KNOWLEDGE ORGANISER
Year 5 Summer Half Term 1

Curriculum Intent Statement -

At St. Augustine's Catholic Primary School, we are passionate about children's learning. The Cognitive Load research theory and Rosenshine's Principles of Instruction highlights that children learn through remembering and recalling and this theory is embedded this within the knowledge of our curriculum.

'Learning is Remembering and Recalling...'

Our curriculum is planned and sequenced around the specific vision of the National Curriculum, our Curriculum Drivers, the Laudato Si and the Gospel Values. This is based upon our School Catholic Mission that we have a moral purpose for our pupils to flourish in a safe, happy and stimulating environment, and leave us with the knowledge and skills, personal qualities and aspirations, to make the world a better place, inspired by the Gospel. We believe that this core belief underpins everything we do here at St. Augustine's.

St. Augustine's curriculum will provide inspiring and relevant learning opportunities for our children to develop the knowledge and skills that can be fluently applied across all subject areas. It will ensure that all children's individual needs and experiences are developed through local, national and global contexts.

In order for children to relate to their learning, topic areas will be carefully planned and supported through external visitors talking about their experiences, or class trips to supplement the children's learning.

Curriculum Development - Intent

LauDato Si, National Curriculum and Gospel Values

Using our Secrets to Success…

Rosenshine's Principles of Instruction

Parents in Partnership and Knowledge Organisers

English
Reading
Writing
Phonics
Spelling
Punctuation
Grammar

Maths
Arithmetic
Fluency
Reasoning
Problem Solving

RE
Knowledge & Understanding
Engagement & Response
Analysis & Evaluation

The Culture Team
History
Geography
French (MFL)

The Arts and Technology Team
Design Technology Art
Music
Computing

The Healthy Hearts and Minds Team
PE
Science
PSHE / RSHE

Being the 'Best we can be'

Our Laudato Si key question this half term…

How can we act as fair and just custodians of our world?

Our Focus Gospel Value this half term is…

Justice

"He has told you, O man, what is good; and what does the Lord require of you but to do **justice**, and to love kindness, and to walk humbly with your God?" (Micah 6:8)

School Mission Statement

Lead us Lord,
To act justly,
To love tenderly,
And to walk humbly.

Amen

Earth matters…

This half term Year 5 have lots of exciting things planned. We will be finding out about our planet and what makes it unique. Building upon the work on planets and the solar system from the Autumn term we will focus upon earth and its many interesting physical features. Questions we will ask will include:

- How are mountains and volcanoes formed?
- How can we be custodians of our planet?
- What effect will changes in the earths temperature have on my own life?

How can I help my child with this topic:
Using an atlas or online version, locate the United Kingdom and other countries of interest.
Identify famous mountain ranges and research specific mountains of note.
Research the longest rivers in the world.

The next few slides will show you some of the things that we will be covering within specific subjects. Each subject will look at a specific set of skills that will allow children to meet the National Curriculum objectives within Year 5.

English Knowledge - KEY VOCABULARY

Grammar Key Vocabulary – Sentence Level

Progressive tenses – showing a continuous action e.g. is clapping, was jumping (formed by adding –ing to the verb).

Present perfect tense – used for actions that started in the past and continue into the present e.g. I have lived in Weymouth for 10 years (formed using has/have + past tense verb).

Adverbial phrases – describe how, when, where or why the verb happens e.g. in the garden, before school, at the park (adverbials at the start of a sentence must be followed by a comma).

Subject – the noun that is doing the verb e.g. *The dog chased the ball.*
Object – the noun that is having the verb done to it e.g. *The dog chased the ball.*

Active voice – the subject comes before the verb in a sentence e.g. *The dog chased the ball.*

Passive voice – the object comes before the verb in a sentence e.g. *The ball was chased by the dog.*

Grammar Key Vocabulary – Word Level

Preposition – describes when or where something is in relation to something else (after, before, under, inside).

Determiner – introduces a noun:
- Articles (a, an, the)
- Demonstratives (this, that, these, those)
- Quantifiers (one, two, some, many, multiple)
- Possessive (his, her, their)

Subordinating conjunction – a word that connects an independent clause to a dependent clause (because, although, however).

Co-ordinating conjunction – a word that joins two elements of equal importance (FANBOYS – for, and, nor, but, or, yet, so).

Synonyms – a word that means the same as another e.g. old and ancient.
Antonyms - a word that means the opposition – e.g. old and young.

Punctuation Key Vocabulary

Parenthesis ( ) , , - - additional information or an aside within a sentence. Punctuated with brackets (for short or formal information), dashes – for informal chatty – and commas for clauses.
Semi colon ; used to join independent clauses (clauses that make sense on their own) in the place of a conjunction.
Colon : used to introduce a list or to join two independent clauses when the second clause relates to the first.
Hyphens to avoid ambiguity used to avoid confusion between words which would otherwise have the same spelling but a different meaning.

English Knowledge & Skills

WRITING - Short stories & Balanced arguments

AMPS descriptive techniques to describe setting, atmosphere and characters:
Alliteration – Most of the **initial letter sounds** of the words in each line are the same.
Metaphor – Saying an object **is** something.
Personification – A **human** quality is given to an object.
Simile - Comparison is used by using '**as a**' or '**like a**'.

Plot – developing problems and solutions within a story.

Dialogue – using the speech of characters to advance action in a story.

READING Key vocabulary

Word meaning - Explaining the meaning of words in context and explaining how word choice enhances meaning.

Retrieval - Finding details and information from a text.

Prediction - Saying what will happen next or as a result of something.

Comprehension – understanding the text and how content is related to the meaning as a whole.

Inference - reaching a conclusion which you can explain and justify with evidence from the text.

Deduction - Using evidence in a text to support an idea.

Summary – summarising main ideas from across paragraphs.

Don't forget the Vocabulary Challenge!

SPELLING

- Words with silent letters
- Words ending **in ment**
- Modal verbs
- Adverbs of possibility and frequency
- Statutory Spelling Challenge Words
- **Homophones** – words that sound the same but mean different

HOW TO HELP – Writing

- Discuss descriptive techniques when reading.
- Discuss how authors develop the plot in their stories.
- Look at dialogue and how it moves a story on.
- Encourage your child to write as much as possible for as many different purposes as you can.

HOW TO HELP - Grammar

- Speak in grammatically accurate sentences.
- Spot gramma being taught at school when reading.
- Work together on your child's IXL homework.

HOW TO HELP - Reading

- Read with your child (lots)
- Discuss vocabulary and develop understanding of new words
- Visit local libraries
- Read comics/magazines/newspapers
- Let your child see you read
- Make reading enjoyable- not a battle
- Let children read what interests them

Spelling Y5 & 6 Curriculum words

accommodate
accompany
according
achieve
aggressive
amateur
ancient
apparent
appreciate
attached
available
average
awkward
bargain
bruise
category
cemetery
committee
communicate
community
competition

conscience
conscious
controversy
convenience
correspond
criticise
curiosity
definite
desperate
determined
develop
dictionary
disastrous
embarrass
environment
equip
equipped
equipment
especially
exaggerate
excellent

existence
explanation
familiar
foreign
forty
frequently
government
guarantee
harass
hindrance
identity
immediate
immediately
individual
interfere
interrupt
language
leisure
lightning
marvellous
mischievous

muscle
necessary
neighbour
nuisance
occupy
occur
opportunity
parliament
persuade
physical
prejudice
privilege
profession
programme
pronunciation
queue
recognise
recommend
relevant
restaurant
rhyme

rhythm
sacrifice
secretary
shoulder
signature
sincere
sincerely
soldier
stomach
sufficient
suggest
symbol
system
temperature
thorough
twelfth
variety
vegetable
vehicle
yacht

Help your child to practice spelling and using these words.

Look for them in books.

Can they write them in their homework?

Maths Knowledge – KEY VOCABULARY

Number and the 4 Operations

Divisor – the number you are dividing by
Quotient – the answer to a division calculation
Product – the answer to a multiplication question
Factors – numbers that go into a given number (come in pairs) e.g. factors of 12 are:
1 and 12 2 and 6 3 and 4
Multiples – in the times table of - e.g. multiples of 12 are 12, 24, 36 etc.
Lowest Common Multiple – the lowest multiple of 2 or more numbers that are the same.
Highest Common Factor – the largest factor that is a factor of two or more other numbers
Integer – a whole number
Prime numbers – numbers that only have 2 factors, 1 and itself
Decimal – part of a whole where 1 is the whole
Percent – part of a whole where 100% represents the whole

Fractions

Equivalence – fractions that have the same value/are the same size
Numerator – the top number of a fraction (how many parts selected from the whole)
Denominator – the bottom number of a fraction (how many parts the whole is split into)
Simplify – giving a fraction in the simplest form using the smallest possible numerator and denominator (e.g. 50/100 = ½)
Common denominator – finding the lowest common multiple of two or more denominators to allow you to add or subtract them
Mixed number – a whole (integer) and a fraction e.g. 1 ½
Improper fraction – where the numerator is larger than the denominator e.g. 3/2. Improper fractions can be converted into mixed numbers e.g. 3/2 = 1 ½

HOW TO HELP
Mental arithmetic games – e.g. Countdown.

Regularly revisit times tables facts up to 12 x 12.

Use maths in daily life – cooking, measures, shopping etc.

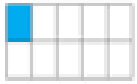
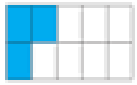
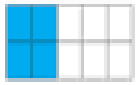
Be positive about maths at home!

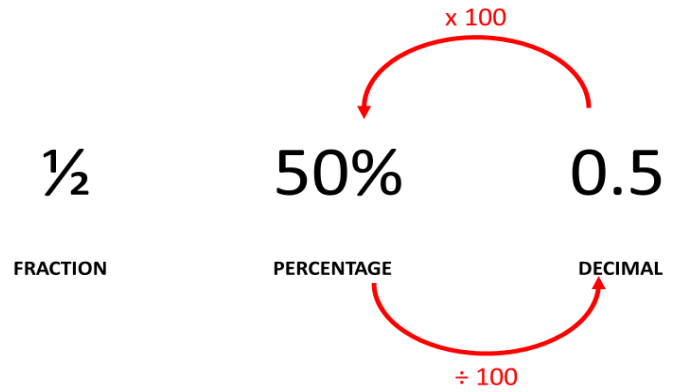
Embrace struggle! Teach your child that it's good to get stuck! This is how we learn best. Allow time for resilience building.

Fluency, Reasoning and Problem Solving Key Vocabulary -

Fluency - Using number and calculation skills accurately and efficiently
Reasoning - Following a line of enquiry, justifying and proving their answers
Problem Solving - Solving real life and logical problems using mathematical understanding

Maths – Decimals and percentages

Fractions	Decimals	Diagram	Out of 100	Percentages
1/10	0.1		10/100	10%
2/10	0.2		20/100	20%
3/10	0.3		30/100	30%
4/10	0.4		40/100	40%
5/10	0.5		50/100	50%



This half term we are learning to :

percentages

-Read, write, order and compare numbers with up to three decimal places.

-Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

-Round decimals with two decimal places to the nearest whole number and to one decimal place.

-Solve problems involving number up to three decimal places.

-Recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

-Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25.

TIMES TABLES – the best possible help with multiplying and dividing, percentages, fractions and decimals is knowing your times tables.

Maths – Shape

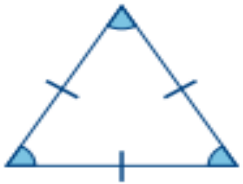
Properties of Shape — Knowledge Organiser

Key Vocabulary

- angle
- right angle
- acute
- obtuse
- horizontal
- vertical
- diagonal
- parallel
- perpendicular
- two-dimensional
- polygon
- line of symmetry
- reflection
- mirror line
- isosceles
- equilateral
- scalene
- quadrilateral
- rhombus
- parallelogram
- trapezium

Triangles

Triangles have 3 sides and 3 vertices. The total of the angles in a triangle is 180°.



An equilateral triangle is a regular polygon. It has sides of equal length and each angle is 60°.

An isosceles triangle has two sides of equal length and two angles of equal size.

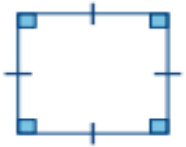
A right-angled triangle always has one 90° angle.

It can be isosceles or scalene.

A scalene triangle has no equal sides or angles.

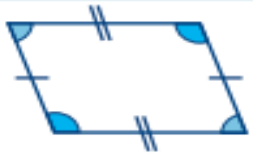
Quadrilaterals

A quadrilateral is a polygon with four sides.



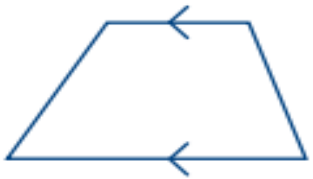
A square has four sides of equal length and four right angles (90°). A square is also a rectangle, a rhombus and a parallelogram.

A rectangle has two pairs of parallel, equal sides and four right angles. A rectangle is also a parallelogram.

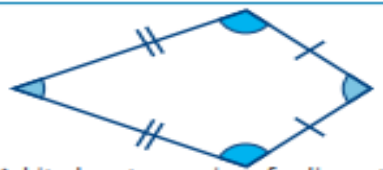


A parallelogram has two pairs of parallel, equal sides and opposite equal angles.

A rhombus has four sides of equal length and opposite equal angles. A rhombus is also a parallelogram.



A trapezium only has one pair of opposite parallel sides.



A kite has two pairs of adjacent equal sides and one pair of opposite equal angles.

Maths – Shape

Properties of Shape

Knowledge Organiser

Angles

An angle is created when two straight lines meet at a point or intersect.

Right angle

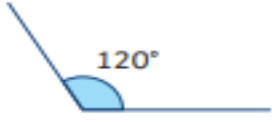
The intersection of perpendicular lines creates a right angle.

Acute angle

Any angle measuring more than 0 degrees and less than 90 degrees is acute.

Obtuse angle

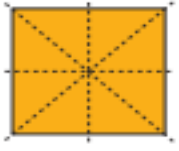
Any angle measuring more than 90 degrees but less than 180 degrees is obtuse.



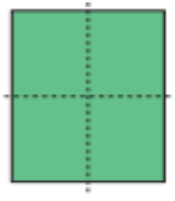
Lines of Symmetry

Lines of symmetry may be horizontal, vertical or diagonal. Some 2D shapes will have no lines of symmetry and some 2D shapes will have multiple lines of symmetry.

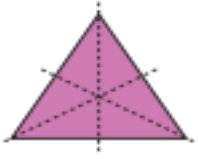
A square has four lines of symmetry.



A rectangle has two lines of symmetry.

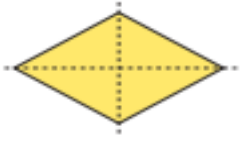


An equilateral triangle has three lines of symmetry.



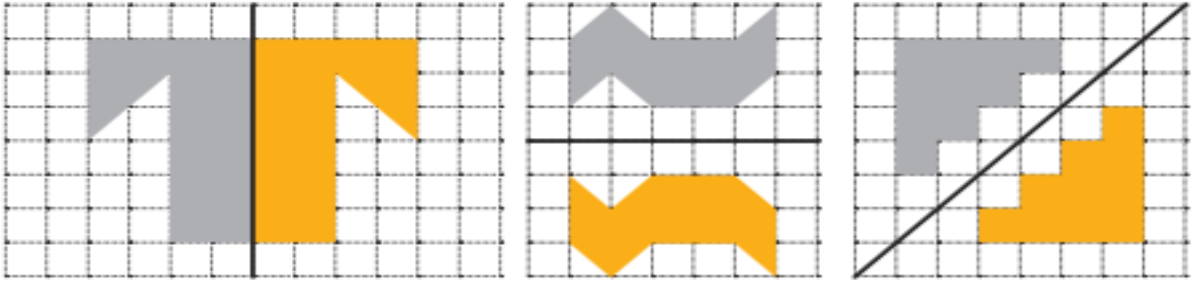
An isosceles triangle has one line of symmetry.

A rhombus has two lines of symmetry.



Symmetric Figures

Patterns and shapes can be reflected in a mirror line. Mirror lines can be vertical, horizontal or diagonal.

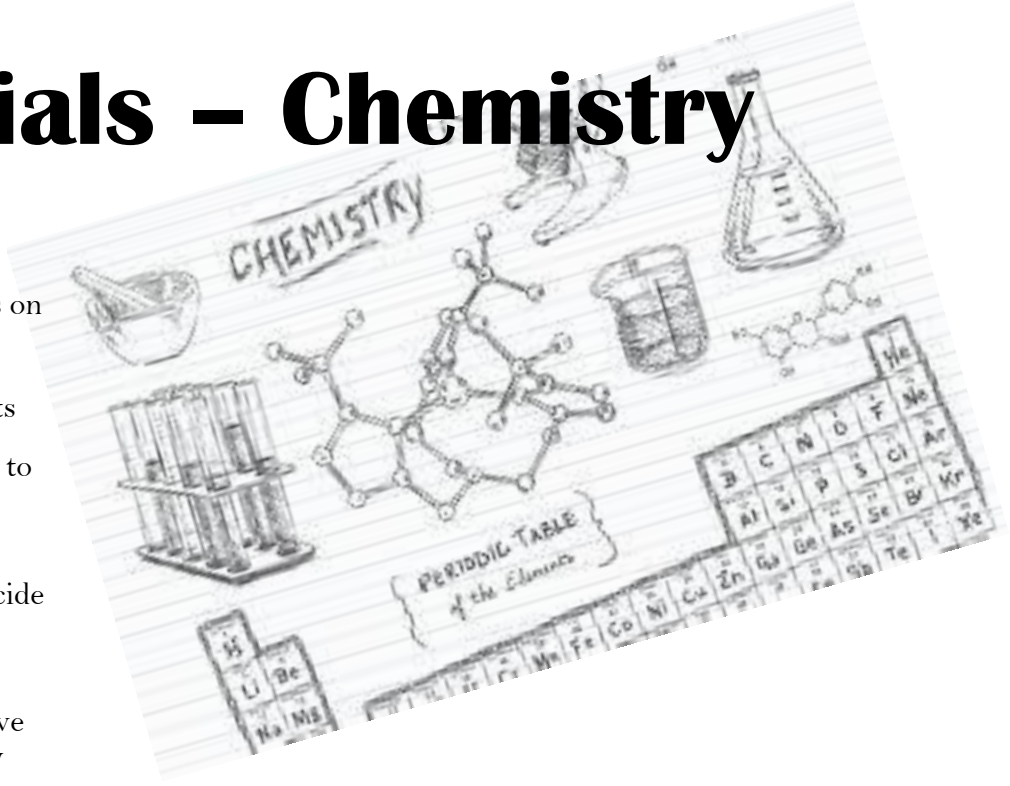


Religious Education

Pentecost-Serving Transformation-Celebration of the spirit's transforming power

What do you think would happen if there were no energy in the world?
Which source of energy do you think is best for world, what are the pro and cons of it?
Why do we have a duty to ensure that the energy used is renewable?
How can we as individuals save energy?
How can people use the energy of their minds for the good of others and why?
How can people use time and physical energy for the well being of others and why should they?
Another word for transform is 'change'. How can we use our energy to transform ourselves?

Science: Materials – Chemistry



- This half term we will learn how to:
- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- demonstrate that dissolving, mixing and changes of state are reversible changes
- explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

cm CHEMISTRY OF MATERIALS

Earth Matters…

Earth Matters

Climates and Biomes

Key Concepts -

Care, Responsibility, Sustainability

Key Vocabulary

Biome - a large naturally occurring community of flora and fauna occupying a major habitat, e.g. forest or tundra.

Habitat - the natural home or environment of an animal, plant, or other organism.

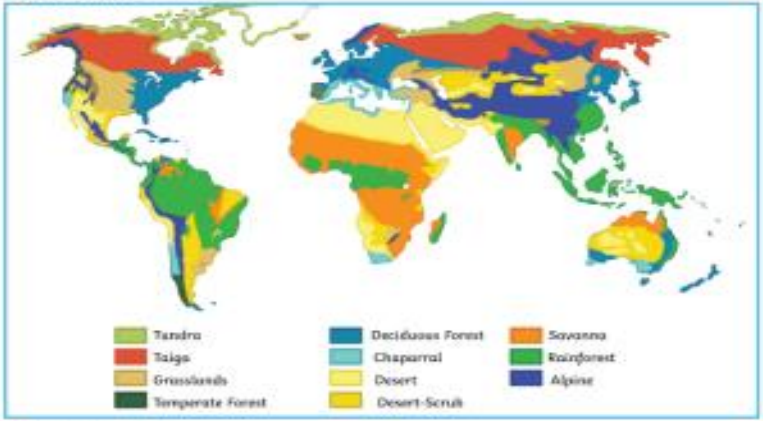
Water cycle - a way in which water moves around the world.

Photosynthesis - the process by which green plants and some other organisms use sunlight to synthesize nutrients from carbon dioxide and water

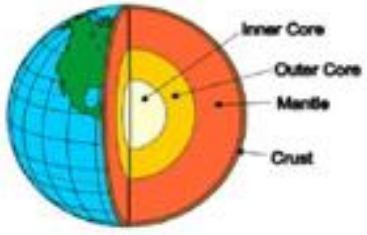
Adaptation - the process of change by which an organism or species becomes better suited to its environment.

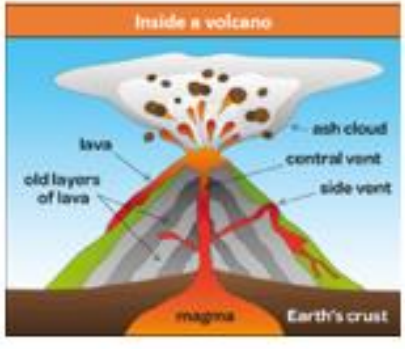
7 Biomes

- Rainforest
- Savannah
- Tundra
- Taiga
- Desert
- Temperate
- Grassland

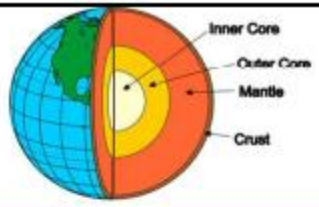


Vocabulary	
Ring of fire	Path along the Pacific Ocean where there are many active volcanoes and frequent earthquakes
Tectonic plates	Large moving slabs of rock, which form the outer layer of the Earth.
Fault	A crack in the Earth's crust.
Magma	Molten rock deep below the Earth's surface.
Lava	Magma that flows out from under the Earth's surface.
Pyroclastic flow	An extremely fast moving body of gas, rock, ash resulting from a volcanic eruption.
Eruption	A sudden explosion or bursting out.
Epicentre	The point on the Earth's surface, which is directly above the focus of the earthquake.
Seismologist	A scientist who studies earthquakes
Volcanologist	A scientist who studies volcanoes.
Magnitude	The great size or extent of something.
Active	Volcanoes that are currently in a state of regular eruptions or activity.
Dormant	Volcanoes that are capable of erupting, and will probably erupt again in the future, but have not erupted for a very long time.
Extinct	A volcano that has shown no activity for over 10,000 years and is not expected to erupt again.





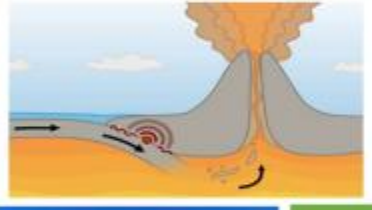
Vicious Volcanoes & Mighty Mountains



	Structure of the Earth
Crust:	solid rock; 0-60 km thick; continental (granite) and oceanic (basalt); broken into tectonic plates
Mantle:	liquid/molten rock; ~2,900 km thick
Outer core:	liquid metal; iron and nickel; ~4400°C
Inner core	solid metal; iron and nickel; ~6100°C

Keywords	
Magma	Molten rock in the mantle
Lava	Magma that has reached the surface
Pressure	Physical force (pressure builds up when tectonic plates lock together and can't move)
Friction	Resistance or difficulty in moving. Tectonic plates are rough and so there is friction when they move.
Basalt	Dark-coloured volcanic rock.
Granite	Hard rock
Fold mountain	Mountains formed when tectonic plates collide and cause the plates to wrinkle
Ocean trench	A deep valley formed on the ocean floor where one tectonic plate subducts under another.
Tsunami	Large ocean wave caused by underwater earthquake.

Earthquakes occur when plates jolt forward after getting stuck.



Volcanoes erupt when magma rises to the surface.

	Volcanoes
Shield volcano:	Largest volcanoes on earth; wide base; low height; not steep. Example: Kilauea (Hawaii) and Erta Ale (Ethiopia)
Stratovolcano (composite):	Most of the world's volcanoes are composite volcanoes: made of layers of lava and ash; steep sides; tall.

	Tohoku 11/03/2011 9.0 Richter Scale	Fuego Volcano 03/06/2018 Explosivity Index 3
Location	Japan	Guatemala
Primary Effects	16,000 people died 4000 people missing 6000 people injured	110 deaths 200 people missing 300 injured
Secondary Effects	Tsunami wave and flooding (reached 39 m high, travelled 10 km inland on eastern side of Japan) Disruption to:: travel and farming	Heavy rain caused landslides Hunger due to crops being destroyed Disruption to travel and farming
Immediate Responses	Military aircraft identified areas needed most urgent help Roads cleared to bring water/food/ medical care / tents	Search & Rescue teams clear roads to reach people Water / food / medical care / tents Evacuation
Long-term Responses	Continued training, education and earthquake drills Rebuild infrastructure (roads, electricity, buildings)	Education and evacuation drills New and improved emergency response systems Rebuilding infrastructure

Geography
Earth Matters

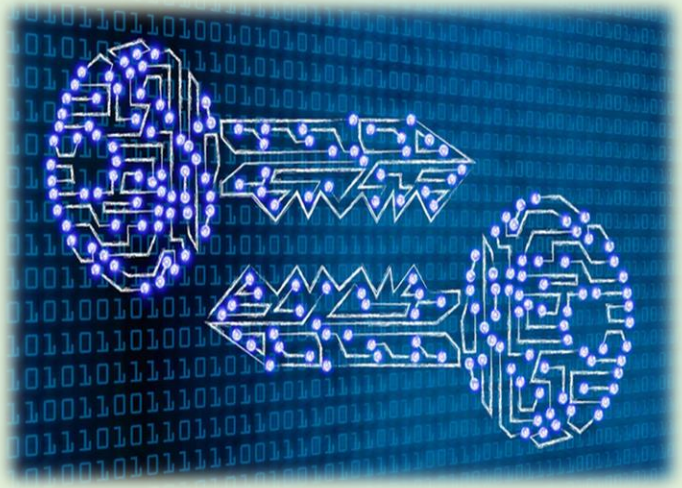
Year 5 Geography Skills:
We will be…

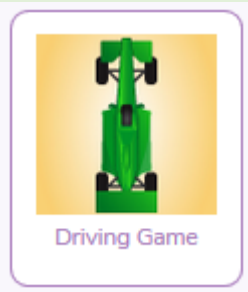
describing and understanding key aspects of:

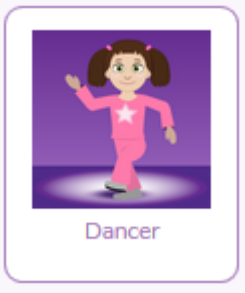
physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

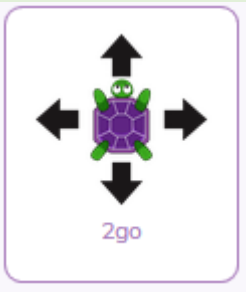
Computer Science – We are cryptographers

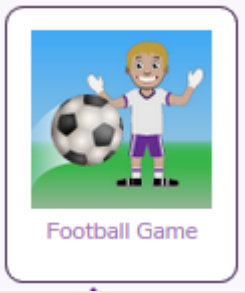
Children learn more about communicating information securely through an introduction to cryptography (the science of keeping communication and information secret). They investigate early methods of communicating over distances, learn about two early ciphers, and consider what makes a secure password.











Art/DT

Year 5 Skills

Children will learn to:

Demonstrate a wide variety of ways to make different marks with dry and wet media.

Identify artists who have worked in a similar way to their own work.

Develop ideas using different or mixed media, using a sketchbook.

Manipulate and experiment with the elements of art: line, tone, pattern , texture, form, space, colour and shape.

Music

Children will be learning to:
Sing songs with control and using the voice expressively
Sing songs with increasing control of breathing, posture and sound projection.
Sing songs in tune and with an awareness of other parts.
Identify phrases through breathing in appropriate places.
Sing with expression and rehearse with others.
Sing a round in two parts and identify the melodic phrases and how they fit together.
Sing confidently as a class, in small groups and alone, and begin to have an awareness of improvisation with the voice.
Reading and writing notation.
Perform using notation as a support. Sing songs with staff notation as support.

Key Vocabulary

- Sing
- Expression
- Improvisation
- notation

PSHE

Year 5 this term will be learning about:

Living in the Wider World.

Keeping myself safe

Children will be learning:

That they have different kinds of responsibilities, rights and duties at home, at school, in the community and towards the environment; to continue to develop the skills to exercise these responsibilities

PE

Rugby
Children will learn to:

Rugby Objectives
Perform a 'drop kick'
Rugby Skills
choose, combine and perform skills more fluently and effectively in invasion, striking and net games
understand, choose and apply a range of tactics and strategies for defence and attack
use these tactics and strategies more consistently in similar games
understand why exercise is good for their fitness, health and wellbeing
understand the need to prepare properly for games
develop their ability to evaluate their own and others' work, and to suggest ways to improve it
know why warming up and cooling down are important

Foundation Subject
IMPACT QUESTIONS

Topic/Geography

- Why do we study earth? • What would happen if we did not learn about the our environment?
- How are mountains formed?

What makes our planet so special?

PE

Why Is it important that we play team games?

How can we improve our ball skills?

Music

Can you explain what singing in a round means?

Computing

Explain what makes an effective password..

Explain what we mean by the terms secure and hacker?.

PSHE

How do you define the terms rights and responsibilities?

Can you have rights without responsibilities?

Art

Name a famous landscape painter?

How do landscapes differ from portraits?