

# Year 5 Maths – Yearly Overview

**Year 5/6 Fluency Time: Thursday and Fridays 11.45-12.15.** 

**FOCUS: Thurs: KIRFS; Fri: Arithmetic** 

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction (A)  Number: Multiplication are Division (A)			Number: Fractions (A)			Autumn Term Assessments/ Consolidation		
On-going: Flashbacks (to recap on previous learning)  KIRFS A1 = decimal number bonds to 1 and 1  KIRFS A2 = Multiplication/division facts up to 1												
Spring	Number: Multiplication and Number: Fractions Division (B) (B)			Number: Decimals and Percentages			Measurement: :		Number : Statistic s	Spring Term Assessments/ Consolidation		
	On-goi	ng: Flashk	oacks (to	recap on	previous	learning)				Year 5: onversion of Sp 2: Primes	metric units to 50	
Summer	Geometry: Shape Geometry: Position and Direction			Nur	mber: Decin	nals	Number: Negative numbers	Measurement: Converting units	Measurement: Volume	Summer Term Assessments/ Consolidation		
	On-going: Flashbacks (to recap on previous learning)  Year 5:  KIRFS Su1/Su2: Recall, review, consolidate											

# Year 6 Maths – Yearly Overview

Year 5/6 Fluency Time: Thursday and Fridays 11.45-12.15. FOCUS:

Thurs: KIRFS; Fri: SATs Arithmetic

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autu	Number: Place Number: Addition, Subtraction, Value Multiplication and Division				Geom etry:  Onsolidat Consolidat rm							
On-going: Flashbacks (to recap on previous learning) and times table practice						Yr. 6 KIRFS A1 = Multiplication/division facts up to 12 x 12 KIRFS A2 = Common factors					2 x 12	
Spring	Number: Decimals  Number: Percentages  Number:			Number	ber: Algebra  Weasurement: Perimeter, Area and Volume  Number:			r: Ratio	Consolidation/ Spring term assessments			
On-g	On-going: Flashbacks (to recap on previous learning) and times table practice						Year 6. KIRFS Sp1: Metric conversions KIRFS Sp 2: Primes to 20					
Summer	Geometry: Properties of Shapes (Before SATS)  Problem solving (in all lessons leading up to SATS)  Statistics Boost					s (in SATS sters)  Investigations (After SATS)			Consolidation			
On-g	On-going: Flashbacks (to recap on previous learning) and times table practice							KIR		r 6. res/roots to Factor pairs	144	

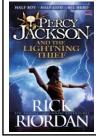
### Year 5/6 Mixed Age Maths Yearly Overview

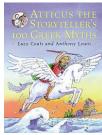
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value Number: Four Operations						Oonsolidation/ Volldation/ Aufumn term					Consolidation/ Autumn term assessments
On-going starters:  Mon: Flashback 4; Tues: SATs Corner/KIRFS/I See Reasoning/I See Problem Solving; Wed: Times Tables; Thurs: SATs Based Retrieval: Fri: Problem Solving						Yr. 6  KIRFS A1 =  Multiplication/division facts up to 12 x 12  KIRFS A2 = Common factors  Yr. 5  KIRFS A1 = decimal numb bonds to 1 and 10.  KIRFS A2 =  Multiplication/division fact to 12 x 12			10.			
Spring	Year 5: Number: Fractions		Number: Decimals and		Yea Number:	r 5:  Decimals  Measures: Converting Units		Statistics		Consolidation/ Autumn term assessments		
Spr	Yea Numbe	r 6: er: Ratio	1	Percentages			r 6: : Algebra	Perimeter, Area and Volume		- Statistics		Consol Autum assess
		4;Tues: SATs		S/I See Reas	oning/I See P I: Fri: Probler		Year 6.  KIRFS Sp1: Metric conversions  KIRFS Sp 2: Primes to 20  Year 5:  KIRFS Sp1: Convert FDP  KIRFS Sp 2: Primes to 50					
Summer	Geometry:		, I POSITION		: Four ations idation	Year 5 Consol			/leasures idation	Investi	gations	Consolidation/ Summer term assessments
Sur	Properties		and Direction		r 6: n & SATs			Year 6: Investigations				Consolida term a:
	On-going starters:  Mon: Flashback 4;Tues: SATs Corner/KIRFS/I See Reasoning/I See Problem Solving: Wed: Times Tables: Thurs: SATs Based Retrieval: Fri: Problem Solving  Year 6.  KIRFS Su1: Squares/roots to 144 KIRFS Su1: Squares/roots to 144 KIRFS Su2: Factor pairs consolidate											
Year !	Year 5/6 Fluency Time: Thursday and Fridays 11.45-12.15. FOCUS: Thurs: KIRFS; Fri: SATs Arithmetic											



Year 5/6 Cycle B – Autumn Term – Ancient Greek Museum Robbery

# Motivational Core Texts:











Poems: The Labours of Heracles, Mud Mother by Brian Patten and Pegasus by Eleanor Farjeon

Main Genres:	Genre Success Criteria:					
Journalistic Texts: To Recount (Crime Scene investigations & King Midas)	Short, effective headline (play on words/alliteration etc.) Orientation (5 Ws) - hooks the reader Quotes (Direct and indirect) Past tense (except quotes) 3rd person Paragraphs Impersonal Passive voice Time connectives/ range of other appropriate connectives Inverted triangle: as the articles progresses, the details become less important Summary linking back to the opening					
Narrative: To Entertain (Percy Jackson innovations set in Leamington Spa and King Midas innovations – linked to the Skittles advert)	Introduction, Build Up, Problem/Climax, Resolution, Reflection: characters/ author reflect on what has happened to them. Create vivid images by using POSAAM Interweave a balance of detailed action/description/dialogue to move the story forwards. A wide range of sentence structure, starters and punctuation. Clear paragraphs Write cohesively at length. Talk to the Reader					
Diaries: To Recount (King Midas & Olympic)	*First person *Past tense *Chronological and anecdotal in style *FAST emotions *Reflections and personal viewpoints *Time conjunctions					
Leaflets: To inform (What the Ancient Greeks left behind)	•Title  Opening introducing the topic  Use facts, not opinion.  Paragraphs with topic sentences, followed by factual details.  May have sub-headings/ info (did you know?) boxes/lists/diagrams/bullet points/images  Generalisers / connectives  technical vocabulary  3rd person  Often present tense e.g. whales are large; past tense for historical reports  Formal tone  Ending that makes a point or relates subject to reader.					
Persuasive Speeches: To Persuade (Who will be the next leader of Olympus?)	•Logical order, using temporal and causal connectives  •Series of points building one viewpoint  •Each argument backed up with relevant evidence and detail/statistics  •Paragraphs with topic sentences  •Personal and direct, often informal  •Emotive connectives  •Opinions presented as facts  •Use of the Imperative  •Superlatives (biggest, fastest, greatest, best!)  •FAB FOREST (Flattery, Alliteration, Bribery, Facts, Opinions, Rhetorical Questions, Exaggeration, Statistics, Triples)					

# Milverton Primary School Knowledge Map [years 5&6 Autumn Term Cycle B – Art – People in Action]



-				
Key Vocabulary				
Formal Elements	Line, tone, shape, texture, colour, pattern and form.			
Line	A line is the path left by a moving point.			
Shape	A shape is an enclosed are – it could be geometric or irregular.			
Tone	The lightness or darkness of something.			
Pattern	Repeating shapes, lines or colours.			
Media	The material used to make a piece of art.			
Composition	The way an object is place or positioned on a page.			
Technique	The ways tools and media are used to create artwork.			
Proportion	The size relationship between different parts.			
Contortion and distortion	Twisting, warping or deforming something			





#### Artists

Bob Martin is a multi-award winning sports photographer specialising in shooting action, graphic and editorial pictures for advertising, corporate and editorial clients. During a career spanning the last thirty years, Bob has photographed every major sporting event; from the Summer and Winter Olympics, to Elephant Polo and even Horse Racing on Ice!



Gian Lorenzo Bernini was an Italian artist and a prominent architect who worked principally in Rome. He was the leading sculptor of his age, credited with creating the Baroque style of sculpture. He also liked to sculpt characters from Greek mythology including Medusa.



#### Art Styles: Ancient Greek Vases

Vase painting was important to the Ancient Greeks and the pots would normally feature paintings of people or figures. Vases were part of a way that the Ancient Greeks made money and artists would sell and trade vases to make a living. They are now excellent historical sources, showing elements of life for historians to discover.

Art Styles: Ancient Greek Theatre Masks

During ancient Greek times, actors in the theatre wore masks to depict different characters.

Since the actors were male, it allowed them to play female parts as well as roles as gods and mythical creatures.



#### Grades of pencil

Pencils come in different grades, the softer the pencil, the darker the tone.

H=Hard B=Black

In art the most useful pencils for shading are 2B and 4B. If your pencil has no grade, it is most likely HB(hard black) in the middle of the scale.

#### Markmaking

To make your drawings look more realistic, you should try to use different marks to show textures and surfaces. You can do this by changing the direction, pressure or length of your marks.



#### Y56 Computing – Cycle B, (Audacity - Radio Station)



# **Key Vocabulary**

Ttoy Toolandiary				
Software	A program, or tool, that has been created to help you achieve certain tasks using a computer.			
Import	Pull a file (usually sound or video) from where it is stored, into the software you are using.			
Export	Send a file (usually sound or video) from your software, so that it can be viewed or heard by others.			
Download	Save a file (usually sound, image or video) from online storage (e.g. a website) to your own computer.			
Edit	Make changes (to improve)			
Audio	Sound data			



Editing and sequencing using Audacity

## **Key Concept: Sound and Motion**

#### Record and Edit Sound and Video

Using software on a computer, and hardware such as a microphone, we can record, import, edit and export sounds, and put clips together to create something like a podcasts, or 'radio show'.

#### **Publish and Review**

Once our work is completed, it can be published in a public (or private) location, allowing other people to view or listen to what we have created. This helps us to review our work, and use feedback to make improvements where necessary.

#### **Arrange Sequence of Clips**

When you have a range of different sound clips, you will need to arrange these clips in the correct order, so that your podcast or radio show makes sense! Sometimes you have to chop clips a little shorter, and sometimes you want to add bits in. Sometimes, you even want to have two sounds playing at the same time, such as a backing track and a presenter's voice. This arrangement of clips is called 'sequencing'.

Software: Audacity is free software that you can use to record, edit, sequence and export sounds

#### Y56 Computing – Cycle B, (Spreadsheets)



# **Key Vocabulary**

Spreadsheet	A spreadsheet is a file that stores data in an organised way
Cell	A cell is a single 'box' in a spreadsheet
Row	A row is a single horizontal 'line' in a spreadsheet
Column	A column is a single vertical 'line' in a spreadsheet
Formula	A formula is an instruction that the spreadsheet software (such as Microsoft Excel) can use to make quick calculations, such as averages
Formulae	Plural (more than one) formula

# Microsoft Excel

#### **Key Concept: Handling Data**

#### **Sort and Organise**

When you have a lot if data (information stored on a computer), it's often important to keep this data safe, and well organised. Software like Microsoft Excel can help you to do this, and to sort your data into groups so that you can understand it more easily, and spot patterns or trends. For example, if you were selling onesies, and you had thousands of pieces of data about who purchased a onesie, it would help to sort your data into age groups, so that you could clearly see which age groups preferred which types of onesies, and advertise the right type to the right people!

#### **Edit Records**

Sometimes, the data you have is incorrect. Storing data in a spreadsheet means that you can easily edit and change your records, without your information becoming disorganised.

#### **Functions and Formulas**

Functions and formulas allow you to tell the computer to make quick calculations automatically, that would otherwise take your hours to do by yourself. Not only would this waste time, but it would also increase the chances that mistakes were made. Formulae can be very powerful, and make our lives a lot simpler!

Software: Microsoft Excel is software that we use to record, organise and present data

#### MPS Knowledge Map - Y56 DT - Cycle B (Greek Instruments) - Autumn



# **Key Vocabulary**

Function	The intended purpose of something – what is it designed to do?
Form	The way something looks – sometimes, function is more important, and sometimes, it's the form!
Material	What is this thing made of? Just one material, or more than one? Why was each material chosen?
Pitch	How high (squeaky) or low (deep) a sound is.
Tension	The 'tightness' or tension of a string will affect the pitch of a note that it plays.



A Bouzouki



A Vice

#### Key Concept: Design, make, evaluate, improve

#### Research

Before we make something new, it's important to 'research' first. Do similar (or identical) products already exist? In what ways will our product learn from, or improve upon, these products? Can we see how they're made? Is there an 'ideal' material we should find out about for our product? Good research can make the difference between success, and failure!

#### **Imagine and Plan**

Once you have an idea about what similar products look like, and how they work, you can imagine and plan your own. What improvements will you make? Who is it for? What should it be able to do once it's made?

#### Create, Test, Improve

If you have a good plan, it's time to create, test and improve your own product! Which tools will you need to create it safely?

How do you use them properly?

Is there a way to save waste as you make it?

When it's finished, it is a good idea to test your product, and see if it can function as you hoped.

If not, you may need to consider how to change your design.

Perhaps it can even be improved? Allow other people to use it, and get feedback.

Tools and Equipment: Plastic tubs, wooden planks, Modroc, wire or elastic, glue, saw, vice, ruler

#### Milverton Primary School Knowledge Map [Yrs 5&6 – History – Autumn Term – Ancient Greece]



#### Society - Athens Vs. Sparta





Location

#### **Main Events**

3500 BC	AD 1	AD 1500
	Ancient Egypt	
	Ancient Rome	
	Maya Civilisation —	
	Ancient Greece	
	Celtic Britain 🗡	
	Anglo-Saxon Britain 🗕	<b>→</b>

#### **Main Events**

#### The First Olympics

- The first recorded Games was in 776 BC, in Olympia.
- The event was part of a festival to honour the Greek god, Zeus.
- Women were not allowed to compete because ancient Greek women were not treated as equals to men and had fewer freedoms.
- · Events included boxing, wrestling, running and chariot racing.
- Evidence about the Games comes from paintings discovered on pottery.

#### Main Events - Conflict

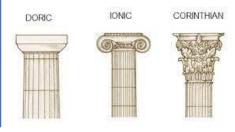
#### The Trojan War.

- The Trojan War (which is believed to have lasted for ten years) was between the Greek and the Trojan Armies.
- In the story, the Greeks pretended to surrender, leaving a gift of a giant horse for the Trojans. The gift was brought inside the city walls. In the night, Greek soldiers hiding inside the horse let the Greek army inside Troy's walls and the city was destroyed.

#### Society - Democracy & Architecture

Around 508 BC, democracy was introduced to ancient Athens. Listening to the opinions of other people and debating issues was an important part of this system. After debating issues, the ancient Athenians would vote. At that time, the only people allowed to take part in democracy were adult males who were citizens of Athens.

# The Three Orders of Ancient Greek Architecture.



Key Vocabulary					
ancient	Something from a very long time ago.				
civilisation	In this context, the word 'civilisation' is used to describe a human society with well-developed rules and government, often where technology and the arts are considered important.				
city states	Small areas that ancient Greece was divided into, each with their own governments, laws and army.				
empire	A group of countries or states that is ruled by one ruler or country.				
legacies	Things that live on after someone dies or after a civilisation or event ends.				
democracy	Democracy is a system where the citizens of a country or state are involved in the way it is run.				
primary source	Information and objects that come from the time being studied.				
secondary source	Interpretations of information and objects which are produced after the time being studied.				

#### **Beliefs**

#### **Gods and Goddesses**

- The ancient Greeks believed in many different gods and goddesses. Each god/goddess represented a certain aspect of humanity and each was responsible for certain parts of life too.
- · Festivals were held to celebrate the gods and goddesses.
- Animal sacrifice was an important part of ancient Greek worship.
- It is believed that the 12 most powerful gods lived on Mount Olympus.
- The ancient Greek gods and goddesses were included in many of the myths that the ancient Greeks told one another.
- Zeus was the most powerful of all the gods. He was god of the sky and the king of Mount Olympus.

#### Milverton Primary School Knowledge Map [Year Autumn Term – History - Mayans]



#### **Key Vocabulary**

**Agriculture:** farming; growing crops or rearing animals.

**Astronomy:** the study of space, planets and stars.

City state: a city and its surrounding area which has its own ruler.

Code: a book written by the Maya using one long sheet of paper.

Glyph: a symbol used in writing.

**Hierarchy:** a system that ranks things, often in order of power or importance.

Maize: a crop, known as corn. Sacrifice: giving up something as an act of worship.

**Settlement:** a place where people live and build homes.

**Temple:** a building devoted to the worship of a god or gods.





# What did the Ancient Maya believe?

Religion was very important to the Ancient Maya, evidenced by their impressive temples. The Ancient Maya worshipped their kings like they were gods but they also worshipped their ancestors and a range of different gods and goddesses.

#### What was daily life like?

Ordinary Maya citizens lived in one room houses built from mud and timber. Men were responsible for providing for their families, women would prepare food and clothes and the children would learn these skills from their parents. Maya people would eat meat as well as their own grown crops, but maize was their staple food. The cacao bean was used to make a drink for the ruling classes.



This map shows the modern countries that the Maya once occupied, as well as the locations of the key Maya cities.



# Maya Numbers The Maya we

The Maya developed an advanced number system for their time.

They were one of only two cultures in the world to develop the concept

The number system used three symbols in different

combinations.

The Maya were an ancient civilisation in Mesoamerica (Central America) that existed from 2000BC to approximately 1697AD. They were considered an advanced civilisation due to their many achievements.

#### Writing

The Maya writing system was used to write several different Maya languages. It was made up of many symbols called gluphs.

Logograms are glyphs representing whole words.

Syllabograms are glyphs representing units of sound (syllables).

The glyphs were carved on stone

buildings and
monuments and
painted on pottery.
Maya scribes
also wrote books
called codices.



#### 2000BC

Civilisations first begin to emerge.

#### 1100BC

The huntergatherers begin to settle on the Pacific Coast.

#### 800BC

Farming begins and a basic trade system develops.

#### 700BC

Maya writing begins developing.

#### 100BC

The first pyramids/temples are built and cities begin forming around them.

#### 250AD

The Classic Era begins. Astronomy, mathematics and architecture are all developing.

#### 800-925AD

Chichen Itza becomes the most powerful city.

#### 1000AD

The Maya civilisation begins to decline and leave the cities. In the 1500s, the Spanish begin to colonise here.

#### Milverton Primary School – Year 5 & 6 – Autumn Cycle B Knowledge Organiser - Physical Education





#### Strike and Field – Tee Ball Invasion - Basketball

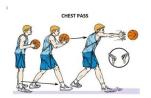
Key Vocabulary	
Tee Ball	Basketball
Tee, ball, and bat	Basketball, Basket, Backboard
Bases – 1st 2nd, 3rd and home	Lay up, jump shot, free throw and rebound
Foul territory	Foul – illegal contact with others
Catcher	Jump ball or tip off
Home Run and Run	Dribble, double dribble and travelling
Outfield	Side line pass to restart the game

	Key Knowledge – Coaching Points								
	Send & Receive	Attack and Defend	Moving	Scoring	Tactics and Rules				
Tee Ball	Hitting off the tee Two hands at the end of the bat Stand sideways on with knee pinched in then stepping into a wide stance Hold back behind the head Swing through connecting with ball, turning hips for power Follow through with swing	Hit the ball where the defenders are not Run quickly to the bases Decide if you should run to the next base or not Field the ball quickly and return to the backstop or catcher	<ul> <li>After hitting the ball you have to run between bases as quickly as possible</li> <li>You can stop on a base each turn</li> <li>If a teammate runs onto a base you are on, you are out</li> </ul>	You score when you run around all the bases and get back to home base     You may move from one base to the next on each new batter     You may go all around on one hit	Each turn starts with a hit from the tee     You are out if someone catches your hit without it bouncing     You are out if someone hits the base with the ball as you are running towards it     Foul Ball is when the ball is hit out of play     You get 5 attempts to hit the ball				
Basketball	Chest pass – pushing the ball with two hands to throw the ball to receiver Bounce pass – same action aiming ball to bounce half way between players Arms out-stretched to give a target for the passer Receive the ball with two hands Pass the ball in front of a moving player for them to move onto	Move up the court to get closer to the basket to score     Pass to teammates or dribble to move up the court     Get in front of the player with the ball to give them a good pass option     Stay inside the lines     Stay in between the attacker and the basket to defend     If the shot is missed both teams can try and rebound the ball	<ul> <li>When moving with the ball you must dribble, bouncing with one hand</li> <li>Jump stop, land on two feet and decide which foot to use as a pivot foot</li> <li>After picking up the dribble pivot on one foot to move to get the best pass or shot</li> <li>When picking up the ball from a dribble you can have two steps</li> </ul>	Throw the ball in a rainbow shape arc into the basket parc into the basket points for a basket point for a free throw points for a shot beyond 3pt line A close in shot on the run is called a layup A shot from distance is called a jump shot  A free throw is a penalty shot awarded after a foul on a shooter	The game starts with a jump ball When you pick up from a dribble, you cannot bounce it again and you only have two steps A side line pass is given when the ball goes out or one side makes an infringement that stops the game Defenders can knock the ball out of an attackers hands Don't foul by making contact If you step on the line you are out of court				











#### Milverton Primary School Knowledge Map [Years 5&6 - Autumn Term - Dance]



Vocabulary	/
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Canon	Performing moves one after the other
Freeze Frame	Completely still in a set position
Choreograph	Creating moves and motifs to perform
Count	Equal beats paired within the music
Dynamics	How movements are executed e.g. smooth, fast aggressive, sharp
Timing	Moving to the sound and beat of the music
Unison	Two or more people performing at the same time

Sport	Steps/Links/Motifs to represent
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Boxing	Jab – cross – uppercut – dodge- weave – block
Sword Fighting	Lunge – flunge (flying lunge) – passata sotto (twist to the ground to evade) – parry (block)
Chariot Racing	Whip – circular whip – trot – gallop – canter
Pentathlon	Long jump – running – discus – javelin –

#### The First Olympics

- The first recorded Games was in 776 BC, in Olympia.
- The event was part of a festival to honour the Greek god, Zeus.
- Women were not allowed to compete in the Olympics. This was because ancient Greek women were not treated as equals to men and had fewer freedoms.
- Events included boxing, wrestling, running and chariotracing.
- Some of the evidence about the Games comes from paintings discovered on pottery.





#### Milverton Primary School Knowledge Map [Years 5 & 6 – Gymnastics – Autumn Term]



To continue a movement.

Do complete an opposite

move. Complete a movement in

parallel with someone else.

Move 360 degrees.

Move 180 degrees.

To influence a certain

#### Jumps

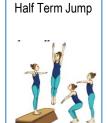




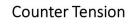


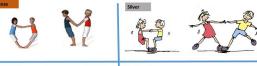








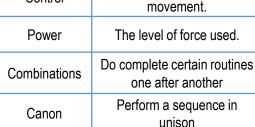






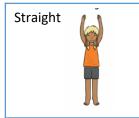






Complete a sequence as the Unison same time as somebody else.

Shapes









Rolls

Egg Roll



Pencil Roll



Dish Roll



Forward Roll



Backward Roll



Vocabulary

Fluency

Contrasting

Unison

Full turn

Half-turn

Control

Teddy Bear Roll



# Milverton Primary School Knowledge Map – PSHE (Anti-Bullying, SLS and Taking Care)



Key Voo Bullying	ey Vocabulary – Anti ullying	
Emotion	A strong feeling. e.g. excited.	
Motive	A reason for doing something.	
Effect	To make something happen.	
Bullying	Bullying is unwanted, aggressive behaviour that is repeated over time.	

#### Effects of bullying:

Bullying can affect everyone—those who are bullied, those who bully, and those who witness bullying. Bullying is linked to many negative emotions and behaviours and can have an effect on learning.

# What to do if you see bullying:

If you see someone being bullied or are being bullied yourself, it is important that you talk to an adult who can help you.

#### Autumn Super Learning Skills (SLS)

#### Colin the Collaborating Caterpillar



#### Key Vocabulary - Taking Care Something you are legally Rights entitled to have. Responsibilities Something that you are expected to do. Safe Free from harm or danger. Network A group of people who you know, and know you, well. Early warning Our body's way of telling us we feel unsafe. signs



#### Monty the Motivated Moth



## Years 5&6 Science Autumn Term



#### Space



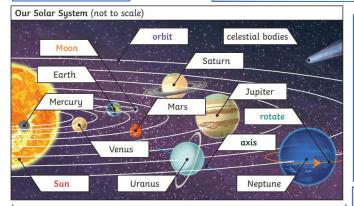












**PLANETS - Mercury**, Venus, Earth and Mars are rocky planets. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal.

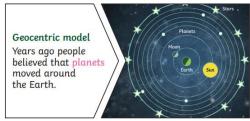
Pluto used to be considered a planet but was reclassified as a dwarf planet (2006)

**DAYS and YEARS** - Earth rotates (spins) on its axis. It does a full rotation once in every 24 hours. At the same time that Earth is rotating, it is also orbiting (revolving) around the Sun. It takes a little more than 365 days to orbit the Sun. Daytime occurs when the side of Earth is facing towards the Sun. Night occurs when the side of Earth is facing away.

**SEASONS** – spring, summer, autumn and winter, are caused by the way the Earth is tilted. The northern hemisphere has summer when it is tilted towards the Sun. The northern hemisphere has winter when it is tilted away from the Sun.

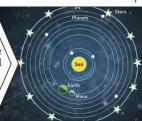
MOON -The Moon orbits Earth in an oval-shaped path while spinning on its axis. At various times in a month, the Moon appears to be different shapes – these are called phases of the moon. This is because as the Moon rotates round Earth, the Sun lights up different parts of it.

	Key vocabulary:		
	Sun	A huge star that Earth and the other planets in our solar system orbit.	
	Star	A giant ball of gas held together by its own gravity.	
	Liquids	A natural satellite which orbits Earth or other planets.	
	Planet	A large object, round or nearly round, that orbits a star.	
	Sphere	A round 3D shape in the shape of a ball.	
	Satellite	Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.	
	Orbit	To move in a regular, repeating curved path around another object.	
	Rotate	To spin. E.g. Earth rotates on its own axis.	
	Axis	An imaginary line that a body rotates around. E.g. Earth's axis (imaginary line) runs from the North Pole to the South Pole.	
	Astronomer	Someone who studies or is an expert	





The work and ideas of many astronomers (such as Copernicus and Kepler) combined over many years before the idea of the heliocentric model was developed. Galileo's work on gravity allowed astronomers to understand how planets stayed in orbit.



# Years 5&6 Science Autumn Term



#### **Forces**







#### Key Knowledge:

Examples of forces in action:



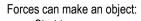
Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

#### Pulleys Gears/Cogs Levers Pulleys can be used to Gears or cogs can be Levers can be used to make a small force lift

make a small force lift a heavier load. The more wheels in a pulley, the less force is needed to lift a weight.

used to change the speed, force or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.

a heavier load. A lever always rests on a pivot.



- Start to move
- Change direction
- Change its shape
- Stop moving
- Move faster
- Mover slower





Isaac Newton is famously thought to have developed his theory of gravity when he saw an apple fall to the ground from an apple tree.



A Newton meter is a piece of equipment that is used to measure the forces acting on an object. Newton meters measure the forces acting against any given object. The greater the force, the larger the number of newtons shown on the newton metre.

Key Vocabulary:	
Air resistanc e	A force that is caused by air with the force acting in the opposite direction to an object moving through the air
Force	A push or pull upon an object resulting from its interaction with another object
Friction	The resistance that one surface or object encounters when moving over another
Gears	A toothed wheel that works with others to alter the relation between the speed of a driving mechanism (e.g. engine) and the speed of the driven parts (e.g. the wheels)
Gravity	The force that attracts a body towards the centre of the earth
Levers	A rigid bar resting on a pivot that is used to move a heavy or firmly fixed load
Mass	How much matter in inside an object. It is measured in kilograms (kg).
Pull force	To draw or haul towards oneself or itself, in a particular direction
Pulleys	A wheel with a grooved rim around that changes the direction of a force applied to the cord
Push force	To move something in a specific way by exerting force
Water resistanc e	A force that is caused by water with the force acting in the opposite direction to an object moving through the water
Weight	Ow strongly gravity is pulling an object down. It is measured in newtons (N).



#### Years 5&6 RE Autumn Term



#### What difference does it make to believe in ahimsa (harmlessness), grace and Ummah?

Exploring religious commitment.

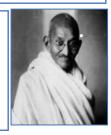
Religious commitment refers to how much an individual is involved in his or her religion (Koenig et al., 2001). More precisely, a religiously committed person is supposed to "adhere to his or her religious values, beliefs, and practices and use them in daily living". This unit is looking at the value of Ahimsa in Hinduism and how it leads to practice, and the belief of grace in Christianity and how that leads to practice and the belief of Ummah in Islam and how that leads to practice.

#### Key facts:

- The grace of God in Christianity is the belief that God loves people unconditionally and is willing to offer forgiveness to anyone for anything.
- The worldwide Muslim community is called the Ummah
- Muslims complete at least on Hajj in their lifetime and give zakat to the needy.
- Ahimsa is an ancient Indian principle of nonviolence which applies to all living beings. It's a religious
  value.
- Prophet Muhammad (pbuh) for Muslims is the last messenger of God. Other messengers include Adam. Abraham and Jesus.
- Archbishop Desmond Tutu (born 7 October 1932) is a South African social rights activist. He won the Nobel Peace Prize in 1983 for his work fighting apartheid in South Africa.
- · Ghandi saw non-violence as a tool based on strong religious thinking.

#### Mahatma Ghandi

Gandhi was a political and social leader in the 20th century. His use of non-violent protest eventually led to his country's independence. Ghandi supported the rights of both Hindus and Muslims in India. He brought around change involving better treatment for groups which were treated unfairly. He led the fight for Indian independence from the British Empire. He organized several non-violent civil disobedience campaigns.



#### Key skills:

Make connections between beliefs and behaviour in different religions.

Make connections between belief in ahimsa, grace and Ummah, teachings and sources of wisdom in the three religions.

Outline the challenges of being a Hindu, Christian or Muslim in Britain today.

Consider similarities and differences between beliefs and behaviour in different faiths.

 $\label{thm:explain} \textbf{Explain similarities in ways in which key beliefs make a difference to life in two or three religions.}$ 

Consider and evaluate the significance of the three key ideas studied, in relation to their own ideas.

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Key vocabulary:		
Ahimsa	A Hindu term for showing respect for all living things	
	and avoidance of violence towards others.	
Belonging	Belonging To show or feel a liking for a place or	
	situation.	
Community	A group of people living in the same place or having	
	a particular characteristic in common.	
Gospels	The teaching or revelation of Christ Grace of God	
	"The love and mercy given to us by God because	
	God desires us to have it, not necessarily because of	
	anything we have done to earn it".	
Grace	The love God has given for free, shown in the saving	
	of the sinners and the giving of blessings.	
Hajj	Muslim pilgrimage to Mecca	
Identity	The different characteristics that shoe who or what	
	you are, or something is.	
Karma	(In Hinduism and Buddhism) The sum of a person's	
	actions in this and previous states of existence,	
	viewed as deciding their fate in future existences.	
Parable	A simple story used to illustrate a moral or spiritual	
	lesson, as told by Jesus in the Gospels	
Purpose	The reason why something is done or created, or the	
	reason why something or someone exists.	
Religious	Behaviours motivated by religious beliefs.	
behaviours		
Religious	Attitudes towards mythological, supernatural, or	
beliefs	spiritual aspects of a religion.	
Religious	How much an individual is involved in his or her	
commitment	religion	
Religious	Based on values reflected within religious texts or by	
values	the influence of the lives of religious persons.	
Scripture	The sacred writings of Christianity contained in the	
	Bible.	
Truth	A fact or belief that is regarded as real	
Ummah	The whole community of Muslims bound together by	
	ties of religion.	
Wisdom	Having experience, knowledge, and good judgement	