

# **Knowledge Organisers**

## **1<sup>st</sup> Spring Term**

**Science**

**Geography**

**History**

**Art/DT**

**French**

**PSHE**

**Computing**

**RE**

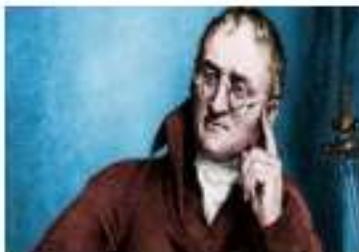
**Music**

**PE**

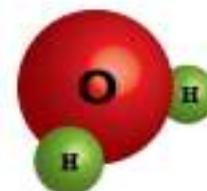
# **Year 5 & 6**

Knowledge Organiser - Science – Year 6 - Chemistry

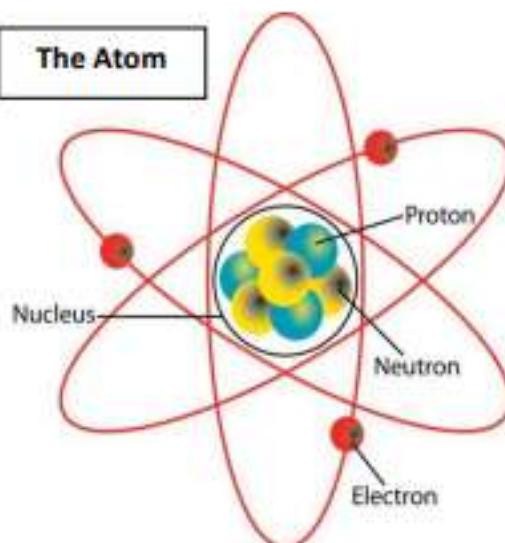
Key Vocabulary:	
<b>atom</b>	a basic unit of matter and the smallest unit of an element
<b>molecule</b>	molecule is formed when two or more atoms are joined by a chemical bond
<b>proton</b>	particle within the nucleus of an atom that holds a positive charge
<b>neutron</b>	particle in the nucleus of an atom that has no electric charge
<b>electron</b>	particle of an atom that orbits the atom's nucleus and carries a negative charge
<b>nucleus</b>	central core of an atom containing the protons and neutrons.
<b>Periodic Table</b>	table of the chemical elements arranged by atomic number.
<b>elements</b>	pure chemical substance that is made up of one type of atom
<b>neutral</b>	not a positive or a negative charge
<b>compound</b>	compound is a pure substance made up of two or more elements
<b>reversible</b>	Reversible changes, like melting and dissolving, can be changed back again.
<b>irreversible</b>	Irreversible changes, like burning, cannot be undone



### John Dalton (1766 – 1844)



## The Atom



### Key Knowledge:

I understand how small an atom is and what it is.

I understand what the numbers on the Periodic Table mean.

I know who Dmitri Mendeleev is and how he organised the Periodic Table.

I know the difference between physical and chemical reactions.

## Dmitri Mendeleev (1834 - 1907)



# Periodic Table of Elements

## Knowledge Organiser – South America – Geography – Year 6

Key Vocabulary	Definition
Pangea	A supercontinent that broke apart 175 million years ago forming the continents we recognise today.
Rainforest	A dense forest, rich in biodiversity, that is often found in tropical areas that receive high levels of rainfall.
Subduction Zone	An area where one tectonic plate is being forced under another, often creating mountain ranges.
Plateau	A flat area of land with high altitude.
Altitude	The height of a location, often relative to sea level.
Deforestation	The process of removing forest.
Biodiversity	The variety of plants and animals within a habitat.

Key Knowledge
I know South America is a continent located in the Western Hemisphere and the countries within it include Brazil, Chile and Argentina
I know the Incan Empire was located in South America and it has a challenging geography.
I understand the different terrain of The Andes mountains.
I know farming and energy production are important to Brazil's economy.
I understand that deforestation is a major threat to biodiversity in the Amazon Rainforest.

The Incan Empire			
Location	Dates	Places	Language and Communication
The Incan Empire spread along the pacific coast from Ecuador to Chile.	Began in 1100 CE	Cusco- the Incan Capital located in Peru built in the shape of a puma	Quechua (Ketch-oo-ah) the single Incan language, spread across the empire, to encourage clarity of communication.
Reached its height in 1530		Machu Picchu- high in the Andes mountains	Quipu: lengths of knotted string, used to keep records and pass messages around the empire.
Declined in 1535			



## Knowledge Organiser - The Industrial Revolution - History - Year Five

Key Vocabulary	Definition
Industrial Revolution	A time of great change in Britain between 1750 to 1900
Population	The number of people living in a particular place
Invention	Something new which is created, can be an object or an idea
Economy	The system of how money is used within a particular country
Agriculture	The process of farming, including both growing and harvesting crops and raising animals, or livestock.
Poverty	The lack of basic human needs such as clean water, nutrition, healthcare, education and shelter
Industry	The process of making products by using machines and factories
Mass production	The manufacture of a product in large numbers and at a low cost.

Pre-industrial Britain



Post-industrial Britain



### Key Knowledge

I know the 'Industrial Revolution' describes the change from a society based on hand manufacturing and human or animal power, to a society based on machinery in factories.

I know the steam engine was one of the most important inventions of the industrial revolution.

I understand the how goods were transported in the Industrial Revolution.

I know industrial revolution caused cities to grow rapidly and that this. was called urbanisation

I understand Victorian children played a role and had dangerous jobs during the industrial revolution.

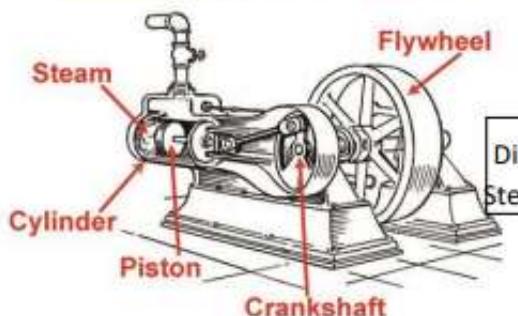
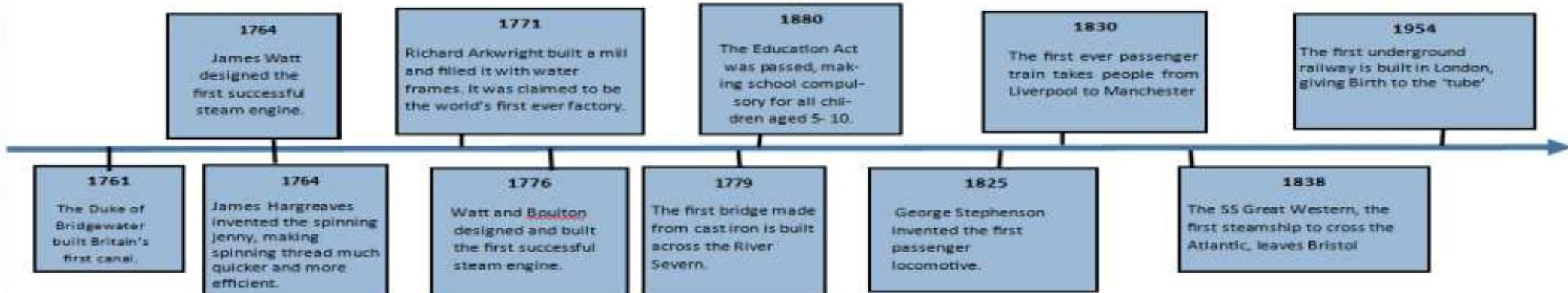


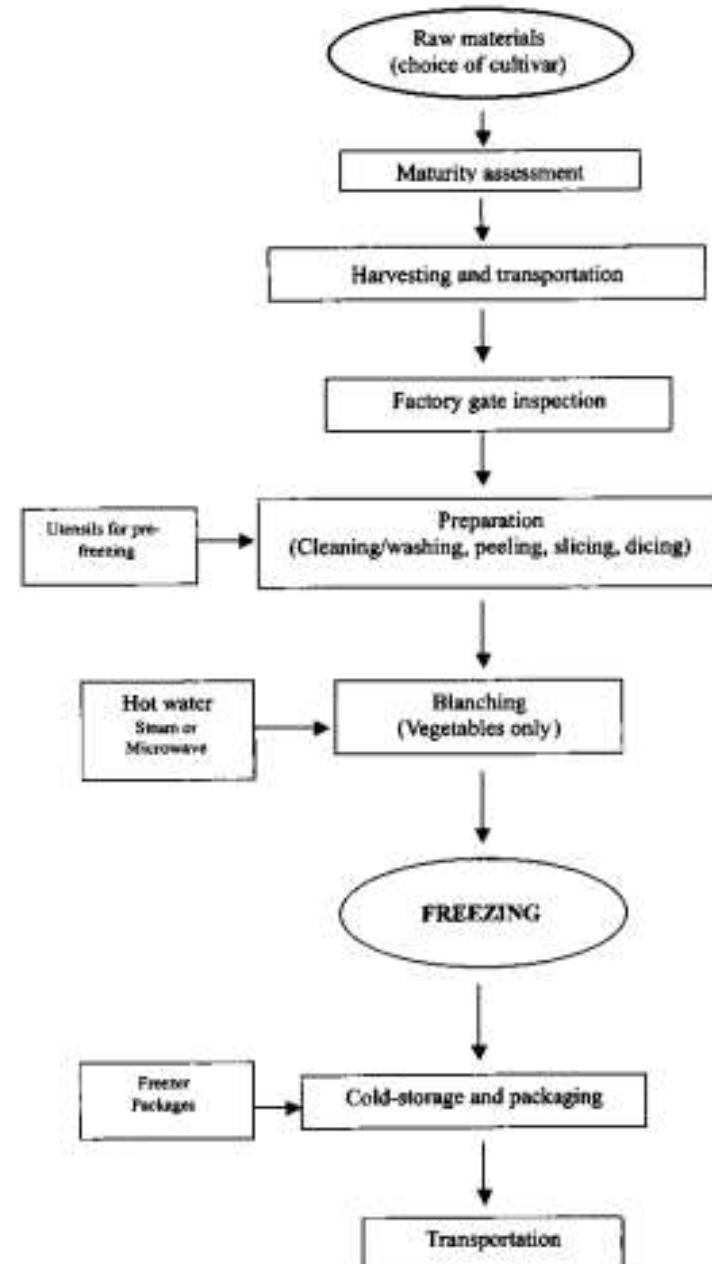
Diagram of a Steam Engine



## Knowledge Organiser – Food -DT - Year 4

Key Vocabulary	Definition
seasonality	times of year when the harvest or the flavour of food is at its best.
produce	to make or grow food to be usually sold.
savoury	food that is salty or spicy rather than sweet.
food production	manufacturing or growing something in large quantities.
ingredients	The parts of a recipe that are combined to make a dish
hygiene	actions and ideas that maintain health and prevent disease, especially through cleanliness.
rubbing in	To mix usually butter and flour together using finger tips to create a breadcrumb consistency.
designing	A plan to make a product
evaluating	To make a judgment about a product against success criteria

Key Knowledge
I know that food is seasonal
I know that food is processed and can give an example
I can follow a recipe
I can design a product for an audience
I can explain how to be safe in a kitchen
I know how to evaluate a product
I know what consumer feedback is



# Latin Knowledge Organiser - Unit 3: (Maximum) Verbs and Adverbs

Key Vocabulary	
Latin	English
cūrāre	to look after, take care of
dare	to give
fortiter	bravely
trāte	angrily
facilē	easily
laete	happily
bene	well
male	badly
optimē	very well, excellently
celeriter	quickly

## Unit Motto

**alea jacta est = the die is cast**

Key Knowledge
To understand the role of adverbs in Latin and English.
To learn the spelling and meaning of 10 core vocab words.
To match English words with their Latin root words.
To learn about traditional Roman mosaics.
To investigate the Bath curse tablets.
To encounter the myth of Midas in a mixture of English and Latin.



Important terms		
adverb	malediction	benediction

adverb  
A word that describes how a verb is being done, often (but not always) ending in -ly in English

malediction  
A curse, from the Latin 'male' meaning 'badly' and 'dicere' meaning 'to say.'

benediction  
A blessing, from the Latin 'bene' meaning 'well' and 'dicere' meaning 'to say.'



**Greek Myth:  
The Myth of Midas**

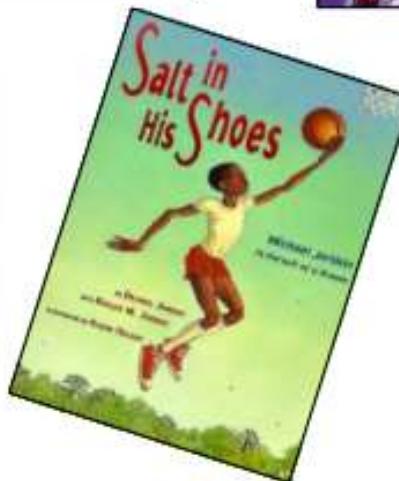
Key Language Ideas and Grammar
Adverbs describe verbs and make them more interesting.
Latin also uses adverbs and they tend to end in -e or -ter.



## Knowledge Organiser – PSHE – Dreams and Goals - Year Four

Vocabulary	
<b>Determination</b>	The effort required to do something and keep doing it until the end, even if it is hard.
<b>Perseverance</b>	The continued effort to do or achieve something despite difficulties, failure, or opposition.
<b>Cooperation</b>	To act or work together with another or others for a common purpose.
<b>Fears</b>	To be afraid of someone or something.
<b>Hopes</b>	To want something to happen.
<b>Dream</b>	Something that you hope for very much, although it is not likely to happen.
<b>Goals</b>	An aim or purpose.
<b>Resilience</b>	To be able to recover quickly from difficulties; toughness.
<b>Commitment</b>	To be dedicated to a cause or activity.

Key Knowledge
I understand that sometimes hopes and dreams do not come true and that this can hurt.
I know how to make a new plan and set new goals even if I have been disappointed.
I know how to work out the steps to take to achieve a goal, and can do this successfully as part of a group.



### Reflective questions

Ask me this...

What dreams or hopes do you have for the future?

How will you know when you have achieved your goal?

What can help when you feel hurt or disappointed?

## Knowledge Organiser- Computing Systems and Networks - Systems & Searching – Computing – Year 5

Key Vocabulary	Definition
System	Computer systems are a combination of both hardware and software working together. Hardware is the physical components of a computer and software is the programs that run on a computer.
Input	An input is data or message that a device receives
Process	A process is what a device does with the message or data it receives.
Output	The output is the data that the device sends out after acting on the input.
Algorithm	A set of instructions, written in chronological order, that are used to get a task done.
Digital	Using or storing data in the form of digital signals
Search Engine	a program that searches for items in a database that correspond to keywords or characters specified by the user.
Index	A set of items which specifies a record of a file
Crawler	A program that searches the web to create an index of data
Bot	A program on the internet or other network that can interact with users
Search Engine Optimization (SEO)	Applied to websites to help them rank as highly as possible.

### Systems

- Systems are a set of things that work together to create a whole outcome.
- Computer systems are made up of inputs (something that sends a message to the device), processes (the way the device acts on the message) and outputs (something that is sent out by the device).

### Working Together

- The internet can be used to help people collaborate on projects online, even when they are miles apart.
- Collaboration means working together on something to reach a shared goal.
- Shared 'cloud' functions and online drives can be used to store projects that multiple people can access at one time.

Key Knowledge:
To know that computers can be connected together to form systems
To recognise the role of computing systems in our lives
To be able to experiment with search engines
To understand and describe how search engines select results
To know how search results are ranked
To understand why the order of results is important and to whom

### Search Engines - Introduction

- We can find information on the World Wide Web by using search engines.
- A search engine is a program that finds websites & webpages based on key words entered by the user.
- When the World Wide Web was invented by Tim Berners-Lee in 1989, there was only 1 website. By 2018, there were 1,630, 322, 579! The World Wide Web is a big place, and we need search engines to be able to find what we need.
- Some examples of search engines are Bing, Google, Yahoo, DuckDuckGo and Kiddle.
- You can also type searches into the address bar of the browser (e.g. Google Chrome or Microsoft Internet Explorer).

Selecting and Ranking Search Results	
<p><b>Selecting Search Results</b></p> <ul style="list-style-type: none"> <li>Search engines use programs known as <u>crawlers</u> to index the World Wide Web.</li> <li>They 'crawl' websites for searchable information – they then store where it is found in a huge <u>index</u>.</li> <li>Search engines select information from this index when we type in key words.</li> <li>Searching for some search terms can bring many <u>millions of results</u>.</li> <li>We need to make sure that our search terms are as <u>refined</u> as possible, in order to allow the search engine to select the information that is most relevant.</li> </ul> <p><b>Ranking Search Results</b></p> <ul style="list-style-type: none"> <li>Search engines 'rank' the web pages (the highest ranked page is at the top).</li> <li>Search engines use <u>algorithms</u> to do this – algorithms look at a number of different factors and give web pages a score for each.</li> <li>The web page with the highest score ranks the highest.</li> <li>Some factors include if the search term is in the title of the page (high points) or if it appears in the paragraphs of the text on the page (lower points).</li> <li>Web designers consider algorithms when making their pages.</li> </ul>	

## R.E. Year 6 Autumn 1 Knowledge Organiser

### Enquiry: What is the best way for a Muslim to show commitment to God?

Key vocabulary	Definition
<b>Islam</b>	Religious faith of Muslims- founded by the prophet Muhammad
<b>Muslim</b>	A follower of Islam
<b>Allah</b>	God
<b>5 pillars of Islam</b>	The framework of the Muslim life. They are the testimony of faith, prayer, giving zakat (support of the needy), fasting during the month of Ramadan, and the pilgrimage to Makkah once in a lifetime for those who are able. The framework of the Muslim life.
<b>Shahadah</b>	Islamic profession of faith, "There is no god but Allah, and Muhammad is his messenger": the first of the Pillars of Islam.
<b>Salat</b>	Prayers, said five times a day: the second of the Pillars of Islam.
<b>Zakat</b>	Giving charity to the needy
<b>Sawm</b>	Fasting (giving up food) during Ramadan
<b>Commitment</b>	Doing something on a regular basis and by demonstrating loyalty, hard work and belief. Making a promise or pledge to someone or something



Key Knowledge
I know what "commitment" means.
The 5 Pillars of Islamic faith are: Prayer, Fasting, Almsgiving, Pilgrimage and Faith.
I know the third Pillar is about giving money to Charity and this shows commitment.
I know that fasting and going on a pilgrimage shows commitment
I can explain how I will show commitment to important people and things in my life.

## THE FIVE PILLARS OF ISLAM

These are the duties of Islam, the religion of Muslims.



**Shahadah**  
(Faith)

To believe in no God but Allah and that Muhammad is His prophet and the messenger of Allah.



**Salah**  
(Prayer)

To pray five times each day:  
Fajr - Before Sunrise  
Zuhr - Early Afternoon  
Asr - Late Afternoon  
Magrib - After Sunset  
Isha - Night.



**Sawm**  
(Fasting)

To give up food and drink during daylight hours in the month of Ramadan.



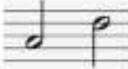
**Zakah**  
(Almsgiving)

To give a share of personal wealth to help people in need and support the Muslim community.



**Hajj**  
(Pilgrimage)

To perform a pilgrimage to Makkah at least once in a lifetime.

Key Vocabulary	Definition
Time signature	The rhythm following a clef
Key signature	The key of a piece of music depends on the flats and sharps in the music.
Tempo	The speed at which music is played
Rhythmic patterns using:	Minims:  Dotted crochets:  Quavers: 
Notation	The symbols which demonstrate sound
chords	A group of notes which fit together.

Songs Covered	
Ghost Parade	Style: 20 <sup>th</sup> and 21 <sup>st</sup> Century Orchestral
Words Can Hurt	Style: 20 <sup>th</sup> and 21 <sup>st</sup> Century Orchestral
Joyful, Joyful	Style: Gospel

**Key Signature:** C major — there are no sharps or flats in the key signature



**Key Signature:** G major — there is one sharp in the key signature

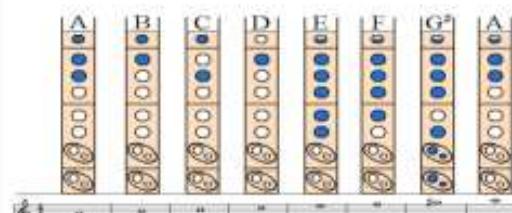


**Key Signature:** C minor — there are three flats in the key signature



## Improvise Together

**Recorder A Minor Scale and Finger Chart.**

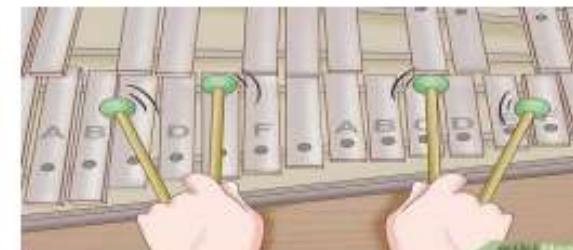


## 4/4 Time Signature



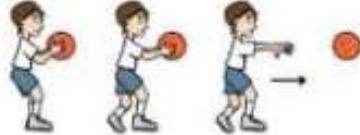
**Top Number**  
4 beats every bar

**Bottom Number**  
Quarter (crochet) beat



Key Vocabulary	Definition
<b>Dribble</b>	Moving with the ball by bouncing it with one hand.
<b>Double Dribble</b>	THIS IS NOT ALLOWED! – Dribbling the ball with 2 hands at once. Possession is given back to the opposing team.
<b>Travelling</b>	THIS IS NOT ALLOWED! – Moving with the ball without dribbling it. Possession is given back to the opposing team.
<b>Chest pass</b>	When someone passes the ball from chest height with no bounce.
<b>Bounce pass</b>	When someone passes a ball with a bounce.

Skill Development
To develop the attacking skills of dribbling.
To protect the ball when dribbling against an opponent.
To develop passing skills.
To use defending skills to delay an opponent.
To develop a shooting technique.
To apply rules and tactics in game situations.

Skills	
<b>Dribbling</b>	
<b>Passing</b>	
<b>Shooting</b>	