

Quest for Knowledge Booklet

Year 9

Cycle Two

2025-2026



Personal details

Name:	
Tutor Group:	Tutor:
House:	
Head of Year:	

Key log in information

My school email:	@honiton.college
My school password:	
Classcharts code:	

Sparx - Maths	sparxmaths.uk
Username:	
Password	

Sparx - Science	sparxscience.com
Username:	
Password	

Spark Reader	sparkreader.com
Username:	
Password	

Other	
Username:	
Password	

Week A	Monday	Tuesday	Wednesday	Thursday	Friday
P1					
P2					
P3					
P4					
P5					
After school					
Week B	Monday	Tuesday	Wednesday	Thursday	Friday
P1					
P2					
P3					
P4					
P5					
After school					



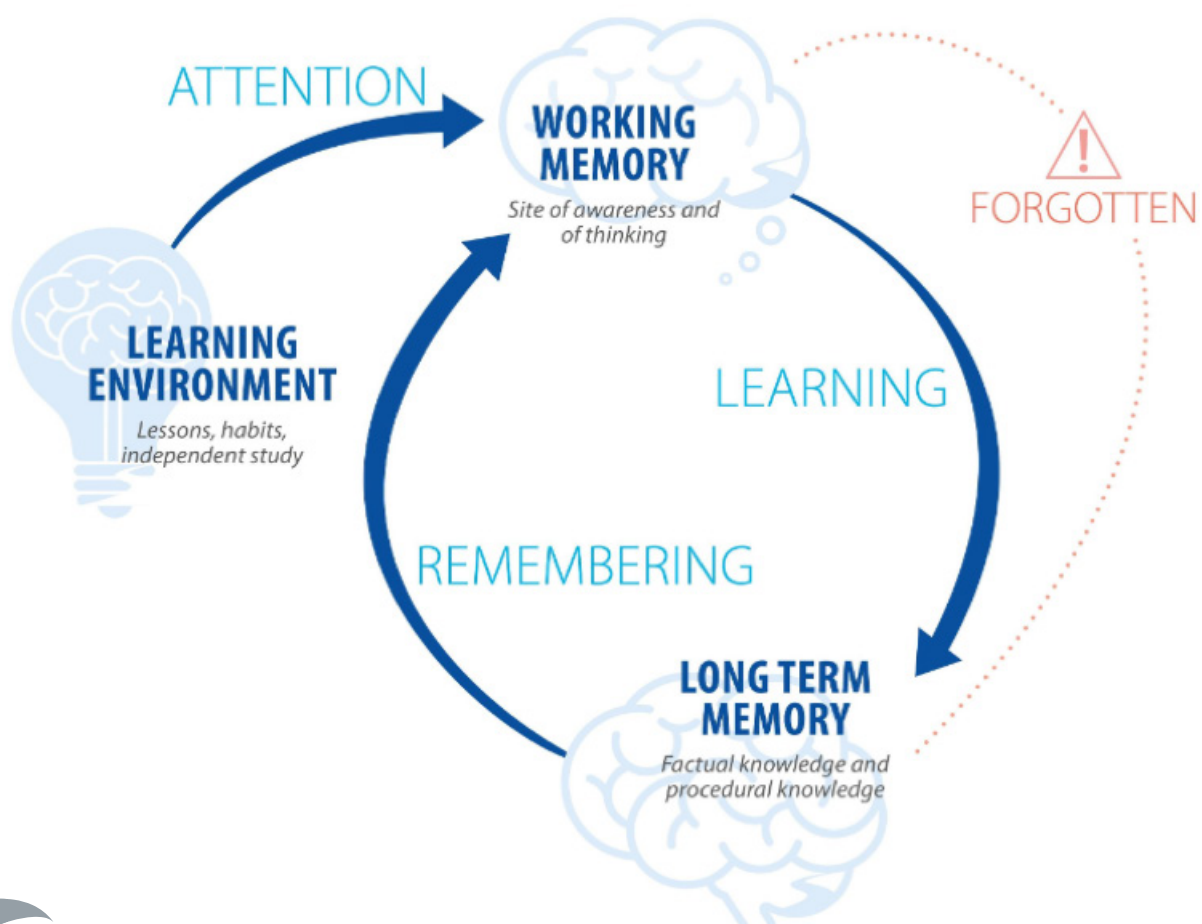
How do we learn?

In your lessons at HCC, teachers plan every minute to ensure the **teaching habits** and strategies they use create a productive learning **environment** and focus your **attention** on the most important content. The information you receive in class is held and dealt with by your **Working Memory** (sometimes called your **short term memory**). Your working memory capacity is limited, meaning you can only deal with a few pieces of new information at a time before you get overloaded - this is called your **Cognitive Load**.

Once in your working memory, new information can be dealt with and transferred to your **Long Term Memory** - this is what learning actually is. Once in your long term memory, the information is organised into schema - you organise new memories and link them to your previous experiences. The information in these **schema** can then be recalled to help you understand new information and importantly, this does not use up the limited slots in your working memory. If information is not effectively **learned** or **encoded** from your working to your long term memory, it will be forgotten.

Retrieval practice will help to make sure your schema are well developed and that you are able to link all the knowledge you will need for your lessons. Retrieval practice is exactly what the name suggests - practising retrieval, and then applying, all of that information stored in your long term memory. Again, if you don't regularly practise remembering this information, it can become **forgotten**.

The model below summarises this process showing how new information moves from your environment (what is in happening in your classroom), eventually forming new and valuable memories.



Your Quest for Knowledge Booklet

This booklet contains key **knowledge** for all your subjects. Each knowledge booklet (**KB**) has the key facts and most powerful information that needs to be **memorised** to help you master your subjects and be successful in lessons. Your teachers have carefully selected the information included to ensure you construct the most effective schema, meaning you can recall the information you need in class to master your subjects.

How Can My Quest for Knowledge Booklet Help Me Remember Information?

Your Quest for Knowledge Booklet is designed to help you remember important facts and concepts by:

1. **Breaking Down Information:** It presents topics in clear, bite-sized chunks that are easier to learn and recall.
2. **Highlighting Key Content:** It shows you exactly what you need to know – focused and to the point.
3. **Supporting Regular Review:** Using it often helps move information into your long-term memory.
4. **Making Revision Easier:** Everything you need is in one place – perfect for quick revision sessions.
5. **Helping You Spot Gaps:** Use it to test yourself and identify areas you still need to work on.
6. **Encouraging Active Recall:** Try remembering information from the booklet without looking – this boosts memory better than just reading.

How Can I Use My Quest for Knowledge Booklet in Class?

Your Quest for Knowledge Booklet is a powerful tool! Here's how it can help you succeed in class:

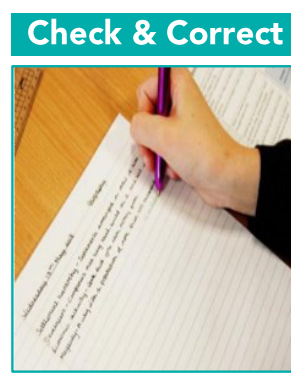
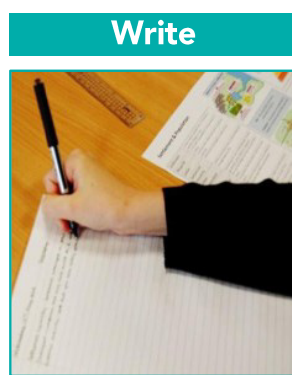
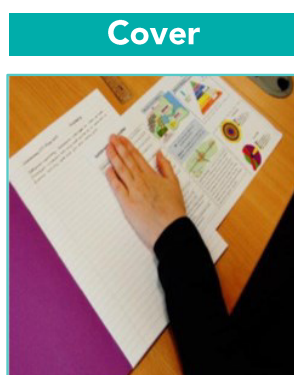
- **Quick Revision:** Use it to quickly remind yourself of key facts before a lesson starts.
- **Stay Focused:** Check it during class if you forget something—it helps you keep up without falling behind.
- **Join In:** Use what you've memorised to take part in class discussions and answer questions with confidence.
- **Better Notes:** Spot what's important faster, so your notes make more sense later.
- **Spot Gaps:** If you don't understand something on your organiser, that's your clue to ask for help!



Your knowledge booklet is a great resource for use at any time at home or in school. Being able to **recall** the information it contains from your long term memory will help you have a really **high success rate** in lessons. One of the most effective ways of forming strong long term memories is by quizzing yourself. In fact, research shows that pupils remember 50% more when they test themselves after learning something new. Simply reading through your knowledge organiser is helpful, but there are also far more effective ways to memorise the important content.

How can I self-quiz?

- » **Cover-Write-Check:** Your teacher may direct you to read a specific section or week of your KB. Once you've read the information, **cover** it up and **write** out as much as you can from memory. Next, **check** the (KB) to see if you're right, then **correct** any mistakes in your purple pen. Repeat this process two more times - even if you got 100% correct.



- [illegible]

[illegible]

Once your notes page is complete, you could cover the notes and recall section and see how much of the content you can write down - then check and correct. Alternatively, cover up the notes section and try to answer the questions you wrote in the recall section. Find out more about how to prepare and use Cornell notes here [**https://www.youtube.com/watch?v=WtW9lyE04OQ.**](https://www.youtube.com/watch?v=WtW9lyE04OQ)

Homework

Homework helps you practice what you've learned in class so it sticks in your mind. It gives you a chance to go over things at your own pace and get better at solving problems. Doing homework also helps build important life skills like responsibility, time management, and independence.

Plus, when you come to class with your homework done, you're more prepared to ask questions, take part in discussions, and succeed in tests and assignments.

Why Follow a Schedule?

Following a schedule helps you stay organized and use your time wisely. It makes sure you don't forget important things like homework, projects, or activities. When you stick to a schedule, you're less likely to feel stressed or rushed because you know what to do and when to do it.

A good schedule also helps you find time for fun, rest, and the things you enjoy—so you can balance school and life more easily! An example schedule is below, to help you ensure that your homework is completed ready for the hand in day.

Day	Subject	Homework set	Hand in
Monday	Seneca		Sparx Science
Tuesday	Sparx Science	Sparx Science	Sparx Maths
Wednesday	Sparx Maths	Sparx Maths	Sparx Reader & Seneca
Thursday	Sparx Reader	Sparx Reader & Seneca	
Friday	Sparx Maths		

How Can I Do Independent Study?

Independent study helps you take control of your learning and get ahead! Here's how you can do it in each subject:

Science

- Use the **Independent Learning** section in Sparx Science, your booklet or Quest for Knowledge booklet.
- Pick a topic you're unsure about and review the key points.
- Watch a short video, read a summary, or make flashcards to help remember it.

Reader

- Keep **reading regularly**—at least 20 minutes a day if you can.
- Use the **quizzing system** to test your understanding of what you've read.
- Try different types of books to build a strong vocabulary.

Maths

- Complete the **XP Boost** tasks for extra practice and challenge.
- Check your **Target section** and focus on topics you need to improve.
- Use the **Independent Learning** section to help you review tricky areas.

Other Subjects

- Use the information in this Knowledge booklet and strategies to help you remember information to get ahead and prepare for assessments

✓ Tip: Set aside 20–30 minutes a few times a week for independent study. Little and often works best!

Stop

STOP

'They're not bullying you because of you, they're bullying you because of how they are'

Jessie J

Bullying affects lots of people and can happen anywhere: at school, travelling to and from school, in sporting teams, in friendship or family groups.

Bullying can take many forms including:

- emotional abuse
 - social bullying
 - social media
 - threatening behaviour
 - name calling
 - cyberbullying
 - sexting
- Bullying includes REPEATEDLY:**
- people calling you names
 - making things up to get you into trouble
 - hitting, pinching, biting, pushing and shoving
 - taking things away from you
 - damaging your belongings
 - stealing your money
 - taking your friends away from you or leaving you out
 - posting insulting messages or rumours, in person online
 - threats and intimidation
 - making silent or abusive phone calls
 - sending you offensive texts or messages

Speak

'Blowing out someone else's candles doesn't make yours shine any brighter'

Drake

Speak to someone.

No one has a magic wand, but we always do our best and we do really care.

Telling someone shares the problem. It helps you feel supported.

It is really important to tell someone, particularly if the bullying has been going on for a while or the strategies you've tried haven't worked.

You're **not** alone

Don't be afraid to tell an adult. **Telling isn't snitching!**



Support

'You always have to remember that bullies want to bring you down because u have something that they admire'

Zak Efron

What we do at HCC to deal with bullying:

- **Mentoring** is having a named person you can go to for support at school. Tutor/HOY/Refocus/Other
- **Restorative justice** brings all children involved together so everyone affected plays a part in repairing the harm and finding a positive way forward.



Any form of bullying will not be accepted at HCC.



YEAR 9 KS3 ART Sweet Repeat

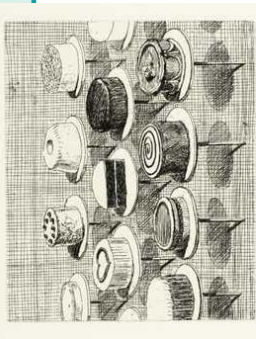
Week 1 and 2

Graduated tone	Technique to create the illusion of 3D form on a 2D surface
Realism	Paintings that convey the objects as they are in real life
Harmonious Colours	Colours that are near each other on the colour wheel (e.g. green and blue)
Still Life	Still Life: One of the principal genres (subject types) of Western art – essentially, the subject matter of a still life painting or sculpture is anything that does not move or is dead

Week 3 and 4

Cultural and Artist Knowledge

Morton Wayne Thiebaud (*TEE-boh*; November 15, 1920 – December 25, 2021) was an American painter known for his colorful works depicting commonplace objects—pies, lipsticks, paint cans, ice cream cones, pastries, and hot dogs—as well as for his landscapes and figure paintings. Thiebaud is associated with the pop art movement because of his interest in objects of mass culture, although his early works, executed during the fifties and sixties, slightly predate the works of the classic pop artists. Thiebaud used heavy pigment and exaggerated colors to depict his subjects, and the well-defined shadows characteristic of advertisements are almost always included in his work.



Week 5 and 6

COLOUR

Colour: hue, saturation. Tint, shade, tone.

Colour harmony: warm, cool, monochrome

Complementary colours enhance. Colour can be used to affect the mood.

Week 7 and 8

FORM

A three dimensional shape that has volume and depth/thickness. Form is created in two dimensional art with tone and perspective.

Week 9 and 10

tone/VALUE

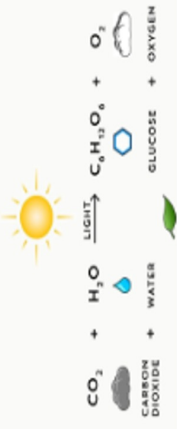
The lightness or darkness of a surface. It can be graduated or solid. Tonal interchange defines edges. Strong lighting and contrast add drama, diffused lighting softens edges.

Week 11 and 12

Let's get creative!

Challenge yourself to draw something at home in the style of Thiebaud – a lipstick, cupcake, lollipop or sweet.

Coloured pencils can be blended and layered to create more complex colours.

Year 9 - Combined Science - Cycle 2		Week 1 - Movement of substances	Week 2 - Photosynthesis												
Key vocabulary - Active transport - the movement of particles from an area of low concentration to an area of high concentration using energy. - Diffusion - the movement of particles from an area of high concentration to an area of low concentration. - Limiting factor - one which will affect the rate of a reaction. - Osmosis - the diffusion of water particles through a semi-permeable membrane from a dilute to a concentrated solution. - Semi-permeable - a term used to describe a membrane that will allow only certain substances to pass through. - Photosynthesis - chemical reaction which takes place in the chloroplasts of plant leaves which creates glucose as a store of energy for the plant. - Atom - the smallest part of a substance made up of three subatomic particles called protons, neutrons and electrons	- Substances move into and out of cells by three methods: Diffusion - movement of particles from high to low concentration. No additional energy needed. Osmosis - movement of water from high to low concentration. No additional energy needed. Active transport - movement of particles from low to high concentration. Needs additional energy. - During osmosis, water moves from an area that is dilute (high water concentration) to an area that is highly concentrated with solutes (low water concentration). - Plants use osmosis to take in water from their roots. - When a plant cell is placed in a highly concentrated solution of solutes it will lose mass as water moves out of the plant cell into the solution.	- All organisms need energy. Plants and algae store energy by transferring it from light to glucose in the process of photosynthesis. - Photosynthesis occurs in the chloroplasts of plant cells which contain chlorophyll. - The chlorophyll is the substance that traps light by facilitating an endothermic reaction.  $\text{CO}_2 + \text{H}_2\text{O} \xrightarrow{\text{LIGHT}} \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$ CARBON DIOXIDE + WATER → GLUCOSE + OXYGEN	- Photosynthesis has two reactants, carbon dioxide and water. Carbon dioxide is taken in through the stoma in the base of the leaves and water is taken in via the roots. Oxygen is a waste product from photosynthesis.												
	Week 3 - Limiting factors of photosynthesis	Week 4 - transport in plants	Week 5 - Atomic structure												
	- Photosynthesis has three limiting factors: Temperature: high temperatures cause the enzymes in the chlorophyll to denature so the reaction cannot take place. At low temperatures the reactants and enzymes may not have enough energy to collide and react. Light intensity: light provides the energy needed for the reaction. After a certain light intensity, the rate of reaction reaches a maximum and the rate of photosynthesis remains constant. Carbon dioxide concentration: carbon dioxide is a reactant of photosynthesis and there the more there is the faster the reaction will be. - All of these factors must be balanced for a high rate of photosynthesis.	Transpiration: the flow of water into the roots (by osmosis), up through the stem through the xylem vessels and out of the stomata (as water vapour) in the leaves. - Factors that increase the rate of transpiration: Wind, temperature, humidity and light intensity. Translocation: glucose is moved around the plant in the form of sucrose. The phloem vessels in the stem help transport sucrose. Companion cells pump sucrose via active transport from the leaf into the phloem by active transport. - The companion cells require energy so contain many mitochondria. Root hair cells: have a large surface area and thin cell walls to increase the uptake of water (via osmosis) and mineral (via active transport).	- Atomic structure is a way of describing the parts that make up an atom and the way they are organised. <table><tr><th>PARTICLE</th><th>RELATIVE MASS</th><th>CHARGE</th></tr><tr><td>PROTON</td><td>1</td><td>+1</td></tr><tr><td>NEUTRON</td><td>1</td><td>0 (NEUTRAL)</td></tr><tr><td>ELECTRON</td><td>$\frac{1}{1840}$</td><td>-1</td></tr></table> - There are always the same number of protons and electrons in an atom - Atomic mass = protons + neutrons - Atomic number = protons - Mendeleev was the scientist who arranged the elements in the periodic table.	PARTICLE	RELATIVE MASS	CHARGE	PROTON	1	+1	NEUTRON	1	0 (NEUTRAL)	ELECTRON	$\frac{1}{1840}$	-1
	PARTICLE	RELATIVE MASS	CHARGE												
	PROTON	1	+1												
NEUTRON	1	0 (NEUTRAL)													
ELECTRON	$\frac{1}{1840}$	-1													

Key vocabulary	Week 6 - Electron configuration	Week 7 - Mass number and isotopes
- Electron configuration - the way in which electrons are placed in shells around the nucleus. This depends on the number of electrons that atom has. - Electron shell - the energy level that surrounds the nucleus. It is occupied with electrons. - Isotope - different forms of the same element which have the same number of protons but a different number of neutrons - Mass number is the number of protons and neutrons together. - Inert - unreactive - Frequency - the number of waves passing a point per second. Measured in Hertz (Hz) - Amplitude - the distance from rest point to peak or trough - Electromagnetic spectrum - a group of waves that have the same speed in a vacuum.	- The protons and neutrons of an atom are found in the nucleus but the electrons occupy shells that surround the nucleus - The shell closest to the nucleus is filled first and must be completely filled before electrons can move into the next shell - There is a limit to the number of electrons that fill each shell: 2 electrons 8 electrons 8 electrons - You can work out which group an element is in on the periodic table by looking at the number of electrons in the outer shell eg. group 1 has 1 electron on the outer shell. - You can work out which period an element is in by counting the total number of shells.	- The mass number of an atom is the total number of protons and neutrons in the nucleus. We call this the relative atomic mass. - The relative formula mass is the mass of compounds or molecules. This is the sum of the relative atomic mass of each atom in the compound. - The number of protons in an atom determines which element is. Therefore all atoms of the same element have the same number of protons. - Not all atoms of the same element have the same mass because they don't all have the same number of neutrons. - An element with the same number of protons but a different number of neutrons is an isotope. - The mass number on the periodic table is an average of the mass of all atoms of that element.
Week 8 - Group 1, 7 and 0	Week 9 - Waves	Week 10 - Electromagnetic spectrum
Group 1 elements are known as the alkali metals and all have 1 electron on their outer shell - They all form +1 ions as they lose an electron when they react to gain a full outer shell. - The reactivity of group 1 increases down the group as they lose an electron more easily. Group 7 elements are known as the halogens and all have 7 electrons on their outer shell - They all form -1 ions as they gain an electron when they react to gain a full outer shell - The reactivity of group 7 decreases as you go down the group as they find it more difficult to gain an electron. Group 0 are known as the Noble gases. They all have a full outer shell - Group 0 are all inert because they do not need to react to gain a full outer shell.	- Waves transfer energy without transferring matter. - Waves are described in terms of their amplitude, wavelength, frequency and period. Transverse waves - the direction of energy transfer is perpendicular to the direction the particles oscillate. Longitudinal waves - the direction of energy transfer is parallel to the directions the particles oscillate. Wave speed can be calculated as: $V \text{ (m/s)} = \text{distance (m)} / \text{time (s)}$ $V \text{ (m/s)} = \text{frequency (Hz)} \times \text{wavelength (m)}$ Refraction occurs as the interface between two mediums of different density. - Refraction towards the normal line occurs when a wave enters a more dense medium	- The electromagnetic spectrum is a group of transverse waves that all travel the same speed in a vacuum. - They all travel at the speed of light in a vacuum which is $3 \times 10^8 \text{ m/s}$. - The EM spectrum consists of: radio waves, microwaves, infrared, visible light, ultraviolet, x-rays and gamma rays. - The longer the wavelength of an EM wave the lower the frequency. - All EM waves have a variety of uses including communication, cooking and medical applications. - Some EM waves with high frequencies can be harmful. - UV, X-Ray and Gamma are all ionising radiations

Knowledge organiser: Databases

1. Introduction to Databases

What is a database?

- A database is a **collection of data items** that are stored in a structured way.

What are the **advantages** of using databases rather than paper records?

- Data is usually **better organised**
- Searches of the data are **very fast** – usually within a second
- A huge amount of **data is stored** in a very **small space**
- Multiple **users can access** the same data at the same time

The **Police National Computer (PNC)** gives access to several databases containing:

- 13 million personal records
- 59 million driver records
- 63 million vehicle records

2. Database Tables

Each item of information is stored in its own **field**

The **primary key** is a unique field for each **record**

Table name: Planes

Plane_name	Top_speed	Country	Cost	Type
X-15	4520	USA	£100,000,000	Military
Airbus A380	683	Netherlands	£400,000,000	Passenger
SR-71 Blackbird	2500	USA	£28,000,000	Military
MIg-31 Foxhound	1864	Russia	£27,000,000	Military
Boeing 787 Dreamliner	690	USA	£193,000,000	Passenger
F15 Eagle	1650	USA	£24,000,000	Military
Cessna 172 Skyhawk	140	USA	£350,000	Passenger

Data Types

Data type	Data type meaning
AutoNumber	Automatically assigned when a record is added
Short Text	Text up to 255 characters long
Number	A number between approximately -2.1 billion and +2.1 billion
Currency	A number with pounds and pence

3. Database Queries

Comparison operators

Comparison operator example	Meaning
<2020	Finds cars older than 2020
<=2020	Finds cars from 2020 or older
>2020	Finds cars newer than 2020
>=2020	Finds cars from 2020 or newer
= "Ford"	Find Ford cars
BETWEEN 2015 And 2020	Find cars from 2015 to 2020

Boolean operators

Comparison operator example	Meaning
"Ford" Or "Vauxhall"	Find Vauxhall or Ford cars
Not "Ford"	Find any car other than a Ford

4. Input Forms

Features of a form.



Interface Components

Dropdown Box, Text box, Button, Radio buttons, Check Box, Toggle Button

5. Reports and Menus

Report design

Logo added

Background colour changed

Labels are clearer than field names

Helpful report title

Additional boxes have been added which are useful on a paper copy

Column width increased to the size of data they are holding

Car Mart						
Price	Make	Model	First name	Last name	Mobile	Vehicle type
£11,000.00	Ford	Fiesta	Jack	Robinson	070006387	Car
£12,000.00	Vauxhall	Astra	John	Thompson	070006387	Car
£14,000.00	Nissan	Garage	Olivia	Patel	070006387	Car
£18,100.00	Vauxhall	Golf	Anna	Thompson	070006387	Car
£13,000.00	Vauxhall	Corsa	George	Williams	070006387	Car
£15,000.00	Vauxhall	Astra	Freddie	Johnson	070006387	Car

6. Assessment – Top 6!

Table - A group of data arranged in rows and columns.

Field - A column in a table that stores one type of information.

Record - A row in a table that shows one complete set of data.

Form - A user-friendly way to enter or view data in a database.

Query - A way to ask the database a question to find specific information.

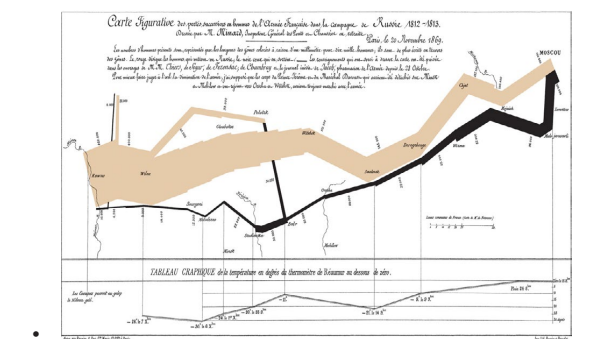
Validation - A check to make sure the data entered is sensible and correct.

Report - A summary of data shown in a clear and organised way

Knowledge organiser: Data Science

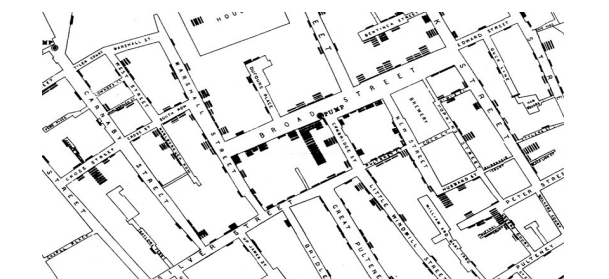
1: Delving into Data Science

- Data science is **extracting meaning** from large data sets in order to gain insights to support decision-making.
- **Joseph Minard** used numbers in 1869 to find meaning and tell a story with the data to Napoleon's march on Russia in 1812. He created a **Visualisation Diagram**.



2: Global Data

- **John Snow's** visualisation for the 1854 cholera outbreak in the Soho area. Use a dotmap.

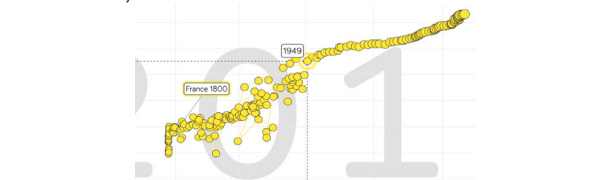


- **Data visualisations** are visual representation of data (such as **charts and graphs**) intended to help an audience process the information more easily and get a clear idea about the data at a glance.
- **Infographics** are visual representations of data, often involving **pictures** that reflect patterns and help tell a story.
- **Infographics can include visualisations.**

3: Statistical State of Mind

A relationship between two **variables**; we call that a **correlation**.

A **positive correlation**, As one variable increases, the other one increases too.



Data that sits outside a trend is known as an **outlier**. The **PPDAC** cycle is a framework for us to follow when asking and answering real-world problems using data.

Problem – Plan – Data – Analysis - Conclusions

4: Data for action

Problem	Define the problem that needs to be solved and pose questions that can be investigated.
Plan	Predict an answer to the question(s). Find a data set or make a plan to collect the data.
Data	Gather the data. You should then cleanse the data before moving onto the next step.
Analysis	Visualise the data. Spot any patterns, trends, correlations, or outliers. Write down your observations about what the data is showing you.
Conclusions	Answer the question and explain what the data reveals. Decide on a conclusion. Take action or form further questions to investigate.

5: Clean it up

Cleansing data involves **detecting** and **correcting**, or **removing**, **corrupt** or **inaccurate** data.

- Missing Values
- Duplicate Entry
- Invalid data

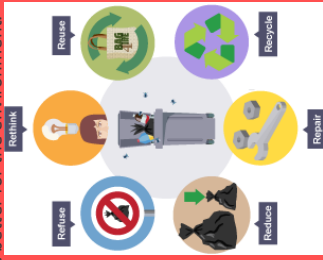
CSV file type - (which stands for comma-separated values) is a plain text file format.

6: Make a Change

Advanced Definition of Data Science:

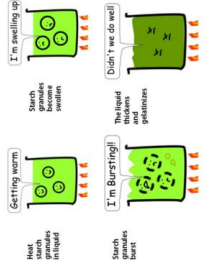
Data science is a multidisciplinary field that involves the extraction of insights and knowledge from structured and unstructured data through a combination of statistics, computer science, and domain-specific expertise

Year 9 Design and Technology/3D Design

One	Two	Three	Four	Five	Six
Design Brief and Specification: A <i>design brief</i> is the statement a <i>client</i> gives to a designer outlining what they want their product to be like, eg 'Design a drinks bottle holder for use while riding a bicycle'. The designer could also produce a brief on behalf of the client, as the client might have a problem but not know how to proceed. A <i>design specification</i> is a list of criteria a product needs to address. Using the brief as a starting point for research, a specification can be written when more facts are known. Information needs to be found through research to help produce early design solutions and improvements. If the criteria are measurable, it makes it easier to later measure how effective the design ideas are, eg 'How much will the design cost to produce?' Design specifications should include: <i>aesthetics</i> <i>function</i> <i>materials</i> <i>environmental issues</i> <i>performance</i> <i>target market</i>	 A Manufacturing Specification: is created after the design is finalised and should contain enough information to enable a third party to manufacture the design. This begins with a detailed drawing with often produced using software. A parts list should then be prepared, detailing the materials that will be used to manufacture each component of the design and how they will be.	Research before and after the design brief can identify any limitations to ideas and help with initial designs. Analysis of research and user feedback can lead to changes being made to the brief. The results of feedback, testing and <i>product analysis</i> should give the designer a good starting point to improve their product. Some people find creative thinking easier than others. It is also sometimes seen as an ability you either were, or weren't, born with. However, according to research carried out by Harvard University, creativity is 85 per cent a learned behaviour. That means that you can improve your ability to think creatively. There are many techniques that can be used to generate ideas. For example: Association One technique is known as association. This is the practice of making connections between seemingly unrelated ideas. The highly successful Virgin brand entrepreneur, Richard Branson, strongly supports the idea of creating associations.	Additional techniques used to produce ideas. Questioning - Asking why, how and what instead of just accepting something you are told. Observing - This is more than seeing things. Think about how you got to school recently. Did you see every part of your journey and can you remember it? Observing means using your senses at the fullest capacity by paying close attention to as many details as you can. This includes what you see, smell, hear and feel. Experimenting - This involves trying new things or different ways of doing things. Google first introduced the idea of 80/20 time. This means Google employees can spend 20 per cent of their time toying with new ideas. Networking - This means involving people and ideas that are different from your own. There is so much diversity that this is sure to increase your capacity for generating ideas	Designers need to understand the challenges of using raw materials and the processes available to limit the amount of waste when manufacturing a product. The world has a bigger population than ever before, and the need for more raw materials causes a range of issues: Deforestation - A lack of tree roots leads to <i>soil erosion</i>, causing rivers to <i>silt up</i>. It is possible to manage deforestation through responsible management of the forests. If more trees are planted than are cut, it is possible to minimise the impact. Designing to ensure less wastage will cost less and be better for the environment. 	Mining and drilling - The environmental impact of mining and drilling is primarily to the area around the sites. Loss of <i>habitat</i> for wildlife is caused by the clearance of land above the sites as well as the noise and light pollution in the area. <i>Water run-off</i> can also create ponds of concentrated chemicals, which can harm the human and wildlife population. Designing products that use a more renewable set of materials will help solve this problem. Carbon footprint - Mining, moving and processing raw materials, then moving them onto the consumer causes pollution of its own. CO₂ (carbon dioxide) <i>emissions</i> from factories, power stations and vehicles need to be reduced to stop further damage to the environment. Everything has a carbon footprint, from creating the raw material to delivering the product in a vehicle. The best way of combating CO₂ emissions is by using the 6 Rs.

Year 9 Food and Nutrition

One	Two	Three	Four	Five	Seven
There are 4 main causes of food related ill health: Allergies: Bacteria, Chemical, Intolerances. Allergies: a serious and possibly life threatening reaction to certain foods or ingredients in foods. Bacteria: microscopic single cell living organism, some of which cause food poisoning. Some are good Bacteria. Chemicals: a substance (natural or manufactured) that can contaminate food and cause damage to ur bodies tissues or organs. Intolerances: a long term condition where certain foods cause a person to be unwell with a range of symptoms, usually not life threatening. Allergies An allergic reaction can happen within a few seconds-hours, it can be mild or severe. A severe allergic reaction is called anaphylaxis or anaphylactic shock, the body's immune system reacts to the food allergen. Visible symptoms: breathing difficulties, swollen lips/eyelids, rash. Non-visible symptoms: throat/mouth swells (can't swallow or breath), abdominal pain collapse/unconscious. Anaphylactic shock treatment: Keep calm, call ambulance, calmly reassure, use Epipen if they have one (medical device to administer adrenaline to help control symptoms). Common Food allergens: cereals (gluten), crustaceans, dairy products, eggs, fish, fruit and veg, lupin, molluscs, nuts, peanuts, sesame seeds, soya, wheat. Must be labelled in bold by law.	Coeliac disease- immune system attacks tissues when you eat gluten. Damages your small intestine so you are unable to take in nutrients. Causes vomiting, diarrhoea, stomach pain/bloating. Long term issues include osteoporosis, iron deficiency (anaemia), vitamin B12 and folate deficiency, bowel cancer. Bacteria These are microscopic organisms (GERMS). Found on/in people, on food, in water, soil and air. Some are good for us, and some are bad! Bacteria needs warmth, moisture, food and time to grow. DANGER ZONE 5°C to 63°C – Bacteria grow fast, never leave food out for more than two hours. Always cover. 63°C to 100°C – MOST bacteria will be killed. Hot food keep at 63°C or above. Below 5°C slows/stops germs' growth and keeps food safe for longer. Cross contamination-How bacteria spreads from one place onto some food. Chemicals Some chemical make people ill quickly others build up in the body over time and can cause cancer, liver/kidney disease. To avoid Chemical Contamination-Food handlers must avoid putting too much of a food additives into food e.g. preservatives, colours. Use caution with cleaning products. Store chemicals safely, farmers to reduce pesticides and fertilisers. Don't use old pans with flaking surface. Caution with raw kidney beans, mouldy nuts/cereals, rhubarb leaves and wild mushrooms as all contain toxins.	UNIT 2: Understanding the importance of Nutrition A Balanced Diet- provides the right amount of nutrients for your needs. See Eat Well Guide. Good nutrition- eating a variety of foods (mainly plant foods) that are unprocessed, whole foods and drinking plenty of water. Water acts as a lubricant for joints and eyes; it is the main component of saliva; it helps get rid of waste; it regulates body temperature. Drink 6-8 glasses a day. Fibre- important for digestive health, it bulks up stools and holds water in them, making them easier to pass. It makes waste move through the digestive tract more quickly, which prevents constipation. Found in fruits and vegetables, nuts, seeds, wholegrain cereal and flour products. Macro nutrients- the nutrients we need in larger quantities: Fat, protein and carbohydrate. Protein- needed for growth and repair of body cells and energy. It is made up of 'building blocks' of amino acids, we get these from food. High biological Value (HBV) proteins contains all the essential amino acids: Meat, fish, poultry, eggs, soya beans, cheese, yogurt, Quorn, tofu. Low Biological Value (LBV) proteins are missing one or more of the essential amino acids: Beans, peas, nuts, lentils, pulses, cereals.	Carbohydrates- Our main source of energy to move, produce heat, digest food and use our brain. Starchy (complex carbohydrates) provide slow release energy when broken down – (wholegrain provide slower release carbohydrates) found in cereal grains such as rice, wheat, oats, bread, rice, potatoes/sweet potatoes and vegetables (carrots, beets, corn). Sugary (simple carbohydrates) provide quick release energy to the body's cells found in milk and dairy, honey, fruits, some vegetables (peppers, tomatoes etc.), milk and confectionary. Fat- is used for energy. Provides warmth when stored under the skin. Also protects bones from damage and is a dietary carrier of fat soluble vitamins A, D, E & K. Two types of fats: Unsaturated and saturated. Saturated Fats are solid at room temperature. Mainly from animal sources e.g. butter, lard, suet, vegetable block, meat fat and ghee. These causes high blood cholesterol. Unsaturated fats are liquid at room temperature and are mainly from plant sources, these can lower blood cholesterol e.g. olive, rapeseed, sunflower, corn, oily fish, avocado, pears, nuts, seeds and some vegetable fat spreads.	Food poisoning Bacteria: Campylobacter the most common food poisoning UK. Found in: Raw or undercooked meat, particularly raw poultry, unpasteurised milk, untreated water, mushrooms and shellfish (only occasionally). Campylobacter Symptoms: Nausea, Diarrhoea (can be bloody), Vomiting, Abdominal pain, High fever Avoided by: Cook meat, especially poultry, thoroughly, prevent cross-contamination, Don't wash raw chicken, Wash pre-packed salads	Intolerances: Gluten- can't digest gluten. Avoid wheat, Barley and Rye, causes stomach cramps and bloating. Found in Flour, Pasta, Bread, Cereal, Certain alcoholic drinks. Lactose- can't digest lactose. Avoid dairy products, causes stomach cramps and bloating. Found in Milk, Milk powder, Cheese, Butter, Margarine, Yogurt, Cream, Ice cream
				Six Salmonella found in the intestinal tract. Transferred from animal to human/ Found in: Raw or undercooked poultry or meat, eggs, unwashed fruit and vegetables, unpasteurised milk and pain, vomiting. Symptoms: Diarrhoea, fever, abdominal pain, vomiting. Avoided by: Thoroughly cooking meat, poultry and eggs, wash hands after touching raw meat or egg shells and after the toilet, wash all fruit and vegetables, avoid cross-contamination (keep any uncooked meat away from cooked food). Listeria can cause miscarriage in pregnant women also dangerous for people with impaired immune systems. Found in: Unpasteurised milk/ products, soft cheeses, ready-to-eat foods, unwashed vegetables. Symptoms: like flu, fever, aches and pains, nausea or vomiting, diarrhoea. Can spread to nervous system and cause convulsions (fits). In rare cases, can lead to septicaemia (blood poisoning) or meningitis. Avoided by: Avoid cross-contamination, reheat ready-to-eat foods all the way through (74°C), use pasteurised milk and cheeses, wash raw vegetables, store raw meat correctly (on the bottom shelf of the fridge, covered).	Eight Gelatinisation: occurs when starch (flour) granules swell and absorb a hot liquid. At around 60°C the starch granules begin to absorb liquid. At around 85°C the granules will absorb around 5 times their volume of liquid. Eventually so much liquid is absorbed that the granules swell, burst. The granules remain dispersed throughout the liquid- this is gelatinisation •Wheat flour (plain flour) Makes a thick white sauce e.g. macaroni cheese



Theme 1. Topic 2: Healthy living and lifestyle

Sports	
activo	active
bailar	to dance / dancing
el baile	dance
el baloncesto	basketball
una bicicleta, bici	bicycle, bike
caminar	to walk / walking
una carrera	career, degree course, race
correr	to run / running
el deporte	sport
deportivo	sporty, sports
doler	to hurt, be painful
el ejercicio	exercise
la energía	energy, power
entrenar; entrenarse	to train; to go training
el equipo	team, equipment
físico	physical
fuerte	strong
el fútbol	football
el gimnasio	gym
juega	she, he, it, one plays
juegan	they play / they are playing
juegas	you play / you are playing
un juego	game
juego	I play / I am playing
jugar	to play (sport/game)
un miembro	member
montar	to ride / set up
nadar	to swim / swimming
la natación	swimming
participar	to participate / participating
un partido	sports match, political party
pasear	to take for a walk / go for a walk
la selección	choice, selection, national sports team

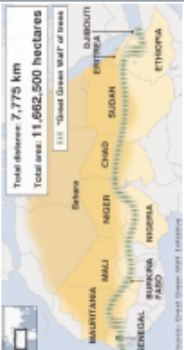
Bodies & ailments!	
un accidente	accident
la boca	mouth
el brazo	arm
la cabeza	head (body part)
el cáncer	cancer
cansado	tired, tiring
la cara	face, expression
el cerebro	brain
la corazón	heart
el cuerpo	body
débil	weak
el diente	tooth
el dolor	pain, ache
la enfermedad	illness, disease
enfermo	ill, sick
la herida	wound, injury
la mano	hand
la medicina	medicine
el médico	doctor
la mente	mind
morir	to die / dying
la muerte	death
muerto	dead
un ojo	eye
paciente	patient
el pelo	hair
el pie; a pie	foot; on foot
la piel	skin
la pierna	leg
respirar	to breathe
la salud	health
la sangre	blood
el sol	sun
el sueño	dream, sleep

Bad habits	
el alcohol	alcohol
un cigarrillo	cigarette
un costumbre	custom, habit, tradition
la droga	drug
fumar	to smoke / smoking
el peso	weight, peso currency
un riesgo	risk
el sobrepeso	obesity, excess weight
el vino	wine

Eating & drinking	
el aceite	oil
el agua	water
el alimento	food, nourishment
el arroz	rice
el azúcar	sugar
beber	to drink / drinking`
una bebida	drink
un bocadillo	sandwich
una botella	bottle
un café	coffee, cafe
un caramelo	sweet
la carne	meat
la cena	dinner, evening meal
cenar	to have dinner, tea
cocinar	to cook / cooking
comer	to eat / eating
la comida	food, meal, lunch
una copa	cup, glass
el desayuno	breakfast
la dieta	diet
dulce	sweet
la ensalada	salad
equilibrado	balanced
la fruta	fruit
la grasa	fat, grease
el hambre	hunger
una hamburguesa	burger
un huevo	egg
el jamón	ham
la leche	milk
una manzana	apple
una naranja	orange (fruit)
la paella	paella
el pan	bread
las patatas fritas	chips, fries
el pescado	fish
el pollo	chicken
probar	to taste, try
un régimen	diet
rico	rich, wealthy, tasty
la sal	salt
sano	healthy
la sed	thirst
las tapas	small dishes of food
un tomate	tomato
una uva	grape
un vaso	drinking glass
vegano	vegan
vegetariano	vegetarian
una verdura	vegetable

Anything else!	
acostar; acostarse	to put to / go to bed
el aire	air
un amigo	friend
el amor	love
apoyar	to support
un artículo	article, product, item
asistir	to attend
un caballo	horse
caer; caerse	to fall ; to fall over
cambiar; cambiarse	to change
el camino	way, route, path
el campo	countryside, pitch, field
un consejo	(piece of) advice
el consumo	consumption
costar	to cost, be hard
el cuidado	care, carefulness
cuidar	to take care of
descansar	to rest, relax
dormir; dormirse	to sleep; fall asleep
el estrés	stress
el gobierno	government
un hermano	brother
un informe	report
un joven	teenager, young person
la juventud	youth
lavar; lavarse	to wash; have a wash
levantar; levantarse	to raise; to get up
matar	to kill / killing
mental	mental
el nivel	level
una opción	option, choice
optimista	optimistic
la paz	peace
el peligro	danger
peligroso	dangerous
un perro	dog
un producto	product
promover	to promote
puro	pure, clean
relajante	relaxing
responsable	responsible
saludable	healthy
serio	serious
el silencio	silence
la sociedad	society
sufrir	to suffer / suffering
superar	to get over/ overcome
la tasa	rate
la vida	life

YEAR 9 CYCLE 2 GEOGRAPHY – Extreme Environments Knowledge Organiser

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
Hot deserts A desert is an area that receives less than 250mm of rainfall per year. Hot deserts are mostly found in dry continental interiors, away from the coasts, in a belt approximately 30°N and 30°S. At these latitudes, air that has risen at the Equator descends forming a belt of high pressure. There is a lack of cloud and rain and very high daytime temperatures. With a lack of clouds, temperatures can plummet to below freezing at night. Desert soils are sandy or stony with little organic matter due to the lack of leafy vegetation. Evaporation draws salt to the surface. The soil is not very fertile.	Adaptations Plants tend to have thin leaves or spines to reduce water loss and some have long roots to reach deep underground water (e.g. cactus). Vegetation is low growing and sparse. Many rodents are nocturnal, living in burrows underground and venturing out at night. Snakes and lizards retain water by having waterproof skin and producing only tiny amounts of urine. Camels have long eyelashes to keep out the sand and a hump to store fat on their back.  	Thar desert Stretches across north-west India and into Pakistan. Covers 200,000km². Most densely populated desert. Opportunities Mineral extraction: Gypsum, feldspar, phosphorite, kaolin. Sanu limestone in Jaisalmer for India's steel industry. Energy: Ideal location for wind and solar power. At Bahari, solar power is used in water treatment. Jaisalmer Wind Park was constructed in 2001. Challenges Temperatures exceeding 50°C makes farming work difficult and high rates of evaporation leads to water shortages. The 650km long Indira Gandhi Canal was constructed in 1958 as a source of freshwater.	Causes of desertification Desertification happens when land is gradually turned into a desert. Over-cultivation: results from the need to produce more food so the soil becomes exhausted. It will turn to dust and become infertile. Over-grazing: Population pressure results in land being overgrazed - too many animals to be supported by limited vegetation. Fuelwood: demand is increasing. Climate change: Causing drier conditions and unreliable rainfall, raining less than it did 50 years ago. Soil erosion: When the vegetation is destroyed, the soil is exposed to the wind and the rain, making it vulnerable to erosion.	Managing desertification Appropriate technology: involves using methods appropriate to the level of development. 'Magic stones' are used in Burkina Faso. Used to build low stone walls on the contours of slopes to trap water and soil. Tree planting: Trees bind the soil together and the leaves and branches provide shade, grazing for animals and fuelwood. 
WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
Las Vegas Approximately 650,000 inhabitants. Population in the Colorado Basin is set to almost double to 77 million by 2060. Average household in Las Vegas uses around 840 litres of water per day. The city gets just over 10cm of rain each year. The city recently suffered its longest drought with 116 days without rain. Seven states all rely on the Colorado River for their water. The water that feeds Las Vegas comes from Lake Mead, behind the Hoover Dam. It is drying up. Xeriscape – a garden that requires little or no irrigation or other maintenance. Desalination – the process of removing salt from seawater.	Alaska Covers 2 million km². Tundra overlaying permafrost in the north. Indigenous people include the Inupiat. Opportunities Mineral extraction: Coal, copper, silver and gold. 20% of Alaska's mineral wealth is in gold. \$2.1 billion worth of gravel is mined. Energy: 1/3 of the state's incomes comes from oil and gas, employing over 100,000 people. Transported from Prudhoe Bay in the north to Valdez in the south via the Trans-Alaskan pipeline (1,200km long / 800 miles). Challenges Roads built on gravel beds to reduce heat transfer, reducing the permafrost melting. Limited sunlight in winter makes working outside difficult. Travel by snowmobiles or 4x4s.	Antarctic Treaty (large scale) Treaty came into force in 1961, originally signed by 12 countries. By 2016, there were 53 countries. Protocol states Antarctica is a natural reserve dedicated to peace and science. Objectives include: no military operations, scientific cooperation, ban mineral extraction. Union glacier (small scale) Expanse of ice in the Ellsworth Range. Natural blue ice runway to land large Ilyushin cargo planes which bring equipment for expeditions. Camp open for four months of the summer season. Small number of visitors for walking, trekking, visiting penguin colonies (must stay 5m away from wildlife). Some equipment is powered by solar panels to reduce the use of diesel.	Mount Everest Height of 8,850 metres above sea level on the Nepal-Tibet border. Everest formed due to the collision between the Indian and Eurasian tectonic plates. Sherpa community are an ethnic group, indigenous to the Himalayan region. Many work as mountain guides, carrying extra gear such as oxygen bottles and are expert navigators. In 2019, Nepali climbers retrieved four bodies and collected some 11 tonnes of decades-old garbage from Mount Everest. Slopes were littered with human excrement, torn tents, cans and plastic wrappers. People living near Everest use melted snow for their water supply.	Mariana Trench Located in the western Pacific Ocean. It is a crescent-shaped trench, considered the deepest oceanic trench on Earth. It is about 2,550km in length and 69km in width. The maximum known depth is 10,984 metres at Challenger Deep. Only three divers have explored this. Some measurements suggest 11,034 metres. The Mariana Trench is part of the Izu Bonin-Mariana subduction system that forms the boundary between two plates. The Pacific plate is subducted beneath the smaller Mariana Plate. In 2019, Victor Vescovo reported finding a plastic bag and candy wrappers at the bottom of the trench.

YEAR 9

Cycle 2 HISTORY: Why have women had to fight for their place in History?

Week 1

Historiography	The study of the writing of history and written history
Gender	a group of people in a society who share particular qualities or ways of behaving which that society associates with being male, female, or another identity
Patriarchy	A system of society or government in which the father or eldest male is the head of the family

How many famous women from History can you list? Stop when you get to 20!
Can you find out more about one of these women?

Feminine focused History – Her-Story

Women have always made up roughly half the global population. Why then should they not inform the way we perceive the past? We know so much about the rich and powerful few, but what about the poor and impoverished many? The very old and the very young are often ignored as well. Historians often write the history that reflects their own experience – so it is no wonder that if the majority of History is written by middle class white men, this is the History we mainly learn about.

Which women are most likely to be missing from history?

Week 4

Matriarchy	A system in which women hold the primary power positions in roles of authority.
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Queen Nzinga Mbande – A 17th C African ruler of the Ndongo and Matamba in Angola. She fought for the freedom and recognition of her kingdoms against the Portuguese. She served as an envoy for her brother at peace negotiations and demonstrated great political and diplomatic acumen. After his death in 1624 she was elected Queen by a small faction of eligible voters, her opponents refused to regard her as the legitimate ruler of Ndongo and joined the Portuguese in an attempt to remove her from the throne. Her ruling prowess, successfully transformed her Kingdom into a commercial state to rival Portuguese colonies.

Queen Elizabeth I - A very clever, quick-witted ruler and famed for her great skills of persuasion. She rarely failed to get her own way, and surrounded herself with carefully-chosen ministers who would help her rule. Many people in the 16th century believed that a woman wasn't fit to rule, but Elizabeth was quick to prove them wrong! She could be as cunning and ruthless a leader as any king who came before her, and she was a strong, formidable leader.

Why did European leaders support a policy of appeasement with Germany?

Week 6

Revisit weeks 1-5. Create your own descriptive sentences about the changing roles of women over time. You should aim to use all the key vocabulary.

Week 2

Subjugated	Bring under domination or control, especially by conquest.
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Ancient Civilisations.

Many people first encounter ancient history in school, and it is typically the rote memorization of great civilizations, the ancient mysteries they left behind, and men's contributions to science, art, philosophy, and so forth. What the history books neglect to mention is that girls – even young girls – played important roles in society. They led very complex lives.

Ordinary Medieval Women

Life was tough for an ordinary village woman. Mothers would teach their daughters to cook, sew, and care for children and animals. The average age to marry was 17, although brides could be as young as 13. Poor women had more freedom to choose who they married but for rich women – her family would choose for her, often to strengthen ties between two rich and powerful families.

Write a description of life for ordinary women
Are there differences between time periods? Explain your thinking

Week 3

The perception of Medieval Europe is that was an age that was totally dominated by men. Women had very few rights and had to be "subject to men in all things".

However, one of the most powerful people in all of Medieval Europe was a woman, Eleanor of Aquitaine. Her influence on the monarchs of England and France was enormous.

Eleanor of Aquitaine – At the age of 15 Eleanor became the most eligible heiress in Europe and she married King Louis VII of France. They had 2 daughters. They went on an unsuccessful crusade in 1147 and finally divorced in 1152 because Eleanor did not have a son.

2 months later Eleanor married Henry of Anjou who became Henry II of England. They had 5 sons and 2 daughters. Eleanor was very active in helping to run Henry's kingdom.

In 1173 Eleanor's 2 sons involved her in a plot to kill their father. It failed and she was imprisoned.

On the death of Henry II, Richard I ordered his mothers release. Despite being in her 60s Eleanor became active once again in English government until her second son John took the English crown in 1199.

What power did Eleanor have and how was she controlled?

Week 5

Exclusion	The process of excluding or the state of not being allowed to contribute, participate or be remembered.
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Interpretation - Elinor Cleghorn, **'Medical Myths About Gender Roles'**: "Historically, women have been subordinated in politics, wealth and education. At every stage in its long history, education has absorbed and enforced socially constructed gender divisions. These divisions have traditionally ascribed power and dominance to men. Women's marginalisation in science has been "particularly powerful" from the 1850s to now. Women's work has often been ignored or trivialized compared to that of their male counterparts. Women's work has not been celebrated, and it's not been recognized as science. There is a difficulty of researching women's contributions to science, given that women often weren't named in historical documents."

Are women actually missing from scientific professions? If not why don't we know more about them?

Plot a flow chart of the changing role of women from the Ancient World to the 19th Century

YEAR 9

Cycle 2 HISTORY: Why have women had to fight for their place in History?

Week 7

Separate Spheres	Victoria ideology that men and women were different and meant for different things
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Attitudes towards the sexes

The Victorian era can be attributed to the forming of strict gender ideals and stereotypes. Men and women were allocated specific roles which led men to hold more power over women, and therefore significantly disadvantaged during this era. Historians call this 'separate spheres,' and it means that a man's place was in the world of economics and business while a woman was at home. Separate spheres worked alongside Darwin's theory, the 'Survival of the Fittest' which placed men higher on the evolutionary ladder.

Victoria Work

These views on gender meant that all aspects of society became gendered. In 1830, wives often assisted husbands in small businesses, but by the 1890s work and home were commonly separated. Men left domestic service, largely down to the shift from agricultural to heavy industrial work. It is calculated that whilst most men worked, only one third of all women were in employment at any time in the 19th century.

How do ideas affect women's roles?

Week 8

Suffragette	A woman seeking the right to vote through organised protest.
Suffragist	A person advocating that the right to vote be extended to more people, especially to women

Suffragists - Those involved in the first wave of the campaign for women's votes are known as suffragists. Suffragists believed in peaceful, constitutional campaign methods. In the early 20th century, after the suffragists failed to make significant progress, a new generation of activists emerged. These women became known as the suffragettes, and they were willing to take direct, militant action for the cause.

Suffragettes - Members of women's organisations in the late-19th and early-20th centuries who, under the banner "Votes for Women," fought for women's suffrage, the right to vote in public elections. The term suffragette refers in particular to members of the British Women's Social and Political Union (WSPU), a women-only movement founded in 1903 by Emmeline Pankhurst, which engaged in direct action and civil disobedience.

What are the main differences between the groups?

Week 9

Martyr	Someone who suffers persecution or death for their beliefs
Force Feeding	the practice of feeding a human or animal against its will.

Positives of the Suffrage movements activities -

- The rough treatment of the Suffragettes arrested and jailed during their protests won increasing sympathy and support.
- Force-feeding of prisoners on hunger strike brought a great public outcry against the government.

- The Prisoner's Temporary Discharge for Ill Health (Cat and Mouse) Act also brought public sympathy for the protesters.
- The behaviour of the Suffrage movement during WWI, including the suspension of protests for the sake of national unity, proved that the women were far from unreasonable.

Negatives of the Suffrage movements activities -

- Some argued that women who acted militantly did not deserve the vote
- Churchill proclaimed that "their cause has marched backwards"
- Opposition to the militant campaign was so strong that the National League For Opposing Woman Suffrage was formed (1911)

Describe the impact of the actions of the Suffrage movement

Week 10

Sexism	Prejudice, stereotyping, or discrimination, typically against women, on the basis of sex
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World War One.

During World War One, women stepped into a range of roles. Men had signed up in huge numbers to go and fight on the front line, leaving jobs behind that needed to be filled. Stepping in and doing this work helped to change the perception as to what women were capable of and proved they were capable of carrying out many of the same jobs as men. Many working class women took up jobs in factories, working as munitionettes producing weapons. Middle class women were more likely to take up administrative roles with the providing support to the armed forces, such as the Women's Army Auxiliary Corps.



What role did women play in World War One?

Week 11

Discrimination	The unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability.
Equality	The state of being equal, especially in status, rights, or opportunities.

Why did women demand social equality?

By 1928, all men and women over the age of 21 could vote, and women could become MPs. Women had secured political equality with men. But the fight for Women's rights was far from over. Socially, women were still considered inferior to men. Women were expected to get married and focus on looking after their families. If they worked, women were paid less than men. The Second World War changed little, and in the 1960s women started to demand social equality. They demanded the right to control their bodies: freedom of fashion and when to have children. They also demanded equal pay for equal work by a series of high profile strikes. They then went on to fight for an end to Sex discrimination, which was finally legally achieved in 1975. This period is known as second wave feminism.

After winning the right to vote what did women continue to fight for. Why was this necessary?

Week 12

Revisit weeks 7-11. Create your own descriptive sentences about the fight to gain the vote and equality. You should aim to use all the key vocabulary.

Request for Peripartetic
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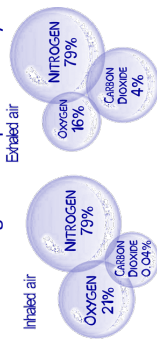
WEEK 1 RPE KEY VOCABULARY Freedom - Being free from restraints of all types. Free will - The ability to make choices for ourselves. Allegory - A story, poem or picture with a hidden meaning. Permissible - Permitted or allowed. Atheist - A person that does not believe in God.	WEEK 2 PSHE KEY VOCABULARY Mental health - A state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life and can work productively and fruitfully. Legal - conforming to or permitted by law or established rules Substance - Something that is taken into the body, alters the body's function either physically or psychologically. Substances may be legal (for example alcohol, caffeine or tobacco) or illegal (for example cannabis, ecstasy, or cocaine). Emergency - A serious, unexpected, and often dangerous situation requiring immediate action.	WEEK 3 Theist view - Most religions state that God must have created humans with free will so that they can make choices in how to act. God did not want to create robots but instead humans that choose freely. Adam and Eve were given free will in the Garden of Eden. Atheist view - Many atheist say that we are governed not by free will but by the processes of the body. We get hungry, tired or stressed and we react to that. They say that free will was a necessary idea, once upon a time. They say that for the religious, it was to plaster over the holes in their god's kindness. It was a useful lie.	WEEK 4 Great ideas involve planning. Planning is vitally important to success. Here are 4 reasons why planning is important: 1. Planning helps identify goals 2. Planning offers directions 3. Planning covers problems 4. Planning gives perspectives SMART targets S - Specific M - Measurable A - Attainable R - Relevant T - Time bound	WEEK 5 According to Christians God is; All knowing: God knows everything it is possible to know, much more than human beings can know. This is omniscience. All-powerful: God has unimaginable power. Nothing is beyond God. Just: God is completely fair and just, so that all will be judged fairly without discrimination. Many Christians believe that as human beings have free will, they have the ability to choose their actions. This free will was given to Adam and Eve in the Garden of Eden, and they abused it by disobeying God	WEEK 6 These are five small changes that can create lasting positive changes in order to experience greater levels of happiness: Three 'gratitudes' - each day, write down three things you are grateful for; these should be different every day (Emmons and McCullough, 2003). Journaling - keeping a written record of your thoughts, feelings, experiences (Slatcher 2006). Exercise - regular physical activity, preferably outside (Babyak et al, 2000). Meditation - e.g. the few minutes of mindfulness practice you do in these lessons (Dweck, 2007). Random Acts of Kindness (Lyubomirsky).	WEEK 7 Plato: He said we cannot trust our senses to tell us about things. He said this world is like an illusion. However, there is another world where everything is perfect and where we can trust what we see. Dostoyevsky: He was asking a fundamental question: do we need to believe in God to have morals? He believed that in order to be good people we must follow the rules that religion gives us, otherwise society will be a horrible place. Nietzsche: He said "God is Dead". By this he meant that God is an idea of the past, not the future; we must face the truth that there is no longer any value in believing in God.	WEEK 8 The following factors could potentially result in a period of poor mental health: • childhood abuse, trauma, or neglect • social isolation or loneliness • experiencing discrimination and stigma • social disadvantage, poverty or debt • bereavement (losing someone close to you) • severe or long-term stress • having a long-term physical health condition • unemployment or losing your job	WEEK 9 State atheism is the official promotion of atheism by a government, sometimes combined with active suppression of religious freedom and practice. State promotion of atheism as a public norm was first practiced during a brief period in Revolutionary France. Since then, such a policy was repeated only in Revolutionary Mexico and some communist states. The Soviet Union had a long history of state atheism, in which social success largely required individuals to profess atheism and stay away from houses of worship; this attitude was especially militant during the middle Stalinist era from 1929–1939.	WEEK 10 Mental illnesses, in general, are thought to be caused by a variety of genetic and environmental factors: 1. Inherited traits. 2. Environmental exposures before birth. 3. Brain chemistry. Stigma - A mark of disgrace or disapproval against a person or circumstance Self-esteem - How we value and perceive ourselves. It can be really difficult to change.
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The Respiratory System

WEEK 1

The Composition of Air

The amount of each type of gas in the air changes during breathing . It also changes as a result of exercise as some gases are used more and some gases are produced by the body.



Gas	Change during exercise
Oxygen	The amount of oxygen in inhaled air will remain the same and in exhaled air will decrease, as more is used up during exercise
Nitrogen	The composition of nitrogen in inhaled and exhaled air will remain at the same level as rest
Carbon Dioxide	The composition of carbon dioxide in inhaled air will remain the same and in exhaled air will increase due to its creation as a waste product of aerobic exercise

WEEK 2

The Mechanics of Breathing

In order for us to get oxygen into our bodies, we have to breathe. Outlined below is the mechanics of how we breathe:

	Expiration	Inspiration	Changes during exercise
External	Relax	contract	More for forceful contraction of intercostal muscles
Ribs	Lower	Rise	
Diaphragm	Relaxes into dome shape	Contracts and flattens	More for forceful contraction of the diaphragm
Lung volume	↓	↑	
Air pressure lungs	↑	↓	
Air pressure is relatively high in...	The lungs	The environment	Greater pressure difference between the lungs and environment

WEEK 3

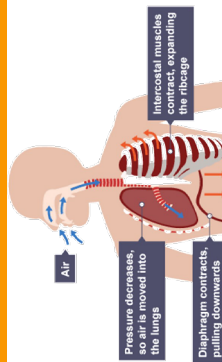
The Components of the Respiratory System

Alveoli: Features that assist gaseous exchange at the alveoli

- Large surface area provides a greater area for diffusion to occur over
- Moist, thin walls (one cell thick) reduce the diffusion distance
- Short distance for diffusion reduces the times it takes for diffusion to occur
- Vast number of capillaries increases the blood supply and oxygen supply
- Large blood supply increases the supply of gases and, therefore, increases the diffusion gradient
- Movement of gas from high concentration to low concentration

WEEK 4

Gaseous exchange and diffusion



- ✦ Oxygen breathed in moves from an area of high concentration (in the lungs) to an area of low concentration (in the capillaries).
- ✦ Oxygen combines with haemoglobin found in red blood cells is carried to the working muscles.
- ✦ Haemoglobin also carries carbon dioxide.
- ✦ Carbon dioxide is taken to the lungs, passes through alveoli and is breathed out .

WEEK 5

Respiratory Values at Rest and during Exercise

A spirometer trace shows the volume of air inhaled and exhaled.

(TV) Tidal Volume: normal amount of air inspired/expired

(VC) Vital Capacity: largest volume of air that can be forcibly expired following largest inspiration

The tidal volume increases during exercise in order to supply more oxygen to the working muscles. It also allows more carbon dioxide to be removed.

WEEK 6

