

# **Knowledge Organisers**

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

**Science**

**Geography**

**History**

**Art/DT**

**Latin**

**PSHE**

**Computing**

**RE**

**Music**

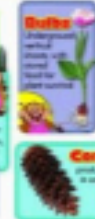
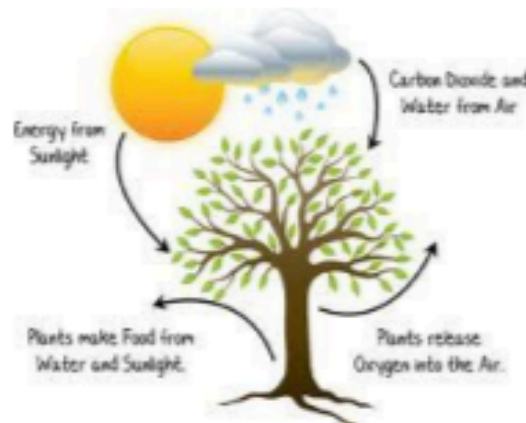
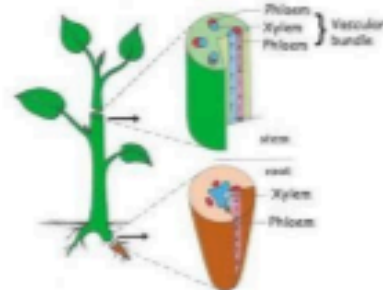
**PE**

# **Year 6**

## Knowledge Organiser – Plants – Science – Year 6

Key Vocabulary	Definition
<b>botanist</b>	expert in the study of plants
<b>roots</b>	take up water and nutrients from the soil, keep the plant steady and upright in the soil; they "anchor" the plant.
<b>stem</b>	carries water and nutrients to different parts of the plant
<b>flower</b>	reproductive organ for a plant
<b>carbon dioxide</b>	needed for photosynthesis to take place
<b>chlorophyll</b>	a green pigment that absorbs light and is used in photosynthesis
<b>chloroplast</b>	an organelle where photosynthesis occurs
<b>photosynthesis</b>	the process by which a plant makes food
<b>xylem</b>	tissue that carries water upwards from the root to every part of the plant
<b>phloem</b>	tissue that transports nutrients from the leaves
<b>transpiration</b>	the emission of water vapour from the leaves of the plant
<b>capillary action</b>	movement of water through the plant
<b>stomata</b>	small opening on the surface of the leaf which control when gases enter or leave the leaf
<b>vascular plant</b>	has roots, stem and leaves to enable water and nutrients to travel through the plant
<b>non-vascular plant</b>	does not have roots or a stem for the transportation of water and nutrients

### The Structure of the Stem and the Root



### Key Knowledge

- I know the parts of a plant and flower and their functions.
- I know the main stages in the life cycle of a flowering plant.
- I understand that plants make their own food using a process called photosynthesis.
- I understand how photosynthesis works and that plants contain chlorophyll.
- I understand the similarities and difference between vascular and non-vascular plants.

### Parts of a Plant



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

Key Vocabulary	Definition
<b>Pangea</b>	A supercontinent that broke apart 175 million years ago forming the continents we recognise today.
<b>Rainforest</b>	A dense forest, rich in biodiversity, that is often found in tropical areas that receive high levels of rainfall.
<b>Subduction Zone</b>	An area where one tectonic plate is being forced under another, often creating mountain ranges.
<b>Plateau</b>	A flat area of land with high altitude.
<b>Altitude</b>	The height of a location, often relative to sea level.
<b>Deforestation</b>	The process of removing forest.
<b>Biodiversity</b>	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  Reached its height in 1530  Declined in 1535	Cuzco- the Incan Capital located in Peru built in the shape of a puma  Machu Picchu- high in the Andes mountains	Quechua (Ketch- <del>wah</del> ) the single Incan language, spread across the empire, to encourage clarity of communication.  Quipu: lengths of knotted string, used to keep records and pass messages around the empire.





## Knowledge Organiser- The Rise of Hitler and WWII – History - Year 6

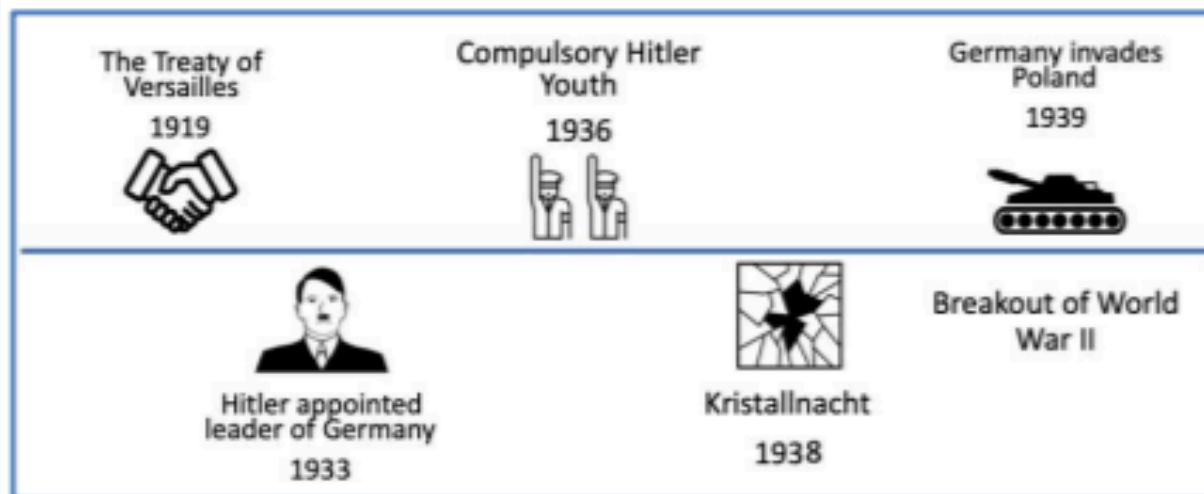
Key Vocabulary	Definition
<b>Armistice</b>	An agreement made between opposing sides in a war to stop fighting.
<b>Treaty of Versailles</b>	A document signed in 1919 to officially end the war between Germany and the Allied Powers and to outline punishments enforced upon Germany.
<b>Nationalism</b>	Support for a nation and its interests, often putting that nation above others.
<b>Adolf Hitler</b>	A German Politician and leader of the Nazi party, his decisions led to the deaths of thousands of people.
<b>Aryan Race</b>	A group of people the Nazis viewed to be superior than others. Aryan features included blue eyes and blonde hair.
<b>Assassinate</b>	The murder of a person for political or religious reasons.
<b>Concentration Camp</b>	A place where people are imprisoned in harsh conditions, without usual legal processes such as a trial.
<b>Refugee</b>	A person who has been forced to leave their country, seeking refuge in order to escape war, persecution, or natural disaster.
<b>Blitzkrieg</b>	A German word meaning 'Lightning War', intensive or sudden military attacks.
<b>Coalition</b>	A unity government formed with members of different political parties.

### Key Knowledge

- I understand that after WWI, many German people were unhappy with the armistice and the Treaty of Versailles.
- I know that after World War 1, Adolf Hitler became leader of the Nazi Party in Germany.
- I understand how The Nazi party controlled many aspects of life in Germany.
- I understand what Kristallnacht means and what happened on this night.
- I know that World War II began when Germany invaded Poland in 1939.



Winston Churchill – Prime Minister of Great Britain from 1940 to 1945



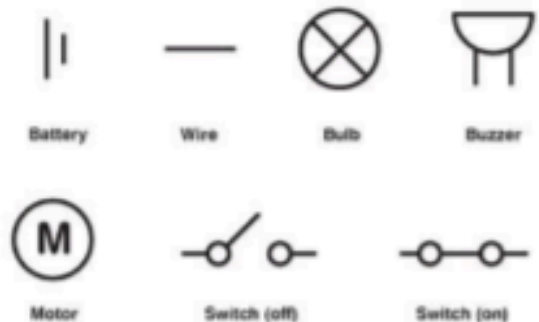
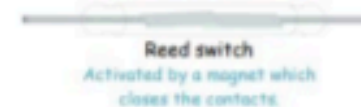
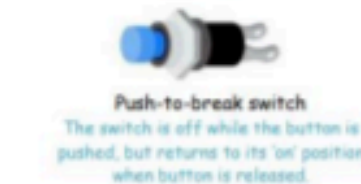
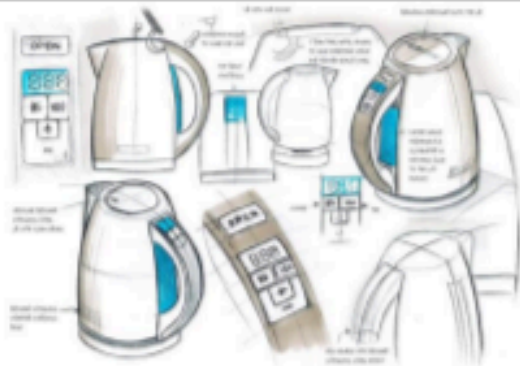
## Knowledge Organiser –Dyson Engineering (Design Technology - Year Six)

### Key Vocabulary:

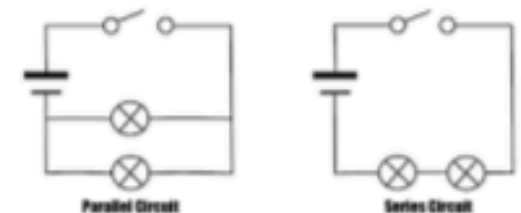
Open Switch	When a switch is positioned such that electricity cannot flow through it.
Closed Switch	When a switch is positioned such that electricity can flow through it.
Output devices	Components that produce an outcome e.g. Bulbs, buzzers, motors
Input devices	Components that are used to control an electrical circuit e.g. Switches or sensors
Design brief	A document for a design project developed by a person or team. They outline the details of the project including any the function, aesthetics, timing and budget.
Innovation	A new method, idea or product.
Function	How something works or operates in a particular way
Purpose	The reason for which something is done or created or for which something exists.
Aesthetics	How something looks or what something sounds like.
Prototype	A first version of a product from which others are developed.

### Key Knowledge:

I know who James Dyson is.
I know how fans have been innovated over time.
I understand how to create an electrical circuit for a fan mechanism.
I know that sketching is important in the design process.
I understand how prototypes help a product to evolve.



### Circuit Types



**James Dyson**  
James' frustration with the vacuum bag encouraged him to rethink it, and use a cyclone design instead.

## Latin Knowledge Organiser - Unit 9: A soldier's life

### Key Vocabulary

Latin	English
<b>signifier</b>	standard bearer
<b>vexillifer</b>	flag bearer
<b>cornicen</b>	horn player
<b>centurio</b>	centurion
<b>ballistā</b>	catapult
<b>prope</b>	near
<b>circum</b>	round
<b>sub</b>	under
<b>super</b>	on top of
<b>in</b>	in
<b>prō</b>	in front of
<b>ad</b>	to
<b>ē</b>	away from
<b>fessus/fessa</b>	tired
<b>laetissimus</b>	very happy
<b>sumus</b>	we are
<b>quis est?</b>	what is it?
<b>currit</b>	running

### Grammar

A **preposition** tells you the position of someone or something.

**Minimus** is in the catapult.

**Minimus** in **ballistā** est.



### Key Knowledge

To translate a Latin story containing questions

To consider the good and bad points of a Roman soldier's life

To encounter Latin prepositions

To recap key vocabulary

To explore and translate ancient mythology (Procrustes and his Terrible Bed)

**Unit Motto**  
semper fidelis =  
always faithful





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

Vocabulary	
Motivation	A desire or willingness to do something.
Empathy	The ability to understand and share the feelings of another.
Sponsorship	The financial support received from a sponsor.
Achievement	A thing done successfully with effort, skill, or courage.
Success	The accomplishment of an aim or purpose
Global	Relating to the whole world; worldwide.
Contribution	To achieve something together with other people.
Compliment	A polite expression of praise or admiration.
Recognition	Appreciation or acclaim for an achievement, service, or ability.



### Key Knowledge

I know my learning strengths and set challenging but realistic goals for myself.

I can identify problems in the world that concern me and talk to other people about them.

I can describe some ways in which I can work with other people to help make the world a better place.



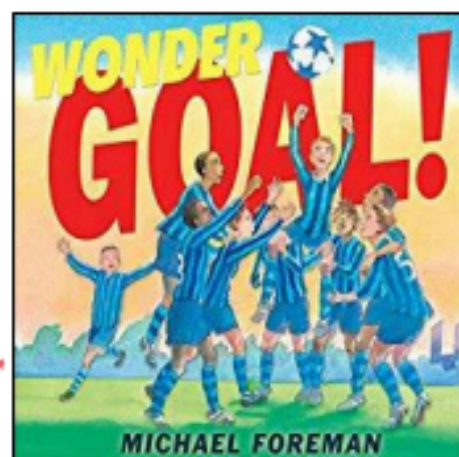
### Reflective questions

Ask me this...

How might you achieve your personal goals?

What does your goal say about you?

How can you help to make the world a better place?



## Knowledge Organiser- Data & Information - Introduction to Spreadsheets - Year 6

Key Vocabulary	Definition
Cell:	the building blocks of a spreadsheet. Each cell holds one piece of data.
Row:	a horizontal collection of cells. Each row is identified by a number on the left side of the row.
Column	a vertical collection of cells. Each column is identified by a letter at the top of the column
Spreadsheet	the entire collection of data. Most spreadsheet programs like Excel, refer to this as a worksheet or workbook. Google just calls it a spreadsheet.
Tab	an organizational unit in a spreadsheet. You can think of them sort of like different pages in the spreadsheet.
Formula	an equation based on multiple cells.
Function	formulas that are built into your spreadsheet software are called functions.
Manual Input	user inputted data into a cell. The difference between manually inputted data versus a cell with a computed value will become increasingly clear over this course
Output	a cell with a value that is calculated based on data in other cells. A function is an example of an output cell.

### Key Knowledge

- To be able to create a data set in a spreadsheet
- To be able to build a data set in a spreadsheet
- To explain that formulas can be used to produce calculated data
- To apply formulas to data, including duplicating
- To create a spreadsheet to plan an event

## SPREADSHEET FEATURES

A spreadsheet is a computer model that performs calculations and displays data.

### Row

A row is a horizontal block of cells. Each row is labelled numerically. The highlighted row is labelled 2.

### Cell reference

The cell reference displays the location of a cell or group of cells.

### Formulae

Formulae are not displayed on the spreadsheet. They are displayed in the formula bar.

### Columns

A column is a vertical block of cells. Each column is labelled alphabetically. The highlighted column is labelled C.

### Cells

Each cell in a spreadsheet has a unique cell reference. For example, the red cell's cell reference is A4. Cells can contain numerical data, text data or formulae.

### Example Spreadsheet

	A	B	C	D
1	Candidate no.	Name	Score	Result
2	1082	Jennifer	25	PASS
3	1212	Azhar	35	PASS
4	1932	Stephen	40	PASS
5	1324	Sam	18	FAIL
6	1453	Paul	29	PASS

### Cell and Font Format

	A	B	C	D
1	Name	Score	Grade	Result
2	Jake	156	D	Failed
3	Alexis	185	C	Passed
4	Isabella	220	A	Passed
5	Chloe	132	F	Failed

Within spreadsheets it is possible to change the font style, colour and size. It is also possible to change the background and border colour of cells.

### Alignment

Left Align

Centre

Right Align

Merge & Centre

The Merge & Centre tool is used to combine cells and centre text. It is useful for headings.

### Number

1-9

Number

1/4

Fraction

£

Currency

12:31

Time

05/05/12

Date

%

Percentage

It is important to select the correct number format when using spreadsheets. Users are also able to select the number of decimal places displayed.

### Graphs & Charts

	A	B
1	Grade	Number of pupils
2	A*	4
3	A	20
4	B	10
5	C	22

Graphs and charts provide visual representations of tabulated data. They are generally easy to interpret and help identify patterns and trends.

### Sorting

	A	B	C	D
1	Pupil ID	First name	Surname	Score
2	1223	Jennifer	Rae	64
3	1432	Isabella	Young	71

Column: PupilID Sort on: Values Order: A to Z

Cells can be sorted according to rules set for one or more columns.

### Formulae and Functions

+

-

\*

/

IF

SUM

AVERAGE

MIN

MAX

ROUND

COUNT

There are various formulae and functions available in spreadsheets.



## R.E. Year 6 Spring 1 Buddhism Knowledge Organiser

### Enquiry: What does enlightenment mean to a Buddhist?

Key vocabulary	Definition
<b>Nirvana</b>	Leaving the cycle of birth and rebirth and going to a place of peace and happiness.
<b>The Buddha</b>	The Buddha was a man called Siddhartha Gautama. He was from a very rich family, but during his life, he learnt about what was really important in life. He then taught others about what he had learnt. Buddhists do not believe that the Buddha was a god but that he was a very wise teacher.
<b>Middle Way</b>	The Middle Way or Middle Path is a teaching about a way of looking at things in Buddhism. This teaching advises a path of moderation, taking a middle way between extremes. In particular, the Buddha advises against taking either an overly hard path or an overly easy path.
<b>enlightenment</b>	In Buddhism, enlightenment (called Bodhi in Indian Buddhism, or satori in Zen Buddhism) is when a Buddhist finds the truth about life and stops being reborn because they have reached Nirvana.
<b>Lotus</b>	The lotus flower (which looks like the lily shown on the right) is an important symbol in Buddhism. It represents spiritual growth and development and receptivity to the Buddha's teachings. It is said that shortly after the Buddha's enlightenment, he saw all human beings like lotuses.

Key Knowledge
To understand Buddha's quest to stop suffering.
To understand that the 'middle way' is a balance between two extremes.
To understand that Nirvana is a state of perfect peace.
To understand why the lotus is an important symbol in Buddhism.
To understand enlightenment and how it effects the lives of Buddhists.



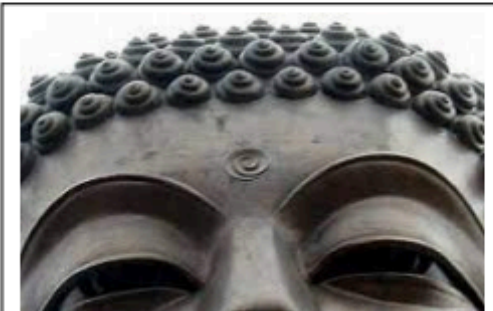
**Buddha**



**Lotus Flower**

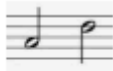
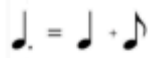





**Buddha under the Bodhi Tree**



**Third Eye**



Key Vocabulary	Definition
Time signature	The rhythm following a clef 4/4 — there are four crotchet beats in a bar
Key signature	The key of a piece of music depends on the flats and sharps in the music. D major — there are two sharps in the key signature (#)
Tempo	The speed at which music is played Adagio — At a slow speed (68 bpm)
Rhythmic patterns using:	<p>Minims:</p>  <p>Dotted crotchets:</p>  <p>Crotchets:</p>  <p>Quavers:</p>  <p>Semiquavers:</p> 
Harmony	Music to support the melody

Songs Covered	
Disco Fever	Style: Disco
La Bamba	Style: Rock 'n' Roll
Change	Style: Pop

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



**Key Signature:** D minor — there is one flat in the key signature

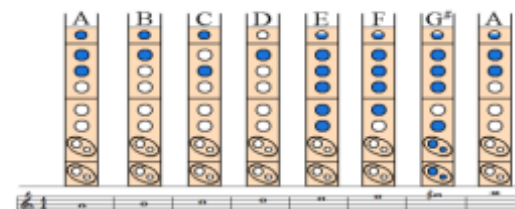


**Key Signature:** E b major — there are three flats in the key signature

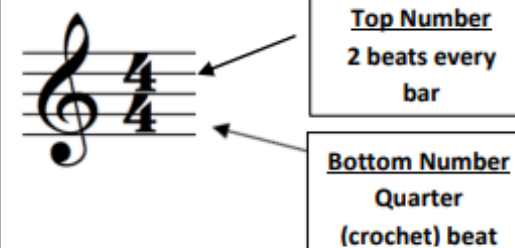


## Improvise Together

### Recorder A Minor Scale and Finger Chart.



### 2/4 Time Signature



### Notes you composed with...


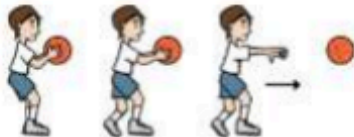
C, D, E, F, G, A, B



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>Rebound</b>	When someone shoots and misses and the ball bounces back into play.
<b>Turnover</b>	When possession is lots to the opposing team.

### Skill Development

- To dribble with control.
- To move into and create space to support a teammate.
- To choose when to pass or dribble.
- To use appropriate defensive techniques.
- To develop a shooting technique and know when to dribble, pass or shoot.
- To apply rules and tactics in game situations.

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