular stereotypes based on sex, gender, race, religion, sexual orientation or disability, can cause damage.
6. Different types of bullying (including cyber-bullying), the impact of bullying, responsibilities of bystanders to report bullying and where to get help.
7. Safe online behaviours regarding data, privacy and interactions with friends online.

pshe
Personal Social Health Education

Unit 4: Citizenship
Year 7

Skills

- Is reflective about the knowledge and skills needed for setting realistic targets and personal goals.
- Engage with and reflect on different ideas, opinions and beliefs to help develop personal opinion.
- Can express and explain opinions through discussion and written assessments.

Knowledge

- Understand what it means to be a citizen
- Understand what actions you can take to become an active citizen
- Distinguish between rights and responsibilities
- Gain an understanding of human rights
- Understand actions that individuals, groups and organisations can take to influence decisions affecting communities and the environment
- Explain what is a democracy
- Understand how the government and parliament is structured
- Describe the role of an MP
- Understand that I can make a change to local issues by taking action

pshe

Personal Social Health Education

Y7: REP

68% of the worlds population have stated that they have some belief in God or would claim to have some element of religious faith. Religion remains an important feature of our world and has been part of our lives for thousands of years. However, are we now at a crossroads where religions are often misunderstood, are misused and some would argue in decline. You are going to consider a variety of different religious, ethical and philosophical ideas to consider why religion is still important and the role it continues to play in the world today in shaping our views.

Knowledge Organiser

Religion

Lesson 1

What has religion ever done for us?

Can you give 2 examples why religion might be seen to be a positive thing & explain why?

Can you give 2 examples why religion might be seen to be a negative thing & explain why?

Lesson 4

The six main world religions: how much do you know?

What are the 6 main world religions and can you give facts and beliefs about each of them?

Lesson 7

Project: which religion will you study?

Can you give me facts & information about your religions beliefs about life after death, God(s), rules & laws?

Lesson 10

What makes you, you?

Can you explain and discuss different beliefs about what makes us, who we are? This Include religious views on the soul and self.

Ethics

Lesson 2

The Ten Commandments: Do we need laws and rules?

Can you explain why these rules may be seen to be important or unimportant in society today?

Lesson 5

Stereotyping and Prejudice: Are there enough good Samaritans?

Can you define the terms prejudice & discrimination and identify examples of this and what we can do to prevent them from happening? Can you link this to and describe the story of the Good Samaritan?

Lesson 8

Should we care about the world?

Can you give examples of how we are harming our planet and what religious groups believe we should do about this?

Lesson 11

The Trolley Problem: Can we make correct moral decisions?

What does it mean to be moral and make ethical decision? Can you make good ethical decisions?

Philosophy

Lesson 3

Does God exist?

Can you define the terms atheist, agnostic & theist?

Can you give arguments to suggest God does exist and arguments to suggest that God does not exist? Evidence is key here.

Lesson 6

How was the world made?

Can you give arguments to suggest that God is responsible for creating the world?

Can you give arguments to suggest that creation has nothing to do with God or a divine being?

Lesson 9

Life after Death – unrealistic?

Can you give the views of different religions on what might happen when we die?

Do you think there is any real proof of life after death?

Lesson 12

Do Atheists have a point?

Can you understand why some may choose to be a theist and an atheist?

Are atheists views too strong?

**Pupils will be assessed in lessons and complete an extended project on a religion of their choice. They will complete a formal examination at the end of the year.*

Year 7 Knowledge Organiser : Bridging the Gap

Science Equipment

Laboratory Rules

Explosive

Flammable

Corrosive

Hazardous to the environment

1. No pupil may enter a Science room without permission.
2. NOTHING must be taken out of the laboratory without permission.
3. No equipment, apparatus or science materials may be touched except on the instruction of a teacher. Follow instructions precisely; check bottle labels carefully and keep tops on bottles except when pouring liquids from them.
4. When using naked flames (e.g. bunsen burners, spirit burners or candles), make sure that ties, hair, loose clothing etc. is tied back or tucked away. Care must be taken with hot items such at test tubes and tripods.
5. NEVER run in the laboratory.
6. DO NOT eat or drink in the laboratory.
7. DO NOT play with taps or switches.
8. Make sure you are fully aware of the health and safety issues for the experiment you are carrying out.
9. Wear eye protection when told to do so. Keep it on from the very start until all practical work is finished and cleared away. Only remove eye protection when told to do so.
10. Always stand up when working with hazardous substances or when heating things so you can quickly move out of the way if you need to.
11. Accidents, breakages or spills MUST be reported to the teacher at once. The teacher will then deal with them.
12. Keep your bench and floor area clear, with bags and coats well out of the way. Stools must be kept under benches.
13. If you are burnt or a chemical splashes on your skin, wash the affected part at once with lots of water. Tell your teacher.
14. Hands must be washed after working with chemicals or biological materials.
15. After an experiment, apparatus must be cleaned, put away and the bench left clean and dry. Waste materials should be disposed of as the teacher instructs.

Caution – harmful or irritant

Toxic

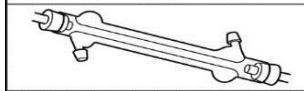
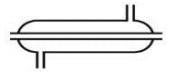
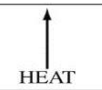
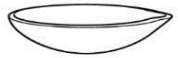
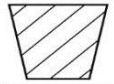
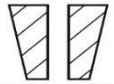
Radioactive material

Health Hazard

Gas under Pressure

Oxidising

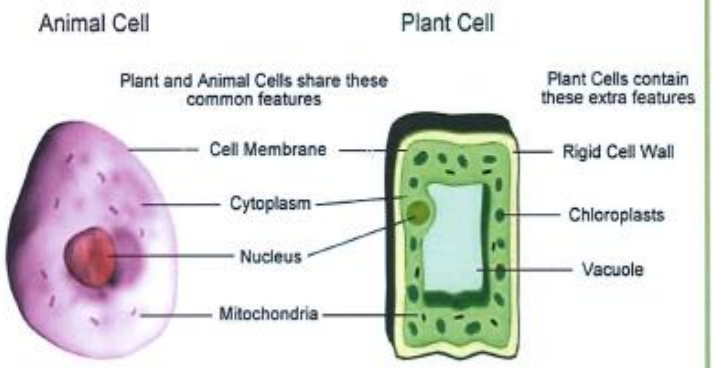
Risk of Electric shock

Apparatus	Name	Diagram	What it is used for
	test tube		storing or mixing solids and liquids
	boiling tube		heating solids and liquids
	beaker		holding liquids or solids
	conical flask		holding and mixing liquids
	round-bottom flask		heating liquids
	measuring cylinder		measuring volumes of liquids
	Liebig condenser		cooling a vapour and condensing it into a liquid
	tripod		heating a beaker, flask or crucible over a Bunsen burner
	gauze		supporting a beaker or flask and spreading the heat from the flame
	Bunsen burner		heating things
	evaporating basin		evaporating the water from a solution
	filter funnel (with paper)		separating an insoluble solid from a liquid
	rubber bung		keeping things in a tube or flask
	rubber bung with a hole		the hole is so that a tube or thermometer can be put into the liquid without any gases escaping

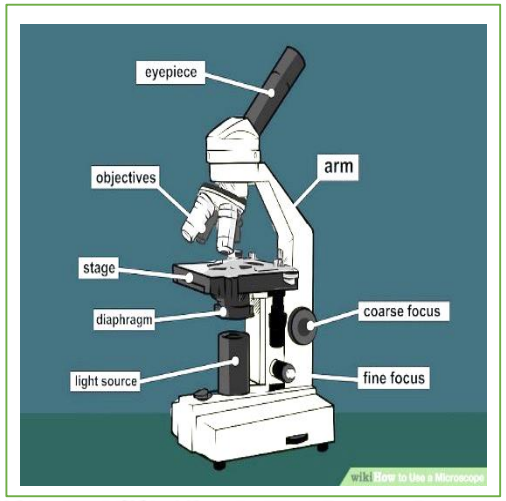
Year 7 Knowledge Organiser : It's all about You : From Cells to Organisms

Cells

Cells are the building blocks of all living organisms



Part of the Cell	What Does it Do
Nucleus	Controls the activities of the cell/ Stores DNA
Cell Membrane	Controls movement into and out of the cell
Mitochondria	Where respiration takes place
Cytoplasm	jelly like substance where chemical reactions happen
Ribosome	makes proteins for the cell
Chloroplast	absorbs light energy for photosynthesis
Vacuole	filled with a solution called cell sap



Key Terms	Function
Stage	Area where specimen is placed
Clamps	Hold the specimen still whilst it is being viewed
Light source	Illuminates the specimen
Objective lens	Magnifies the image of the specimen
Eyepiece lens	Magnifies the image of the specimen
Course/fine focus	Used to focus the specimen so it can be seen clearly
Revolving nosepiece	Holds 2 or more objective lenses

Magnification

We can use the following equation to calculate the magnification of an object viewed through a microscope:

$$magnification = \frac{image\ size}{actual\ size}$$

Using a microscope

To view an object down the microscope we can use the following steps:

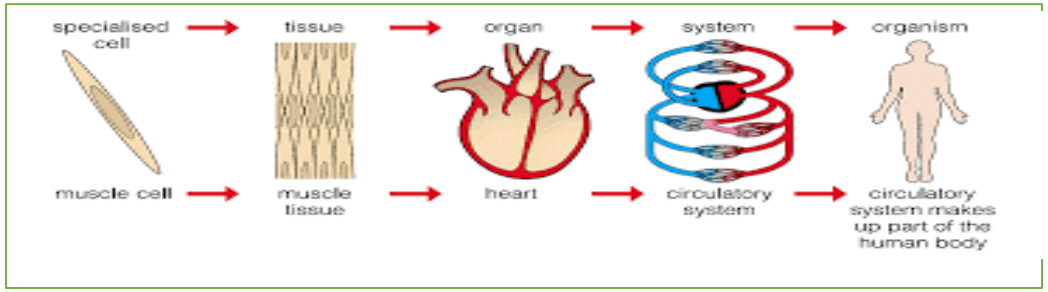
1. Plug in the microscope and turn on the power
2. Rotate the objectives and select the lowest power (shortest) one
3. Place the specimen to be viewed on the stage and clamp in place
4. Adjust the course focus until the specimen comes into view
5. Adjust the fine focus until the specimen becomes clear
6. To view the specimen in more detail repeat the process using a higher power objective

Specialised cells

Specialised cells are found in multicellular organisms. Each specialised cell has a particular function within the organism.

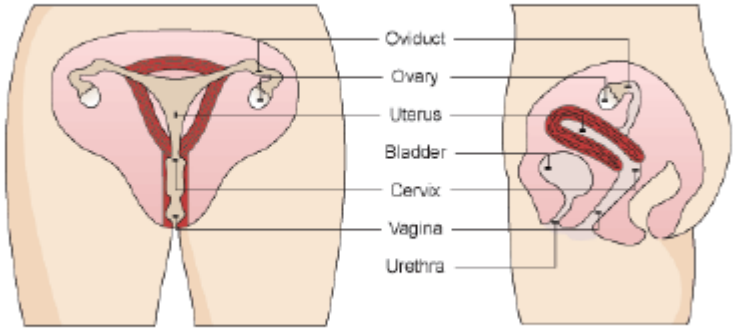
	Type of cell	Function	Special features
Animal cells	Red blood cells	To carry oxygen	• Large surface area, for oxygen to pass through • Contains haemoglobin, which joins with oxygen • Contains no nucleus
Animal cells	Nerve cells	To carry nerve impulses to different parts of the body	• Long • Connections at each end • Can carry electrical signals
Animal cells	Male reproductive cell (sperm cell)	To reach female cell, and join with it	• Long tail for swimming • Head for getting into the female cell
Plant cells	Root hair cell	To absorb water and minerals	• Large surface area
Plant cells	Leaf cell	To absorb sunlight for photosynthesis	• Large surface area • Lots of chloroplasts

organelles → cells → tissues → organs → organ systems → organisms

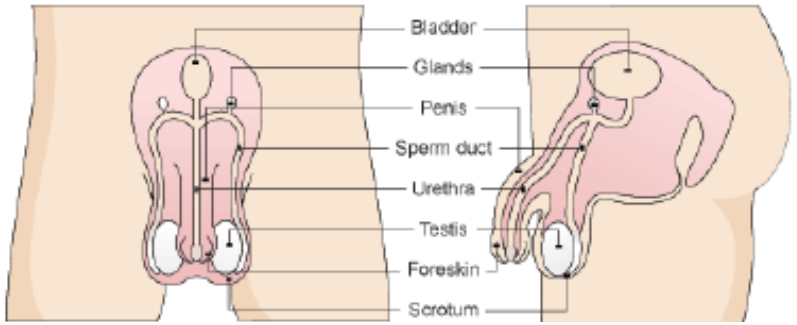


Year 7 Knowledge Organiser : It's all about You : From Cells to Organisms Part 2

Female reproductive system



Male reproductive system



Functions of female reproductive organs

Structure	Function
Ovary	Contain undeveloped **gametes** (sex cells) called ova (or eggs). Every month, an egg matures and is released from the ovary.
Oviduct	Connects the ovaries to the uterus. Their cells are lined with cilia, tiny hairs that help waft the egg along to the uterus.
Uterus	A muscular bag with a soft lining, this is where an unborn baby develops.
Cervix	A ring of muscle which keeps the baby in place while the woman is pregnant.
Vagina	Muscular tube leading from the cervix to the outside of the woman's body. The vagina is where a man's penis enters during sexual intercourse.

Functions of male reproductive organs

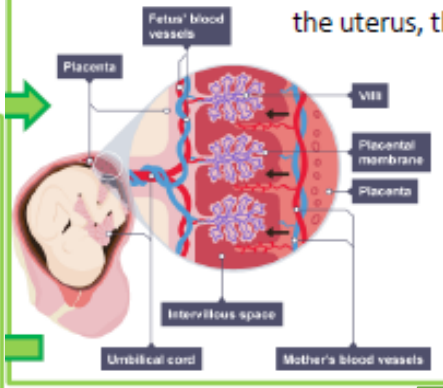
Structure	Function
Testes	To produce **gametes** (sex cells) called sperm. Also makes male sex hormones.
Penis	Passes urine and semen out of the man's body.
Urethra	Tube inside the penis which carries urine and semen.
Sperm Duct	Sperm passes through these and mix with fluids produced by the glands, creating semen.
Glands	Produce fluids to provide the sperm cells with nutrients.

Fertilisation

Fertilisation will occur if the egg cell meets and joins with a sperm cell in the oviduct. The fertilised egg attaches to the uterus lining and the woman becomes pregnant. This stops the menstrual cycle, preventing the uterus lining from breaking down.

Gestation

It takes approximately 40 weeks for a baby (foetus) to develop in the uterus, this time is known as gestation.



The placenta is an organ which provides oxygen and nutrients from the mother to the developing foetus. It also helps to remove waste such as carbon dioxide.
The foetus is connected to the placenta by the umbilical cord.

The menstrual cycle

Takes place in the female reproductive system. It involves a cycle of events which last approximately 28 days, stopping if a woman becomes pregnant.

Day 1-5: The uterus lining breaks down. This is called menstruation.

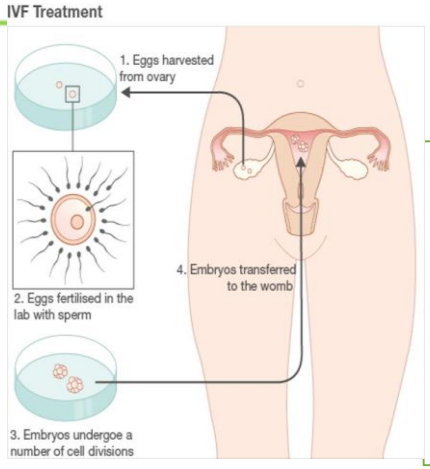
Day 5-14: A female **gamete** (egg cell) matures in one of the ovaries. The uterus lining thickens.

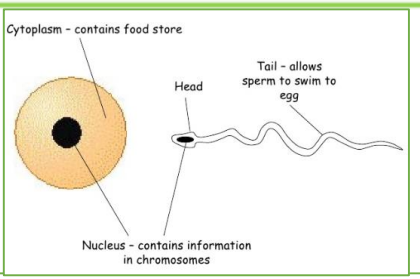
Day 14: The mature egg is released from the ovary. This is known as **ovulation**.

Day 14-21: The egg travels down the oviduct and towards the uterus. The cilia in the oviduct help to waft the egg to the uterus.

Day 21-28: If the egg cell does not meet with a sperm cell in the oviduct, the uterus lining will break down and the cycle will repeat.

IVF



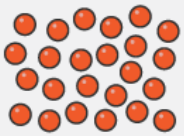


Contraception – Methods used to prevent a woman from becoming pregnant during or following intercourse

7C1 Part 1
States of Matter

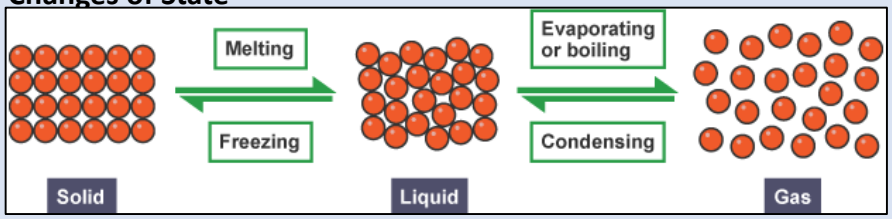
Factors affecting the rate of dissolving:
1. Stirring
2. Surface area of solute
3. Temperature of solvent

States of Matter – SOLID LIQUID GAS

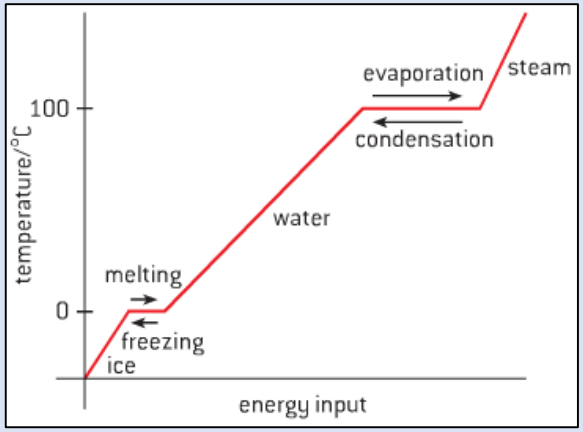
State	Solid	Liquid	Gas
Diagram			
Arrangement of particles	Regular arrangement	Randomly arranged	Randomly arranged
Movement of particles	Vibrate about a fixed position	Move around each other	Move quickly in all directions
Closeness of particles	Very close	Close	Far apart

The particles should be the same in all 3 diagrams.

Changes of State



As a substance is heated it gains **energy**.
When the particles gain enough energy they overcome the **forces** between them.
Whilst a **change of state** is happening the **temperature** of the substance does not change. (flat line on graph)



Sublimation
When a solid changes into a gas without becoming a liquid first for example iodine is a grey solid which produces a purple vapour when heated.

Deposition
When a gas changes into a solid without becoming a liquid first.

Pure substance – made of one type of particle.

Mixture – two or more different substances not chemically combined and easily separated.

Melting point – the temperature at which a substance melts.

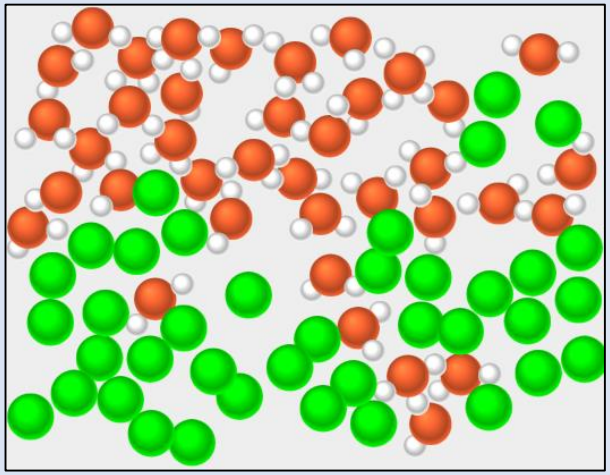
Boiling point – the temperature at which a substance boils.

Dissolving

When the particles in a solid spread out in a liquid.

We call the liquid the **SOLVENT** 

We call the solid the **SOLUTE** 



We call the mixture of the solid and the liquid a **SOLUTION**.

A solid that will dissolve in a liquid is called **SOLUBLE**.

A solid that will not dissolve in a liquid is called **INSOLUBLE**.

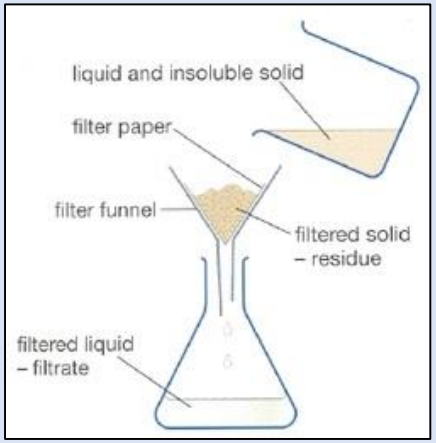
7C1 Part 2
Separation Techniques

Drinking Water:
Reservoir → Sedimentation → Filtration → Chlorination → Drinking water

Filtration

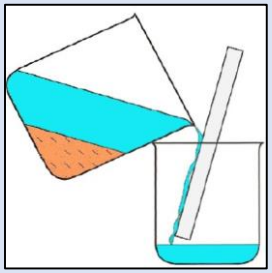
Separates an insoluble solid from a liquid.

The solid pieces are too big too fit through the holes in the filter Paper.



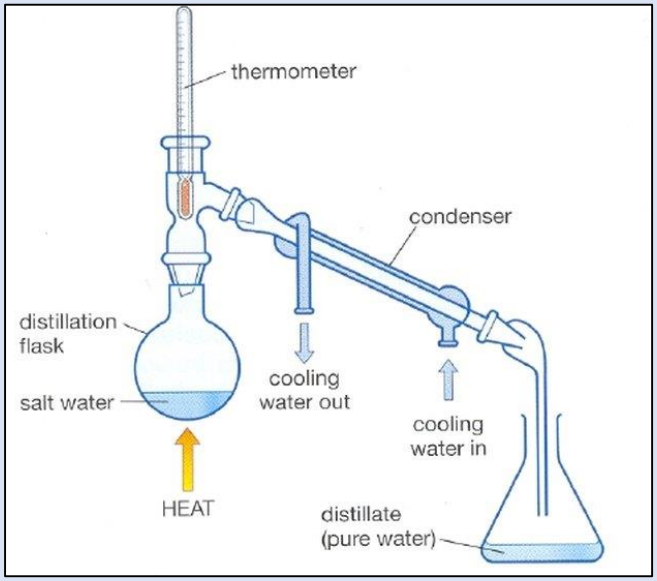
Decanting

Pour a liquid from the top of a settled solid or a more dense liquid.



Distillation

Separating substances with different boiling points.



Salt water mixture is heated.
At 100°C water boils and the particles gain enough energy to become a gas (water vapour).

Boiling point of salt is 1413°C so it does not boil and stays in the flask.

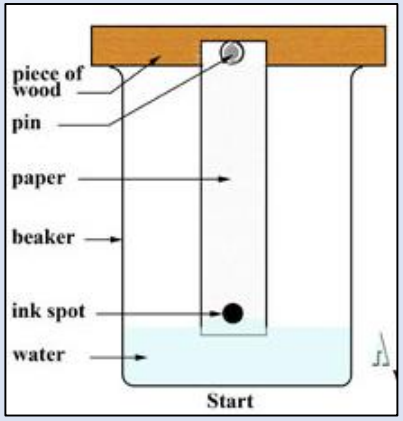
Water vapour rises and travels past the thermometer into the condenser.

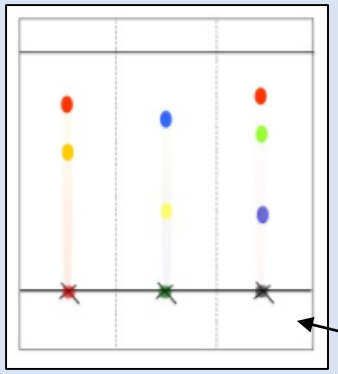
Thermometer checks the temperature to identify the gas.

Condenser cools the water vapour so that it condenses back to liquid water.

Chromatography

Method
Draw pencil line.
Put dot of colour on line.
Hang bottom edge (below dot) in the water.
Leave until water soak up to almost the top of the paper..
Compare with known substances.



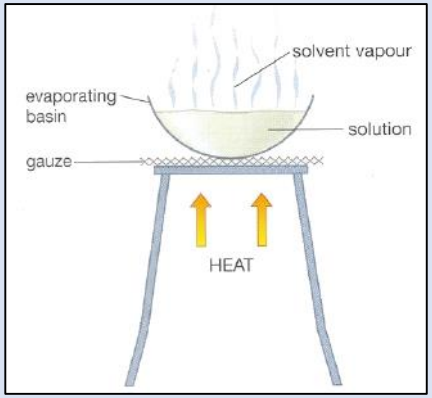


Chromatogram

Different colours contain different mixtures of inks.
The different inks move at different speeds up the paper.
This is because of different solubility.

Evaporation

Separating a soluble solid from a liquid.



Crystallisation

Heat until almost all the water has evaporated.
Leave for the remaining water to evaporate slowly to form crystals.

7P1 Energy Knowledge Organiser

Energy Stores:
Chemical
Kinetic
Gravitational
Elastic
Thermal
Magnetic
Electrostatic
Nuclear

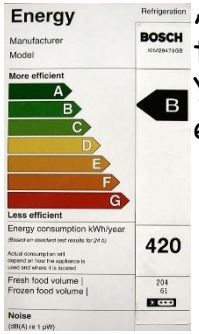
Energy Transfers:
Energy stores can be transferred in the following ways:
- Mechanical (sound)
- Electrical
- Heating
- Radiation (light)

electrically → radio → by radiation (sound) / by heating → THERMAL (environment)

Candle

CHEMICAL (wax + oxygen) → by heating / by radiation (light) → THERMAL (environment)

Energy efficiency:
The more efficient an appliance is the more is transfer input energy into useful energy



Appliances will have these labels stuck to them so you can see their efficiency.
You can calculate efficiency using the equation

$$\text{efficiency} = \frac{\text{useful energy out}}{\text{total energy in}} \times 100$$

Law of conservation of energy – Energy cannot be created or destroyed. It is only transferred

Gravitational energy depends on mass of the object (in kg), its height above the ground (m) and gravitational field strength, "g", which is 10N/kg

Gravitational Energy = mass x g x height

Gravitational energy practical: Investigate which ball is the most efficient at bouncing

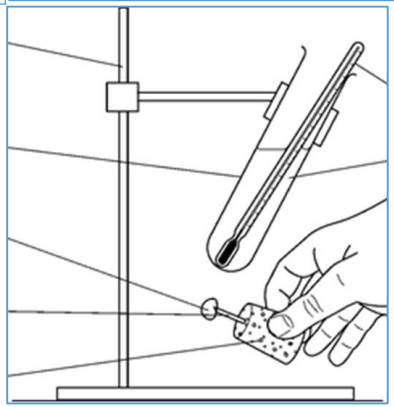
Independent variable – different types of balls
Dependent variable – the rebound height
Control variables:
- Drop the ball from the same height
- Measure the ball's position from the same point

Energy Resources (non- renewable):
Coal, Oil, Gas
Nuclear
(Fossil fuels contribute to global warming and are running out)

Energy Resources (renewable):
Solar
Wind
Hydroelectric
Wave
Tidal
Geothermal
Biomass

Energy in food practical

Method:
- Measure out a volume of water using a measuring cylinder and measure its temperature.
- Set fire to the food
- Use the flame from the food to heat the water.
- Measure the temperature of the water after the food has stopped burning



Energy changes:
- Chemical energy store in food transfers to the thermal store in the water

Conclusion:
The experiment where the water heats up the most is where the biggest chemical energy store has transferred to the thermal energy store in water