

Knowledge Organisers for Year 7

Name: _____

Autumn First Half-Term

Form: _____

What is a Knowledge Organiser?

A Knowledge Organiser is a place to keep some key information for the topics we are learning about. This may include an important formula, vocabulary, dates or explanations. It is not a complete list of everything we are studying but it *is* a place where we can find the basic information. It is likely that when you first see the Knowledge Organiser you won't understand most of what it on it. Gradually, as you work on the content in lessons it will become more familiar and, over time, you should find that, not only do you understand everything on it, but that you can *remember* everything that is on it and, even better, know how this information relates to what you are studying.

How do we use our Knowledge Organisers?

We can use our Knowledge Organisers in many ways. The main aim is that we are able to memorise, understand and eventually *apply* all of the information in the Knowledge Organisers. We will do this by:

- using them to refer to in class to support our learning.
- discussing them at home with parents or carers to reinforce our learning and so that others may be involved in what we are learning too.
- using them as learning homeworks that we will have quizzes on in class.
- using them to refer to when completing homework.

Where will I find the Knowledge Organisers?

Knowledge Organisers will be made available to you via the school website

<https://stjosephsbolton.org.uk> (Follow the link under school information to Learning & Teaching) and your teachers will often send you links to them with your homework on epraise or in your class TEAMS. (You will find out more about these teams over your first year at St Joseph's).

Half-term 1 – Contents

Here are the alphabetical contents for this half-term

• Art	• History
• Business and ICT	• Maths
• Design & Technology	• Music
• Drama	• PE & Fitness
• English	• RE
• French	• Science
• Geography	• Spanish

Art 'The Formal Elements' - Project 1



Grades of Pencils-

Pencils come in different grades, the softer the pencil the darker the tone. You will use HB and 6B in your work.



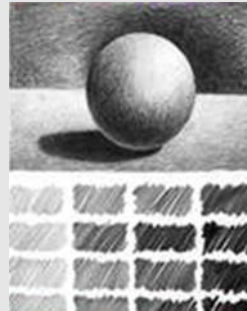
Blending stumps are used to blend tone in smoothly.

Art Technique Key Words

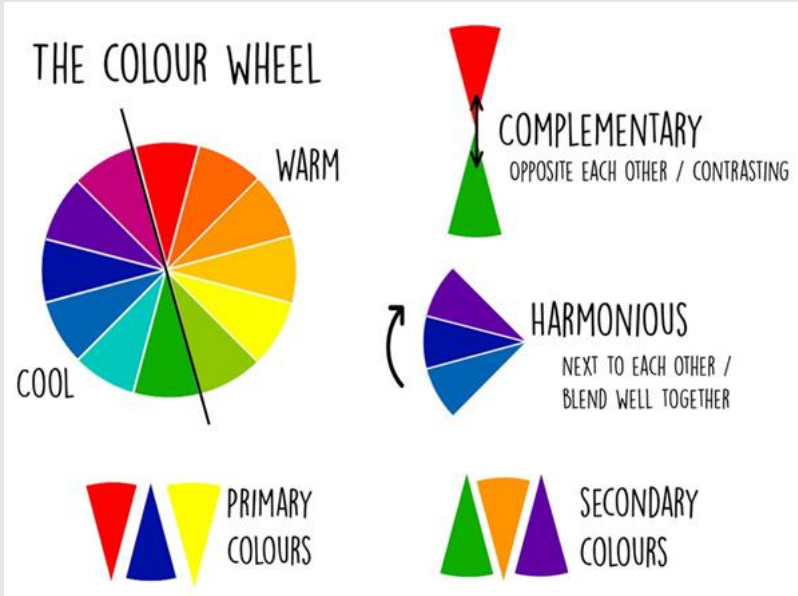
Media/Medium	The materials and tools used by an artist to create a piece of art
Technique	The way an artist uses tools and materials to create a piece of art
Composition	Where you place objects on the page
Highlight	The bright or reflective area on an object or piece of art
Shadow/shade	The darker areas within a piece of art or object
Proportion	The size relationship between different parts - eg height compared to width

Making objects look 3D

To prevent your drawings from looking flat, you should use a range of tones and marks. Pressing harder and lighter and layering with your pencil creates different tones. Use the direction of your pencil to help enhance the 2D surface, and you can also include shadows which will also help objects appear 3D.



Formal Element	Definition
Line	The path left by a moving point, e.g. a pencil or a brush dipped in paint, that can take many forms. e.g. horizontal, diagonal or curved.
Tone	The lightness or darkness of something. This could be shade or how dark or light a colour appears
Texture	The surface quality of something, the way something feels or looks like it feels. There are two types: Actual and Visual.
Shape	An area enclosed by a line. It could be just an outline, or it could be shaded in.
Pattern	A design that is created by repeated lines/ shapes/ tones or colours. It can be manmade, like a design on a fabric or natural, such as markings on animal fur.
Colour	There are 2 types including Primary and Secondary. By mixing any two primary together we get a secondary.

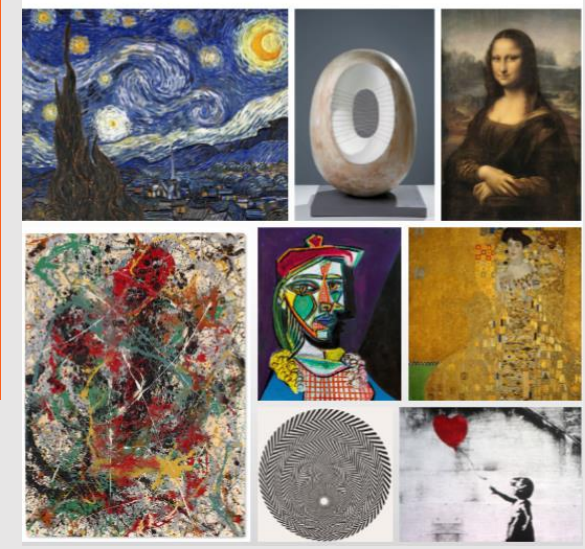


Colour Theory Key Words

- Primary Colours
- Secondary colours
- Tertiary colours
- Complimentary colours
- Harmonious colours

Tint

Shade.



- Vincent Van Gogh
- Leonardo DaVinci
- Jackson Pollock
- Barbara Hepworth
- Banksy
- Pablo Picasso
- Bridget Riley
- Gustav Klimt



B-ICT Knowledge Organiser

Year 7 A1—E-Safety



E-safety websites:

- www.thinkuknow.co.uk
- <https://www.bbc.co.uk/bitesize/>
- www.thinkuknow.co.uk
- <http://www.safetynetkids.org.uk/>
- <https://www.childline.org.uk/>
- <https://www.bbc.co.uk/bitesize/>



<h1>S</h1>	<h1>M</h1>	<h1>A</h1>	<h1>R</h1>	<h1>T</h1>
Stay Safe	Don't Meet Up	Accepting Files	Reliable?	Tell Someone
Don't give out your personal information to people / places you don't know.	Meeting someone you have only been in touch with online can be dangerous. Always check with an adult you trust.	Accepting emails, files, pictures or texts from people you don't know can cause problems.	Check information before you believe it. Is the person or website telling the truth?	Tell an adult if someone or something makes you feel worried or uncomfortable.
				Follow these SMART tips to keep yourself safe online!

Types of cyberbullying -

- Trolling • Excluding • harassing • gossiping • impersonating • cyberstalking • derogatory comments to/about someone • threats • Flaming • Masquerading



Information validity

Web browsers i.e. Chrome, Edge, Safari

Sir Tim Berners-Lee created the first website



How to check the quality of the information and website accuracy -

- Confirmed by other sources
- Unbiased
- Trusted source
- Up-to-date information



Billboard Test—if you wouldn't be happy to see it up there, don't post it online!

Key Terms

Cyberbullying—using any form of technology to bully.

Flaming— posting or sending offensive messages online.

Impersonating—pretend to be another person (to appear to be that person when online).

Masquerading—pretend to be someone you are not (for example posting anonymously or with a fake account).

Browser—software to access the internet i.e. Chrome, Edge

Bias—only giving one side of the story.

Safety and Security Top tips

Password—should be strong -over 12 characters and making use of uppercase, lowercase, numbers and symbols. Do not share this with anyone.

Locking computers—Ctrl + Alt + Delete—every time you leave your computer.

Anti-Virus—regularly scan your PC with anti-virus software to find any new issues



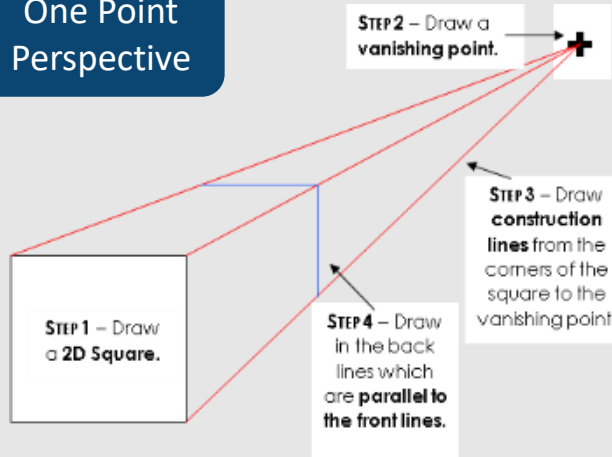
WISDOM HAS BUILT
HERSELF A HOUSE.

Department of Design and
Technology.

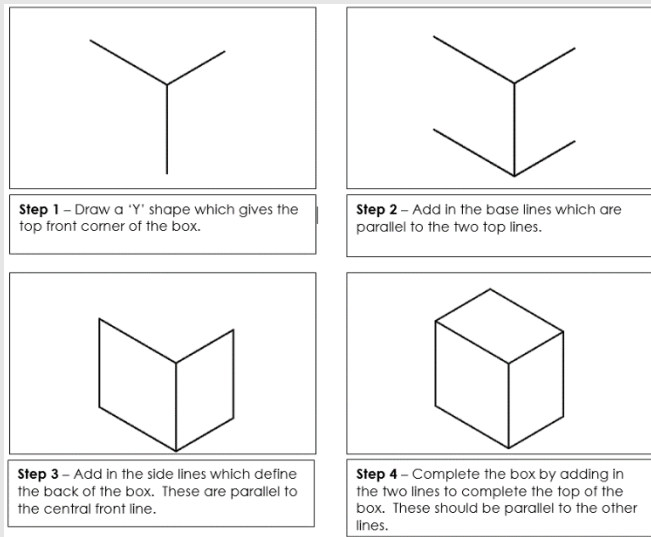
Knowledge Organiser - Year 7 – Drawing and Sketching – 1 of 5 modules



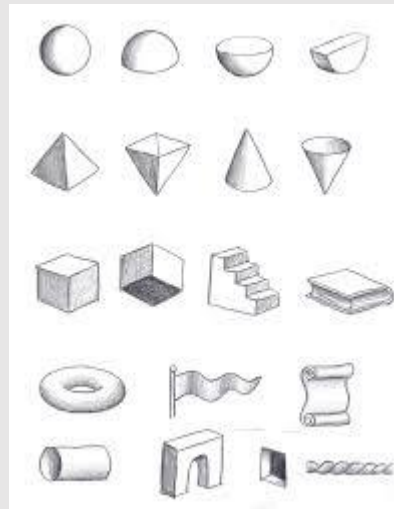
One Point Perspective



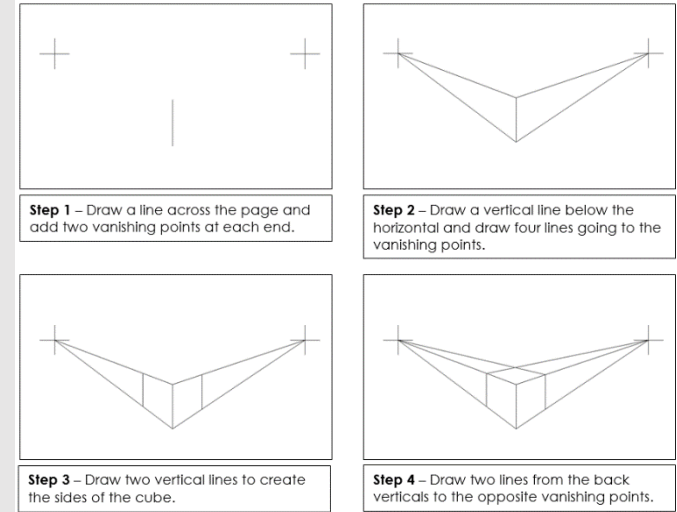
Isometric Drawing



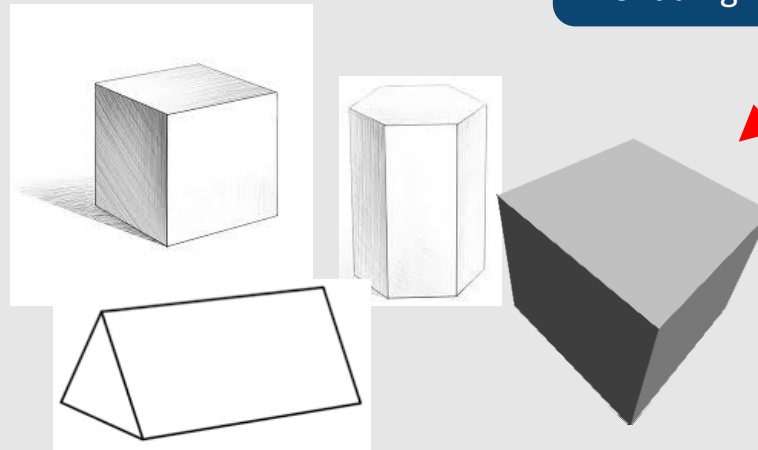
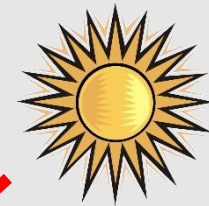
During this module various drawing and presentation skills will be learned. Practice the different techniques skills by drawing different shapes. Try and add tonal shade to improve presentation.



Two Point Perspective



Tonal Shading



Adding **tone** to a drawing when shading makes it look more realistic. The three tones used are **light**, **medium** and **dark**. The face that gets most light is lightest, the face that gets the least light is the darkest, and the one left is in the middle.

Year 7 Drama Autumn Term One

Introduction to Drama

Areas for Assessment

Creating	The ability to work within a group to create and develop performance work.
Performing	The ability to present a character using physical and vocal skills.
Evaluating	The ability to discuss the qualities of a performance using dramatic language.

Dramatic Mediums to consider when Performing

Facial Expression	Consider the direction of your eyes and what they say to an audience. What position is your mouth in. Do you need to demonstrate control if this is in slow motion?
Body Language	Open or closed? Are you portraying a strong character who is outwardly focused or a nervous inwardly character?
Gesture	What are they doing with their hands? Can it help the audience understand what is going on?
Use of Voice	Have you considered the words you are going to say? The volume, tone, pitch and use of pause to convey meaning.
Proxemics (space)	Where do the performers stand in the space? Does the distance between characters tell us anything about their relationships?
Audience Awareness	Are the performers positioned in places where the audience can see them fully?

Diction, Emphasis, Enunciation
Pace, Pause

Elements of Drama

Script: the text of the play

Cast of Characters: all of the characters, usually portrayed by actors

Narrator: the person who tells what happens during the play

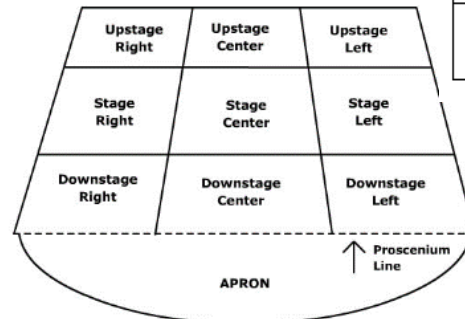
Setting: the time and place in the play

Act: a chapter in a play that contains more than one scene

Scene: the action that take place in a single setting

Dialogue: the words said by the characters

Stage Directions: written instructions telling the actors what to do



DO'S of mime ✓	DON'TS of mime ✗
DO Exaggerate characteristics	DON'T Turn your back on the audience
DO Face the audience	DON'T Laugh on stage
DO Be confident!	DON'T Look at the floor
DO Carry on if things go wrong	DON'T Rush through your lines
DO Make eye contact with the character you're talking to	DON'T Be nervous, just try your best!

Developing your key skills to begin your journey to become actors. Looking at how build working relationships. Develop our use of still images, thought tracking, mime and characterisation.

English - Culture

What will I study?

In this unit, you will begin by exploring what 'Culture' means. We will learn about the culture of St Joseph's as a school community and take time to explore your own individual culture. Our learning journey will take us on a trip around the globe exploring different cultures and traditions, stopping to appreciate texts from different countries by a range of talented writers. For example, in our studies of American culture, students have the opportunity to study the biographies of culturally significant figures such as Michelle Obama as well as texts from more recent figures of interest such as Amanda Gorman's poem 'The Hill We Climb'. Students will develop skills such as learning how to analyse language, both in poetry and prose, as well as using some of the texts we study as a springboard for their own writing.

Key Skill: Travel Writing

DAFOREST persuasive writing techniques

Direct Address	When the writer addresses the reader directly using pronouns such as 'you'/'we'
Alliteration	Using a series of words in succession that begin with the same consonant sound.
Fact	A statement that is true and can be proven.
Opinion	Someone's point of view of/about something. It is not always based on fact or knowledge.
Repetition	To repeat the same word/phrase/sentence more than once for effect.
Rhetorical Question	A question that does not require an answer, usually posed to emphasise an idea/opinion.
Exaggeration	A statement/information that is untrue
Emotive Language	Words deliberately chosen to create emotion in the reader.
Statistics	Factual data in numerical form used to convince the reader. (Either fractions or percentages)
Triple (Rule of three)	A list of 3 adjectives/phrases in succession for effect, usually to emphasise a strong idea.

Core Knowledge: Poetic Features

Forms/Types of Poems

Acrostic
Cinquain
Free verse
Haiku
Limerick
Narrative
Nonsense
Shape
Sonnet

Structural Features

Stanza
Rhyme Scheme
Pattern
Rhythm
Alternate
Couplet
Flashback
Chronological

Language Features

Alliteration
Imagery
Metaphor
Onomatopoeia
Personification
Simile
Adjectives
Verbs
Adverbs

Key Vocabulary

Key Word:	Definition:
Discrimination	The unfair treatment of others, usually on the grounds of religion, race, gender, age or disability.
Metaphor	Where a writer describes/compares something to something else but it is not literal. E.g. She was a shining star.
Prejudice	A judgement made about another person that is unfair, usually on the grounds of class, race, religion, gender, age or disability.
Tolerance	Understanding and acceptance of feelings, habits, or beliefs that are different from your own.
Empathy	Being aware of and understanding another person's feelings, experiences, and emotions.
Identity	The fact of being who or what a person or thing is.
Culture	A pattern of behaviour, ideas and traditions shared by a society or group of people.
Traditions	The handing down of information, beliefs, or customs from one generation to another.
Civilisation	A large group of people who share certain ways of living and working.
Society	A community or group of people having common traditions, institutions, and interests.

Core Skill: Language analysis

PEAZL writing frame. Use this for support when writing an analytical paragraph.	
Point	Begin your paragraph with a clear opening sentence focusing on the question. It should state your opinion.
Evidence	Identify a relevant quotation from the text to support your idea/opinion. Push yourself to embed this quotation into a sentence.
Analyse	Explain literal and deeper meanings of the quotation. E.g. 'This suggests...'
Zoom	Zoom in to words more closely to analyse the effect. The words you zoom in to must be from your quotation. Try to zoom in to as many significant words/techniques as possible. Push yourself to use subject terminology when zooming in e.g. name the device.
Link	Make a statement about how your analysis links to the writer's purpose, big ideas or wider messages in the text. Try to link back to the question to ensure your explanations are well focused.



A INTRODUCTIONS		
1	Bonjour	Hello
2	Salut	Hi
3	Au revoir	Goodbye
4	Comment t'appelles-tu?	What are you called?
5	Je m'appelle	I am called
6	Ça va?	How are you?
7	Ça va bien merci, et toi?	I'm well thank you, & you?
8	comme ci-comme ça	so-so
9	mal	badly

B AGE		
1	Un, deux, trois	1,2, 3
2	Quatre, cinq, six	4,5, 6
3	Sept, huit, neuf	7,8,9
4	Dix, onze, douze	10,11,12
5	Treize, quatorze	13, 14
6	Quinze, seize	15,16
7	Dix-sept, dix-huit	17,18
8	Dix-neuf, vingt	19,20
9	Quel âge as-tu?	How old are you?
10	J'ai onze ans	I am 11 years old
11	J'ai douze ans	I am 12 years old

C BIRTHDAY		
1	janvier, février	January, February
2	mars, avril	March, April
3	mai, juin	May, June
4	juillet, août	July, August
5	septembre	September
6	octobre	October
7	novembre	November
8	décembre	December
9	Quelle est la date de ton anniversaire?	What is the date of your birthday?
10	C'est quand ton anniversaire?	When is your birthday?
11	Mon anniversaire, c'est le douze juin	My birthday is on 12th June
12	Mon anniversaire, c'est le premier mai	My birthday is on the 1st of May

D EYES		
1	Comment sont tes yeux?	What are your eyes like?
2	J'ai les yeux...	I have ... eyes
3	verts	green
4	gris	grey
5	bleus	blue
6	noisette	hazel
7	marron	brown

E HAIR		
1	Comment sont tes cheveux?	What is your hair like?
2	J'ai les cheveux...	I have ... hair
3	je n'ai pas de cheveux	I don't have any hair
4	blonds	blond
5	noirs	black
6	gris	grey
7	bruns	brown
8	roux	red / ginger
9	longs/ mi-longs	long/ mid-length
10	courts	short
11	bouclés	curly
12	nattés	braided
13	raides	straight

F HEIGHT AND SIZE		
1	je suis	I am
2	je ne suis pas	I am not
3	grand(e)	tall
4	petit(e)	small
5	gros(se)	overweight
6	mince	slim
7	de taille moyenne	average height
8	très	very
9	assez	quite

G PERSONALITY		
1	Comment es-tu?	What are you like?
2	Je suis	I am
3	Je ne suis pas	I am not
4	Il / elle est	He / she is
5	Il / elle n'est pas	He / she is not
6	bavard(e)	chatty
7	timide	shy
8	gourmand(e)	greedy
9	sympa	nice
10	actif (active)	active
11	sportif (sportive)	sporty
12	paresseux (paresseuse)	lazy
13	marrant(e)	fun/ funny

H COUNTRIES		
1	Où habites-tu?	Where do you live?
2	J'habite	I live..
3	en Allemagne	in Germany
4	en Angleterre	in England
5	en Belgique	in Belgium
6	en Écosse	in Scotland
7	en Espagne	in Spain
8	en France	in France
9	en Italie	in Italy
10	en Irlande	in Ireland
11	en Suisse	in Switzerland
12	au pays de Galles	in Wales
13	au Portugal	in Portugal

Map Skills

TYPES OF GEOGRAPHY

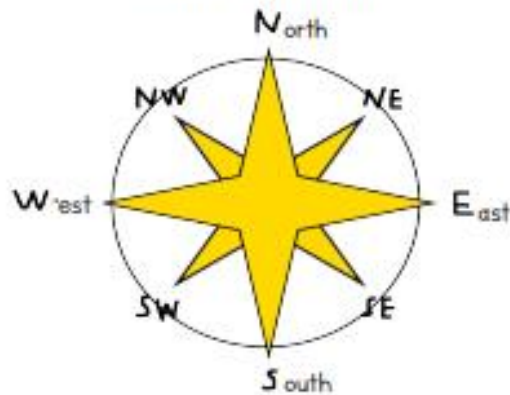
- HUMAN GEOGRAPHY** The impact of people on the earth
- PHYSICAL GEOGRAPHY** The natural world without people
- ENVIRONMENTAL GEOGRAPHY** Human interaction with nature

WHAT IS GEOGRAPHY

"Geography is the study of the Earth's landscapes, peoples, places and environments. It is, quite simply, the study of the world we live in."

Geography is part of your everyday life; you use it every day without even realizing!

COMPASS POINTS



WHERE IS THE UK?



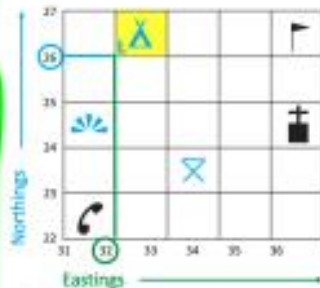
The United Kingdom (UK) is an Island country located in the continent of Europe, it is made up of four countries: England, Scotland, Northern Ireland and Wales.

THE UK



4 FIGURE GRID REFERENCES

Along the edges of each map there are numbers. These numbers help you work out where a location is on a map. Northings are numbers that go from bottom to top, Eastings go from left to right.



The first two numbers give the eastings.

32 26

The second two numbers give the northings.

Remember... eastings then northings!

Along the corridor and up the stairs!

MAP SYMBOLS

Symbols are useful for lots of reasons including, space saving on a map, multi-lingual (all languages can understand them), saves time, clear.



MOTORWAY



FOREST



PARKING



GOLF COURSE



TRAIN STATION



BUS/COACH STATION



CYCLE TRAIL



NATURE RESERVE



FOOTPATH



RIVER



VIEWPOINT



MARSHLAND

ATLAS SKILLS

There are generally three main types of maps shown in an atlas



PHYSICAL MAPS these show topography/relief (the shape of the land) and other physical features such as rivers and lakes.

POLITICAL MAPS these show country borders, cities, transport links etc.

THEMATIC MAPS these show information such as climate data, agriculture types etc.

6 FIGURE GRID REFERENCES

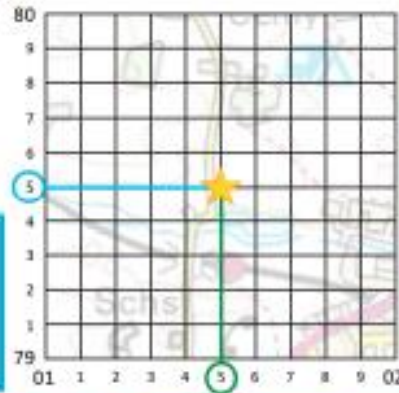
We can use six-figure grid references to find an exact location within a grid square, so they are much more accurate. The grid square is divided into tenths.

Example

015 795

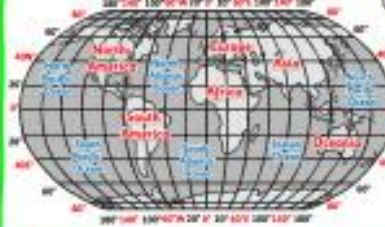
The first three numbers give the easting which includes the number of tenths.

The last three numbers give the northing which includes the number of tenths.



LONGITUDE AND LATITUDE

Unlike grid lines where we go along the corridor and the stairs, here we go **UP** and **ACROSS**



LATITUDE
Flat lines. Flat-itudel

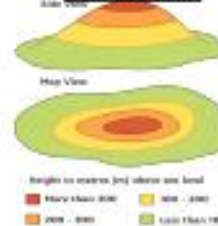
LONGITUDE
Long lines - up and down

HEIGHT AND RELIEF

RELIEF the difference between the highest and lowest heights of an area.

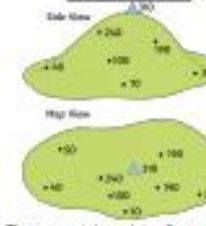
TOPOGRAPHY the surface features of the earth like hills, mountains, valleys etc.

LAYER SHADING



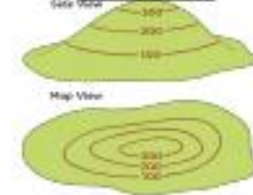
Areas of different heights are shown using different colours. A key is used to show how high the land is.

SPOT HEIGHTS



The exact height of a place above the ground is measured and written onto a map.

CONTOUR LINES

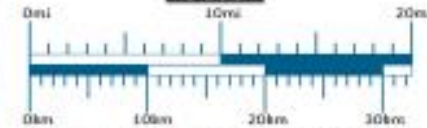


Contour lines are lines on a map which join up places of the same height. Everywhere along a contour line is the same height.

SCALE AND DISTANCE

OS maps have a scale. On some smaller maps, 1cm on the map equals 250m in real life. On some larger maps, 1cm on the map equals 500m. Different maps might have different scales, so check on your map to find its scale.

LINE SCALE



Using a line scale on a map is as easy as using a ruler. The important thing to remember is that a line scale shows measurements in km and the measurements on a ruler are in cm.

WORD SCALE

One centimeter on the map represents 3 kilometers on the ground. (1cm = 3 km)

Using the scale above, if we measure the distance on a map between two places with our ruler. The measurement is 4cm. We then have to multiply that measurement by 3 to calculate that the real distance between the two places is 12km.

SPACE

PLACE EAST
SCALE SOUTH

KEY WORDS

DISTANCE
SCALE

NORTH

RELIEF CONTOUR
WEST TOPOGRAPHY

History 1a: The Neolithic Revolution



Introduction

The first humans were hunter gatherers, who did not settle in one place. They followed herds of animals which they hunted and they gathered fruits, vegetables and berries.

At the end of the last ice age, the temperature began to rise and the ice began to melt. As the sea levels rose, the humans began to move to higher ground.

The humans took their favourite plants and animals with them as they moved and this led to farming.

This period is called the Neolithic Revolution, when humans made the change to a settled lifestyle and farming.

Summary of your learning

- Understand that pre-history occurred before historical records were kept.
- Understand that prehistorical periods (Palaeolithic and Neolithic) occurred over many thousands of years.
- Analyse changes in human's existence from hunter/gatherer, to settlement and the beginnings of agriculture.
- Examine the Stone Age settlement at Skara Brae and focus on how archaeologists and historians draw inferences from artefacts.

Chronology: what happened on these dates?

2.5 million BC

In the Palaeolithic period (roughly 2.5 million years ago to 10,000 B.C.), early humans lived in caves or simple huts or tepees and were hunters and gatherers.

10,000 BC

The Neolithic Revolution started around 10,000 B.C. in the Fertile Crescent, a boomerang-shaped region of the Middle East where humans first took up farming. Shortly after, Stone Age humans in other parts of the world also began to practice agriculture.

3180 BC

The site at Skara Brae was occupied from roughly 3180 BC to about 2500 BC and is Europe's most complete Neolithic village.

2600 BC

A large settlement dating back to 2600 BC was discovered near the ancient stone monument of Stonehenge in Wiltshire.



Key Vocabulary

Palaeolithic – Oldest known prehistorical period when humans were nomadic hunter gatherers.

Nomads – people who move from place to place to hunt animals and gather fruits and berries

Archaeologist - Person who learns about the past through digging up artefacts and studying them.

Artefact - Object made by a human.

Revolution – A fundamental change in the way people live.

Neolithic - Most recent era whereby humans discovered farming and began to live a settled life.

Settlement - A place where people establish a community.

Temperature – Measurement of heat.

Skara Brae - A stone-built Neolithic settlement, located in the Orkneys in Scotland.

Stonehenge - A prehistoric monument in Wiltshire

History 1b: The Romans



Key Knowledge

- ✓ What was the Roman Empire
- ✓ The Roman Army
- ✓ Roman Britain
- ✓ The Revolt of Boudica

Who were the Romans?

Rome is a city in Italy. 2000 years ago it was the most powerful and important city in the world. The people from Rome owned and controlled a massive **EMPIRE**

Summary of your learning:

- ❖ We will investigate the Roman Empire and the chronology of Rome
- ❖ We will investigate why the Roman Army was so



successful

- ❖ We will look at why the Romans invaded Britain
- ❖ We will examine the revolt of Boudica

Key Vocabulary

Empire - A group of countries ruled by a more powerful state or country

Emperor - The ruler of an Empire

Chronology - The arrangement of dates or events in the order in which they occurred

BC - Before Christ. A way of dating years before the birth of Jesus. The bigger the number BC, the longer ago in history it was, because BC numbers decrease in size.

AD - Anno Domini - "in the year of our Lord". AD is used to show dates after the birth of Jesus. This year is 2019 AD

Invade / Invasion - to take control of another country often by violence

Revolt - When a group of people refuse to be ruled & take action against their rulers

Legion - A group of 5,000 men under the command of a Legate.

Cohort - each legion was divided into ten cohorts

Centuries - each century had 80-100 men

Barbarians - the name the Romans gave to the people who lived outside the Roman Empire.

Trade - making money by buying and selling goods

Legionary - A Roman soldier

Centurion - in charge of a century

Testudo or tortoise - a defensive tactic



Chronology

54 BC Julius Caesar attempts to invade Britain.

43 AD Romans invade and conquer Britain under Emperor Claudius.

49 AD Roman London founded.

60 AD Boudica's revolt against the Romans fails.

84 AD Romans conquer Wales and Scotland.

133 AD Construction of Hadrian's Wall to keep the Picts of Scotland out of England.

306 AD Constantine the Great proclaimed Emperor in York.

409 AD The last Roman troops withdraw from Britain.



Year 7 Knowledge Organiser – Maths Autumn 1

SEQUENCES

What should I be able to do?

- Describe and continue both linear and non-linear sequences
- Explain term to term rules for linear sequences
- Find missing terms in a linear sequence

These are all **non-linear** sequences.

This is because they increase by a different amount each time.

To get the next term in this one, **double** the previous term

- 1, 2, 4, 8, ____, ____
- 64 000, 32 000, 16 000, ____, ____
- 1, 3, 6, 10, ____, ____
- 100, 150, 225, ____, ____, ____
- 1, 1, 2, 3, 5, 8, ____, ____

To get the next term in this one, **add** the previous 2 terms together. This is part of the **Fibonacci sequence**

KEY WORDS:

Sequence: terms or numbers put in a pre-decided order

Term: a single number or variable

Position: the place something is located

Rule: instructions that relate to two variables

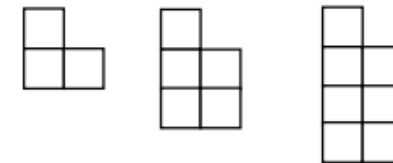
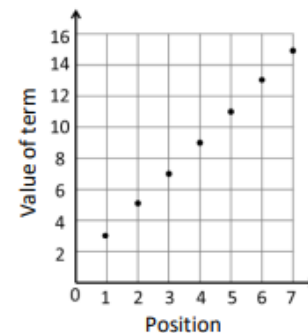
Linear: the difference between terms increases or decreases by the same value each time

Non-linear: the difference between terms increases or decreases in different amounts

Difference: the gap between two terms

Arithmetic: a sequence where the difference between the two terms is constant

Geometric: A sequence where each term is found by multiplying the previous one by a fixed non-zero number



Position	1	2	3	4
Term	3	5	7	9

Linear sequences can be displayed via pictures, in a table or graphically

These sequences are linear because each term increases by 2 each time, starting from 3

Year 7 Knowledge Organiser – Maths Autumn 1

ALGEBRAIC NOTATION

What should I be able to do?

- Use inverse operations
- Substitute into function machines
- Find functions from expressions
- Form sequences from expressions
- Represent functions graphically

Algebraic notation

$$f + f + f + f + f + f \quad 6f \quad 7 \times g \quad 7g$$

$$t \div 5 \quad \frac{t}{5} \quad 5 \div t \quad \frac{5}{t}$$

$$m \times m \quad m^2 \quad d \times c \quad cd$$

KEY WORDS:

Function: a relationship that instructs how to get from an input to an output

Input: the number/symbol put into a function

Output: the number/expression that comes out of a function

Operation: a mathematical process

Inverse: the operation that undoes what was done by the previous operation

Commutative: the order of operations do not matter

Substitute: replace one variable with a number or a new variable

Expression: a maths sentence with at least 2 numbers and at least one operation

Evaluate: Work out

Two step functions

Calculate the value at the end of each operation

$$3.7 \longrightarrow \boxed{\times 5} \longrightarrow \boxed{+ 1} \longrightarrow 19.5$$

To calculate the input, use the **inverse** operations

Substitute into expressions

	$n = 1$	$n = 2$	$n = 3$	$n = 4$	$n = 5$
$3n + 5$	8	11	14	17	20

Multiply the input by 3 and then add 5

Link this to your work on linear sequences

Find functions from expressions

$$a \longrightarrow \boxed{\times 3} \xrightarrow{3a} \boxed{+ 2} \longrightarrow 3a + 2$$

$$b \longrightarrow \boxed{+ 2} \xrightarrow{b + 2} \boxed{\times 3} \longrightarrow 3(b + 2)$$

Year 7 Knowledge Organiser – Maths Autumn 1

EQUALITY and EQUIVALENCE

What should I be able to do?

- Form and solve linear equations
- Understand like and unlike terms
- Simplify algebraic expressions

Understand Equality

• $6 + 3 = 9$	• $12 + 9 = 3 \times 7$
• $8 = 5 + 3$	• $8 \div 0.2 = 80 \div 2$
• $5 + 6 = 8 + 3$	• $6700 - 67 = 99 \times 67$
• $312 + 99 = 312 + 100 - 1$	

Like and unlike terms

Like terms

$5a, 6a$
 $10t, -3t$
 $2xy, 4xy$
 $10, -7$
 $3a^2, 7a^2$

The same variables

Unlike terms

$5a, 5b$
 $-10t, -3$
 $2xy, 4xz$
 $10, 7a$
 $3a^2, 7b^2$

Different variables

KEY WORDS:

Equality: two expressions that have the same value

Equation: a mathematical statement that two expressions are equal

Equals: represented by the “ = ” symbol - means the same

Solution: the set or value that satisfies the equation

Inverse: the operation that undoes what was done by the previous operation

Solve: to find the solution

Term: a number or variable

Coefficient: a multiplicative factor in front of a variable

Like: variables that are the same are “ like ”

Collecting like terms - The symbol \equiv means equivalent to

$$3a + 4 + 5a \equiv 8a + 4$$

$$6b + 2c - 2b + 6c \equiv 4b + 8c$$

$$5d + 3e + 2d - 3e \equiv 7d$$

Solve one step equations

$$70 - f = 11.4$$

$$f = 58.6$$

Know other relationships that might help when trying to solve an equation

$$70 = 11.4 + f$$

$$70 - 11.4 = f$$

Music – Autumn Term 1 – Keyboard skills

Pitch	High	The highness or lowness of a sound.
	Low	
	Stepwise	Moving one note at a time
	Leap	Jumping to the next note.
Articulation	Smooth	Playing notes in a long, smooth way
	Legato	
	Detached	Playing notes in a short, detached, spiky way.
	Staccato	
Dynamics	Loud	The volume of the music. Italian music terms are used to describe this.
	Soft	
	<i>pp</i> pianissimo	Very quiet
	<i>p</i> piano	Quiet
	<i>mp</i> mezzo piano	Moderately quiet
	<i>mf</i> mezzo forte	Moderately loud
	<i>f</i> forte	Loud
	<i>ff</i> fortissimo	Very loud
	Crescendo	Gradually getting louder

Tempo	Fast	The speed of the music. Italian musical terms are used to describe this.	
	Slow		
	Lento		Slow
	Andante		At a medium (walking) pace
	Moderato		At a moderate speed
	Allegro		Fast
	Accelerando (accel)		Getting faster
Duration	Rallentando (rall)	Getting slower	
	Long	The length of a sound or note	
Short			
Texture	Thin texture	A solo or small number of instruments	
	Thick texture	Lots of instruments.	
Timbre	Sonority	Instrumentation – the unique sound or tone quality of different instruments, voices or sounds.	
	Instrumental sound		

Peer feedback prompts

WWW

EBI

What went well...

Even better if...

Self-reflection

What step are you working at?

What do you need to do to achieve the next step?

Note names and durations

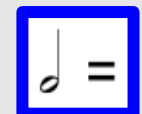
Quaver Crotchet Minim Semibreve



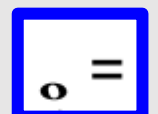
½ beat



1 beat



2 beats



4 beats

Treble clef



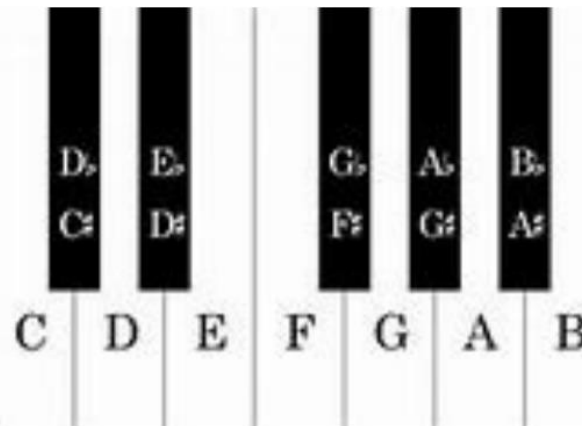
Flat Sign



Sharp Sign



Bass clef



PE Department - Fitness

Key Skills:

Three elements of a Warm up

Pulse raiser – This allows us to increase our heart rate and the amount of blood pumped around our body which carries more oxygen to the muscles we are using.

Stretching – Increased blood flow to the muscles. Increased range of motion at the joints. Reduced risk of injury.

Increased intensive activity – This allows the participant to take part in activities relevant to the sport/ activity to be undertaken.

Increase mental preparation.

Purpose of a cool down – Return heart rate to resting levels gradually.

Remove LACTIC ACID from the body (reduce muscle soreness).

Effects of exercise on the body – Breathing and Heart Rate increase with intensity of exercise.

Pulse rate – Pulse rate (the number of times your heart beats in a minute) can be taken at either your wrist or neck. The normal rate =70-100BPM

How to take your pulse rate: -

Gently place 2 fingers of your other hand on this artery.

1. Do not use your thumb, because it has its own pulse that you may feel.
2. Count the beats for 30 seconds, and then double the result to get the number of beats per minute.
- 3.

Stretch and Challenge Task:

Note where the Radial and Carotid sites are for taking the pulse.

Describe activities that may raise the pulse rate.

Main Muscles



Key Content and Terms to learn:

Warm up; Cool Down; Heart Rate; Body Temperature

Key Skills:

- Controlling the ball – using different parts of the body – this could be the feet or thigh. Remember to cushion the ball.
- Passing – there are 3 types of passes. Side foot pass, driven pass with the laces and a lofted pass. Using the side of the foot allows you to pass accurately over a short distance, a driven pass allows you to pass the ball on the floor, but a greater distance. Finally, a lofted pass allows you to lift the ball in the air over players and change direction. Remember to keep your standing foot next to the ball when you make the pass.
- Dribbling – dribbling allows you to move the ball quickly around the pitch using the inside and outside of your feet and keeping the ball close to your feet and your head up.
- Turning with the ball and outwitting a defender – turning with the ball allows you to change direction using different techniques, such as dragging the ball back with the sole of your boot. Outwitting and opponent allows you to beat a defender using different techniques such as a step over.
- Shooting – there are different types of shots that allows you to score goals. You instep can be used to control and place the ball into the goal. If you use your laces then this allows more power to be produced.
- Heading – you can use an attacker header, a defensive header or a controlled header, which might be passing the ball back to someone with your head.
- Attacking – keeping possession – making a number of passes allows your team to keep possession and advance up the field.

Tackling techniques – tackling, jockeying and forcing the player onto their weaker foot.



Basic Rules

1. Game is started by kicking the ball from the centre spot.
2. The U12 game has 9 players – goalkeepers, defender, midfielders and attackers.
3. Referee and two assistants with officiate the game.
4. If a ball goes over a touch line a throw in is taken (kick in on the astroturf). If an attacker kicks over the goal line it is goal kick and if a defender kicks it over the goal line it is a corner.
5. To score the ball must cross the opposition's goal line.
6. The offside rule also applies where an attacker is in front of all opposing defenders when the ball is kicked.

PE Department – Year 7 Netball

Key Skills:

Passing and receiving –including chest pass, bounce pass, shoulder pass and overhead pass.

Attacking – getting free from an opponent in order to receive the ball. Includes sprinting, dodging and changing direction.

Shooting – With one hand under the ball and the other steadying it at the side, keep your eyes on the hoop, bend your knees and push the ball with the fingers.

Defending – Marking your opposite player both with and without the ball.

Footwork – You must land with a 1-2 landing or with 2 feet. You must then not move the landing foot.

POSITIONS

Goal Shooter (GS) – Can only play in their attacking goal third. Marks the GK.

Goal Attack (GA) – Plays in the goal third and centre third. Marks the GD.

Wing Attack (WA) – Plays in the centre third and their teams attacking third. Marks the WD.

Centre (C) – Only player to be able to play in all 3 thirds. Marks C.

Wing Defence (WD) – Plays in centre third and their defending third. Marks the WA.

Goal Defence (GD) Plays in the centre third and their defending third. Marks the GA

Goal Keeper (GK) Can only play in their defending goal third. Marks the GS

Key content and Terms to learn

Passing and receiving

Shooting

Attacking

Defending

Footwork

Contact

Dodging



Rules: The game starts with a centre pass and the ball must be caught in the centre third. You must comply with the footwork rule e.g. a 1-2 landing.

You only have 3 seconds to release the ball.

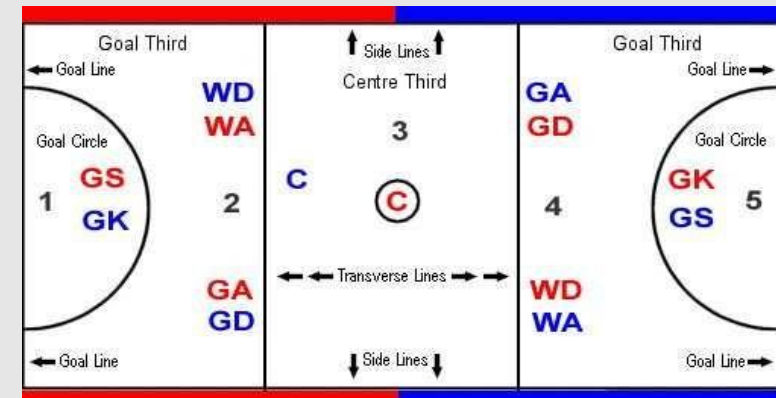
When defending you must be 1 metre away from the player.

There must be no contact with an opposing player.

Only GS and GA may score a goal.

You must stay in the correct area of the court for your position Teams take it in turns to take a centre pass.

The ball must be touched in each third of the court.



Take your learning further

- Watch an international or super league game of netball online. You could use [England Netball | Home](#)
- Draw a court and mark on the positions for 2 teams in different colours.

Glossary of Key Vocabulary

Covenant: a solemn promise/binding agreement between God and His people.

Plague: ten disasters God sent as punishments on Pharaoh and Egypt when he refused to set the Israelites free.

Passover: the Jewish festival that celebrates their freedom from slavery in Egypt when the Angel of Death 'passed over.'

Sacrifice: giving up something valuable for the sake of something else.

Abraham: the founder/father of Judaism.

Moses: lived 1000 years after Abraham.

Commandment: laws/rules.

Decalogue: The Ten Commandments.

Mount Sinai: the mountain where Moses received the Ten Commandments from God.

Torah: The first five books of the Tenakh.

Tenakh: the whole Jewish Scriptures (same as the Old Testament in Christianity).

Old Testament: The first section of the Bible.

Promised Land: the modern day land of Israel God promised to Abraham.

Hebrews/Israelites: another reference to Jews.

Exodus: means to leave. Describes the time after the Israelites left Egypt. It is also the second book of the Torah.



Year 7 RE

Autumn 1 People of Promise



Overview

This half term you are learning about the origins of Judaism, and why this is still important for Christians too. Judaism began when God called a man named Abraham and made a special Covenant with him. Abraham is known as the father/founder of Judaism. Years later, God called Moses to continue the Covenant and lead the Israelites to the Promised Land. God also gave Moses all the Jewish Laws, including the famous Ten Commandments! These laws are written in the Torah, which is the first five books of the Jewish Scriptures called the Tenakh. This is the same as what Christians called the Old Testament.

Checklist of what you will learn this half term:

- Introduction to RE at St Joseph's
- Promise and Covenant
- Covenant with Abraham
- Abraham and Isaac
- The Ten Plagues
- Plagues: God or Science?
- Covenant with Moses
- The Ten Commandments



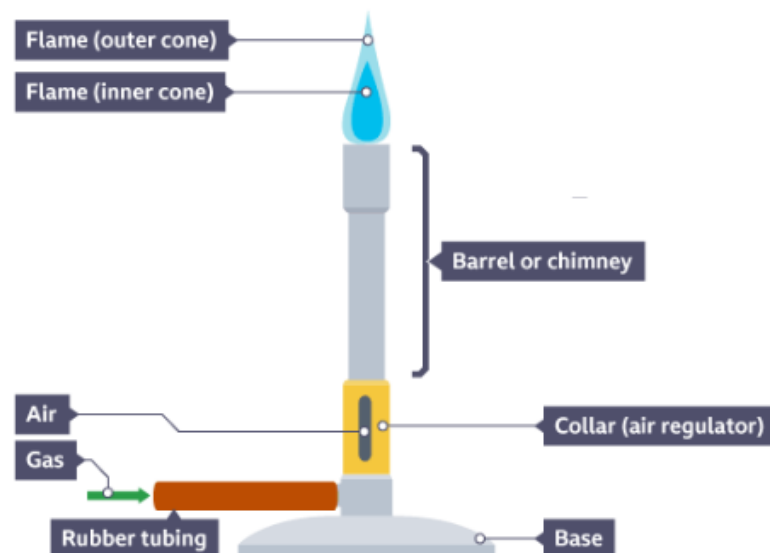
Key Sources of Wisdom and Authority (Religious Teachings):

- "I will give you descendants as numerous as the stars in the sky." (God to Abraham, Torah)
- "The whole land of Canaan will belong to your descendants forever, and I will be their God." (God to Abraham, Torah)
- "So now, go. I am sending you to Pharaoh to bring my people the Israelites out of Egypt." (God to Moses, Torah)
- "The people are to take some of the blood and put it on the doorposts..." (God to Moses and Aaron, Torah)
- "Worship no other god but me." (Decalogue)
- "Do not steal." (Decalogue)
- "Do not kill." (Decalogue)
- "Honour your father and mother." (Decalogue)



Name of apparatus	Drawing	2D cross section diagram
Beaker		
Test tube		
Conical flask		
Measuring cylinder		
Tripod		
Gauze		

Bunsen burner



Name of apparatus	Drawing	2D cross section diagram
Bunsen burner		
Evaporating basin		
Filter funnel		
Condenser		
Round-bottom flask		

Independent variable: The variable that you change

Dependent variable: The variable that is measured

Control variable: A variable that should be kept the same

Prediction: What you think your results will show and why.

Risk assessment: Identify hazards, the harms they can do and how you will minimize any risks in a practical investigation.

Method: Step-by-step instructions for how to carry out a practical investigation.

Results table: As the practical is carried out, write the results in a table.

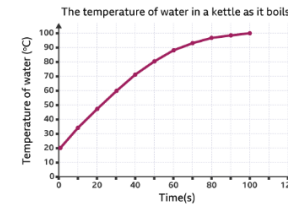
Anomalies: result that is much higher or lower than the general pattern

Calculating a mean

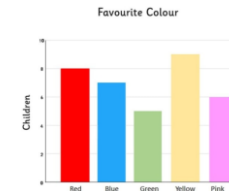
1. Check for anomalies – circle them and ignore
2. Add up the remaining results for that value
3. Divide the total by the number of results

The most common ways of presenting data in science are:

- A **line graph** should be used when the independent and dependent variables are continuous.

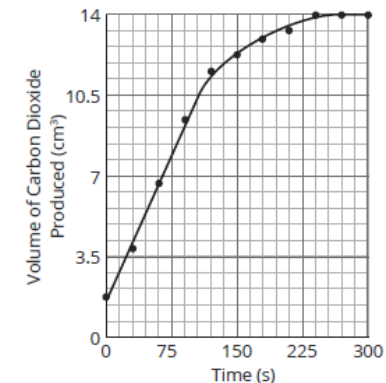
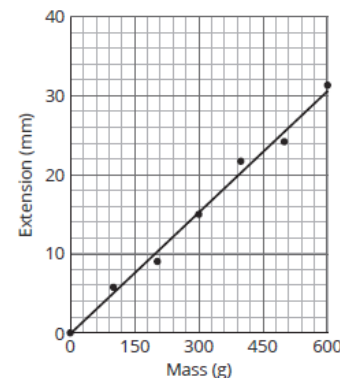


- A **bar chart** should be used if the independent variable is discontinuous .



Once points have been plotted for a line graph, draw a **line of best fit:**

- ✓ Does NOT have to go through 0,0
 - ✓ The line should be drawn through as many points as possible,
 - ✓ Equal numbers of points above and below the line.
 - ✓ Anomalies should be ignored.
 - ✓ It may be straight
- or curved

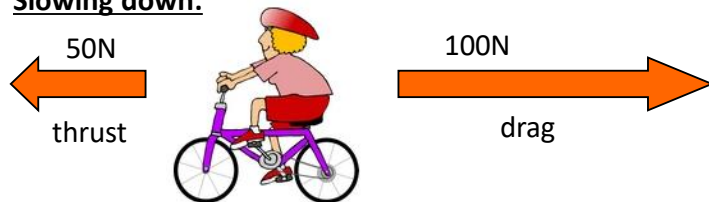


Forces on an object are either balanced or unbalanced, and this affects the **motion** of the object.

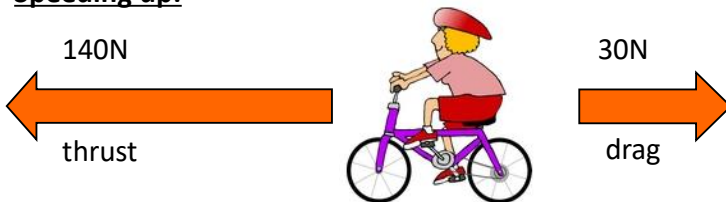
Forces	Motion
Balanced	Stationary or moving at a constant speed
Unbalanced	Changing speed – accelerating or decelerating

Resultant force = overall force on an object

Slowing down:



Speeding up:



Constant speed:



Keywords

Balanced forces = forces are equal in opposite directions

Unbalanced forces = forces are not equal in size

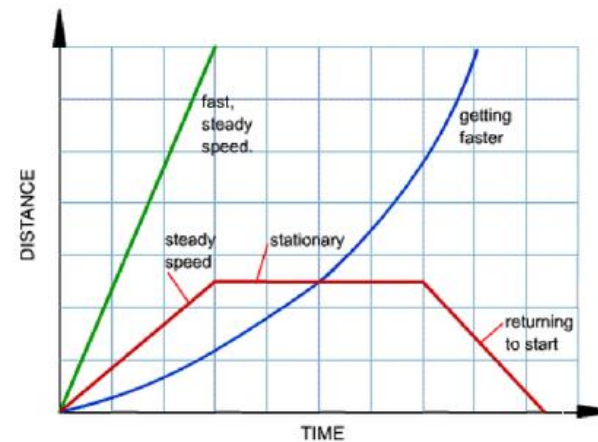
Accelerating = speeding up

Decelerating = slowing down

$$\text{Speed} = \text{distance} \div \text{time}$$

The unit we use for speed is usually m/s metres per second – but you should always check the units given for distance and time

Distance time graphs



Horizontal line = stationary (not moving)

Diagonal line = moving at a constant speed

Steeper line = a faster constant speed

Downwards diagonal line = going backwards

Curved line = changing speed:



The gradient of a line tells you the speed of the object

Particle theory

All matter is made up of particles. Particles are found in three main states of matter. Particles behave differently in the three states.

Types of substance

Pure – made up of only one type of substance

Impure – a mixture of different substances

Mixture - the different types of particle in a **mixture** are not chemically combined, and can be separated

States of matter – how particles can be arranged in matter - solid, liquid, gas

Changes of state – moving from one state of matter to another - evaporation, condensation, freezing, melting

Changes of state that take in energy:

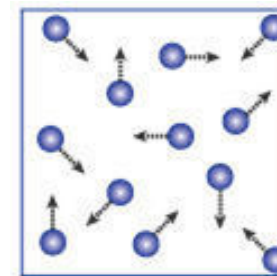
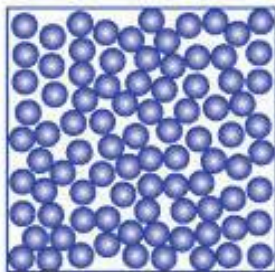
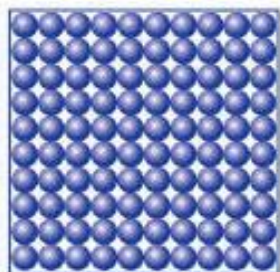
Melting – from solid to liquid

Evaporation – from liquid to gas

Changes of state that release energy:

Freezing – from liquid to solid

Condensation – from gas to liquid



Solid

Liquid

Gas

Particles are in a regular, fixed arrangement
Particles vibrate in a fixed position (but do not move)

Particles are arranged randomly and can move – they slide past and over each other,

Particles can move in all directions, and show random movement. Particles are far apart.

Least amount of energy

More energy

Highest amount of energy

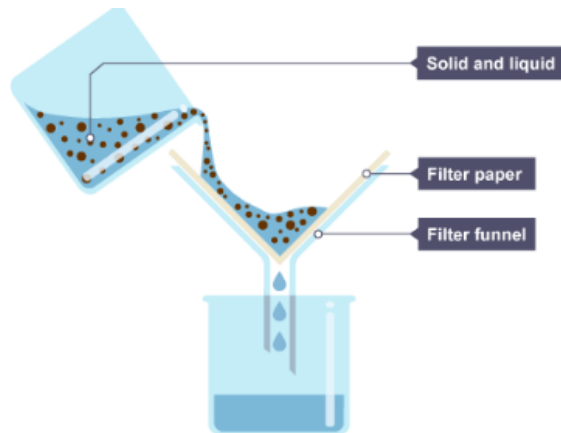
Fixed volume and shape

Fixed volume, shape can change

No fixed volume or shape – can be compressed

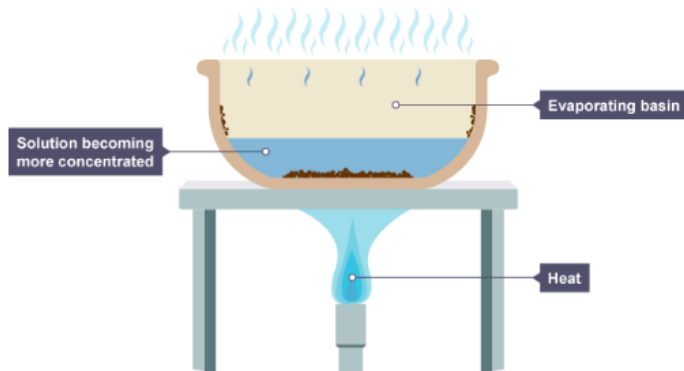
Filtration

Used for separating an insoluble solid from a liquid
e.g. sand from water



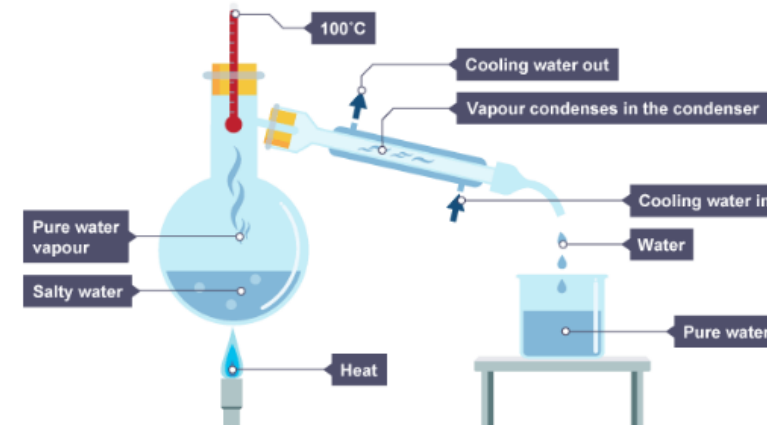
Evaporation or crystallisation

Used to get a soluble solid from a solution
e.g. salt from salt water



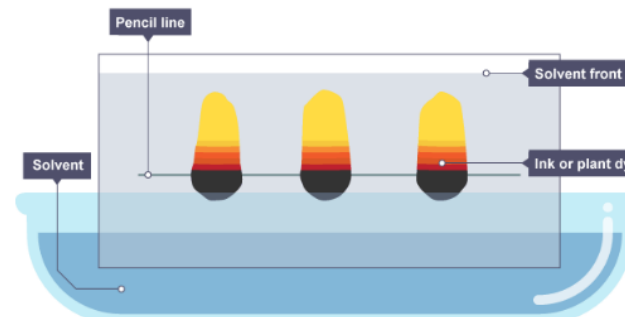
Distillation

Used for separating a liquid from a solution. It involves evaporating and condensation. It works because water and salt have different boiling points.
e.g. water from salt water



Chromatography

This is used to separate out the substances in a liquid.
Simple chromatography is done on paper
e.g. the individual dyes in ink or paint



1. uno
2. dos
3. tres
4. cuatro
5. cinco
6. seis
7. siete
8. ocho
9. nueve
10. diez
11. once
12. doce
13. trece
14. catorce
15. quince
16. dieciséis
17. diecisiete
18. dieciocho
19. diecinueve
20. veinte
21. veintiuno
22. veintidós
23. veintitrés
24. veinticuatro
25. veinticinco
26. veintiséis
27. veintisiete
28. veintiocho
29. veintinueve
30. treinta
31. treinta y uno

¡Hola! - Hello
 ¡Buenos días! - Good morning
 ¡Buenas tardes! - Good afternoon
 ¡Buenas noches! - Goodnight
 ¡Adiós! - Bye
 ¡Hasta luego! - See you later
 Por favor - please
 Gracias - thanks

enero - January 
 febrero - February 
 marzo - March 
 abril - April
 mayo - May
 junio - June
 julio - July
 agosto - August
 septiembre - September
 octubre - October
 noviembre - November 
 diciembre - December

Días de la semana

Lunes
 Martes
 Miércoles
 Jueves
 Viernes
 Sábado
 Domingo



Año 7 - Tema Uno - Todo Sobre Yo



¿Cómo te llamas?

What is your name?

¿Qué tal / Cómo estás?

How are you?

¿Cuántos años tienes?

How old are you?

¿Cuándo es tu cumpleaños?

When is your birthday?

¿Qué tipo de persona eres?

What time of person are you?

¿Cómo se dice "book" en español?

How do you say "book" in Spanish?

¿Puedo tener ... por favour?

Perdón. He olvidado mis deberes.

Me llamo Juan

My name is John

Estoy fenomenal / regular / fatal

I am great/alright/awful

Tengo doce años

I am twelve years old

Mi cumpleaños es el dos de mayo

My birthday is the 2nd of May

Soy sincero / tímido.

I am sincere/ shy.

Se dice "libro" en español.

You say it "libro" in Spanish.

Please can I have ...?

Sorry. I've forgotten my homework.

Los Sonidos -



- a - animal
- e - elefante
- i - iguana
- o - oso
- u - urraca
- c - cebra
- ch - cucaracha
- h - hola
- j - jirafa
- ll - me llamo
- n - pequeño
- qu - quieto
- rr - arriba
- v - vaca
- z - zorro

Accents matter:

Fútbol
 carácter

Ser (to be) is an important irregular verb.

soy I am
eres you are
es he/she is

To make a sentence negative, put **no** before the verb.

No soy tímido. I am **not** shy.
No es verdad. It is **not** true.



Tener (to have) is an irregular verb.

tengo I have
tienes you have
tiene he/she has

When you give your age in English, you say: 'I am twelve.' In Spanish, you say: **Tengo doce años.** What does this mean, literally?

	Masculine	Feminine
Indefinite article -a	Un	Una
Definite article - the	El	La

Intensifiers

muy - very
 un poco - a bit
 bastante - quite
 demasiado - too

masculine	feminine
sincero	sincera
tímido	tímida
generoso	generosa
serio	seria
listo	lista
tonto	tonta
simpático	simpática
tranquilo	tranquila
divertido	divertida