KNOWLEDGE ORGANISER
Year 4

Extreme Earth

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 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…

Are we responsible for climate change?

Our Focus Gospel Values this half term are …

How can we make sure we do as we say in order to contribute to a fairer world?

School Mission Statement

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

Amen

Extreme Earth

This half term, Year 4 will be learning all about the Earth we live in. We will look at Global warming, climate change and how our wonderful world can create incredible natural phenomenon. We will look at volcanoes, earthquakes and tsunamis within our learning. We will also look at how habitats, and the way a habitat can change, affects the creatures that live in them. We will use art to explore some of the phenomenon that occur and will also include opportunities to practice our sketching skills.

How can I help my child with this topic:
Ask them to tell you what they have done at school – have discussions about their learning**.**
Look up activities about global warming and climate change and the impact this has on our environment.
Talk to your child about what they have learnt in school, were will their curiosity take them?
Investigate how animals have adapted to be able to live in changing environments.

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 4.

English - KEY VOCABULARY

Spelling Key Vocabulary -

Compound Word - A word that contains two or more root words e.g. news+paper, ice+cream

Key Word/Common Exception Word - A word which can't be phonetically decoded

Prefix - A prefix is added at the beginning of a word in order to turn it into another word e.g. disappear

Suffix - Suffix A suffix is an 'ending', used at the end of one word to turn it into another word e.g. teacher

Homophone - Two different words are homophones if they sound exactly the same when pronounced
e.g. hear/here

Grammar key vocabulary -

Pronoun - Word that takes the place of a noun e.g. it, he, she

Possessive Pronoun - Words that demonstrate ownership e.g. His, her

Verb - Verbs are sometimes called 'doing words' because many verbs name an action that someone does e.g. run, cook

Modal Verb - An auxiliary verb that expresses necessity or possibility e.g. might, should, will, must

Auxiliary Verb - A verb that helps make sense e.g. They have been swimming

Adverb - These modifying the verb e.g. quickly, happily

Adverbial - Linking ideas across paragraphs using adverbials of time [e.g. later], place [e.g. nearby] and number [e.g. secondly] or tense choices [e.g. he had seen her before]

Fronted Adverbial - Words or phrases at the beginning of a sentence, used to describe the action that follows e.g. Later that day, I heard the bad news

Question - Asks something e.g.: Why aren't you my friend?

Statement - States a fact or something that has happened. **E.g. You are my friend.**

Command - Something you have to do. **E.g. Be my friend!**

Exclamation - When something is exclaimed- start with 'what' or 'how'. **E.g. What a good friend you are!**

English

Grammar

Noun Phrase - A phrase where an adjective is used before a noun to describe it e.g. blue table, fierce fox

Tense - Shows whether you are writing about the past, present or future

Relative Clause - Clauses that begin with who, which, where, when, whose, that, or an omitted relative pronoun

Subordinate Clause - Typically introduced by a conjunction, that forms part of and is dependent on a main clause (e.g. 'when it rang' in 'she answered the phone when it rang').

Direct Speech - The part being spoken e.g. Rachel shouted loudly "Watch out!"

Indirect / Reported Speech - Summarising what has been said e.g. He said they'd already eaten when he'd arrived.

Speech Marks - Punctuation used around the part being spoken e.g. The conductor shouted, "Sit down!"

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.

SPELLING

- Words with a /shun/ sound, spelt with 'sion'
- Words with a /shun/ sound splt with 'ssion'
- Words with a /shun/ sound spelt with 'tion'
- Words with a /shun/ sound spelt with 'cian'
- Words with 'ough' to make a long /o/, /oo/ or /or/ sound
- Year 3 and 4 CEW challenge.

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.

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 Y3 & 4 Common Exception words

Year 3 and 4 Common Exception Words

Aa	breath	consider	enough	group	island	natural	popular	**Rr**	surprise
accident	breathe	continue	exercise	guard	**Kk**	naughty	position	recent	**Tt**
accidentally	build	**Dd**	experience	guide	knowledge	notice	possess	regular	therefore
actual	busy	decide	extreme	**Hh**	**Ll**	**Oo**	possession	reign	though
actually	business	describe	**Ff**	heard	learn	occasion	possible	remember	thought
address	**Cc**	different	famous	heart	length	occasionally	potatoes	**Ss**	through
although	calendar	difficult	favourite	height	library	often	pressure	sentence	**Vv**
answer	caught	disappear	February	history	**Mm**	opposite	probably	separate	various
appear	centre	**Ee**	forward	**Ii**	material	ordinary	promise	special	**Ww**
arrive	century	early	forwards	imagine	medicine	**Pp**	purpose	straight	weight
Bb	certain	earth	fruit	increase	mention	particular	**Qq**	strange	woman
believe	circle	eight	**Gg**	important	minute	peculiar	quarter	strength	women
bicycle	complete	eighth	grammar	interest	**Nn**	perhaps	question	suppose	

Help your child to practice spelling and using these words.

Look for them in books.

Can they write them in their homework?

Maths – decimals

Dividing by 10

Tens	Ones
8	5

÷ 10

÷ 10

Tens	Ones	Tenths
	8	5

÷ 10

Dividing by 100

Tens	Ones
8	5

÷ 100

÷ 100

Tens	Ones	Tenths	Hundredths
	0	8	5

÷ 100

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Rounding Decimals

0 ← 0.1 0.2 0.3 0.4 | 0.5 0.6 0.7 0.8 0.9 → 1

If the tenths digit is **1, 2, 3 or 4,** we round **down** to the nearest whole number.

If the tenths digit is **5, 6, 7, 8 or 9,** we round **up** to the nearest whole number.

Make a Whole

1 → 0.58, 0.42

1 → 0.37, 0.63

Partitioning Tenths and Hundredths

0.65 → 0.6, 0.05

0.65 → 0.5, 0.15

Comparing Numbers with Two Decimal Places

Ones	Tenths	Hundredths
	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$

0 . 3 4

Ones	Tenths	Hundredths
1		$\frac{1}{100}$ $\frac{1}{100}$

1 . 0 2

Ones	Tenths	Hundredths
1 1	$\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$

2 . 1 3

Maths – Money

Key Vocabulary

- amount
- change
- combinations
- estimate
- decimal
- pence
- penny
- pounds
- round
- value
- convert

UK Coins

							
£0.01	**£0.02**	**£0.05**	**£0.10**	**£0.20**	**£0.50**	**£1.00**	**£2.00**
one penny coin	two pence coin	five pence coin	ten pence coin	twenty pence coin	fifty pence coin	one pound coin	two pound coin

UK Notes

£5
five pound note

£10
ten pound note

£20
twenty pound note

£50
fifty pound note

Pounds and Pence

£3 and 25 pence **£3.25**

£52 and 13 pence **£52.13**

463 = £4.63

705p = £7.05

92p = £0.92

Maths – Money

Ordering Money

We can compare or order amounts by changing all amounts to either pounds or pence.

£4.82 ☐ 428p

£4.82 = 482p

482p > 428p

£4.82 > 428p

Order in ascending order:

516p 156p £1.65 £6.51

£1.65 = 165p and £6.51 = 651p

156p, £1.65, 516p, £6.51

Estimating Money

That's about £8.

That's about £4.

We can use estimates when calculating.

They are about £3 and £7 so will be about £10 in total.

They are about £4 and £3 so will be about £7 in total. I will have about £3 left.

Maths – Time

Key Vocabulary

- 12-hour time
- 24-hour time
- Roman numerals
- analogue
- digital
- hours
- minutes
- seconds
- o'clock
- half past
- quarter past
- quarter to
- midday
- midnight
- noon
- a.m.
- p.m.

Analogue and Digital Clocks

Minute Hand
The long hand points to the minutes past the hour.

Hour Hand
The short hand points to the hour. If this hand is pointing between the hours, it is the earlier hour of the two.

12:00
twelve o'clock

12:15
quarter past twelve

12:30
half past twelve

12:45
quarter to one

Durations of Time

There are **60 seconds** in an minute.

There are **60 minutes** in an hour.

There are **24 hours** in a day

There are **7 days** in a week.

There are **12 months** in a year.

Maths – time

24-Hour Time

There are 24 hours in a day.

01:00	1 a.m.	1 o'clock	
02:00	2 a.m.	2 o'clock	
03:00	3 a.m.	3 o'clock	
04:00	4 a.m.	4 o'clock	
05:00	5 a.m.	5 o'clock	
06:00	6 a.m.	6 o'clock	
07:00	7 a.m.	7 o'clock	
08:00	8 a.m.	8 o'clock	
09:00	9 a.m.	9 o'clock	
10:00	10 a.m.	10 o'clock	
11:00	11 a.m.	11 o'clock	
12:00	12 p.m.	12 o'clock	

13:00	1 p.m.	1 o'clock	
14:00	2 p.m.	2 o'clock	
15:00	3 p.m.	3 o'clock	
16:00	4 p.m.	4 o'clock	
17:00	5 p.m.	5 o'clock	
18:00	6 p.m.	6 o'clock	
19:00	7 p.m.	7 o'clock	
20:00	8 p.m.	8 o'clock	
21:00	9 p.m.	9 o'clock	
22:00	10 p.m.	10 o'clock	
23:00	11 p.m.	11 o'clock	
00:00	12 a.m.	12 o'clock	

Religious Education

Pentecost

Christians believe that the Spirit of God is active in each person and, in a special way, in the community of believers, which is the Church. It is the work of the Spirit to enable people to hear God's message and to live Jesus' way of service.

The Word of God

"The Spirit of the Lord is upon me, because he has anointed me to bring Good News to the poor. He has sent me to proclaim release to the captives and recovery of sight to the blind, to let the oppressed go free, to proclaim the year of the Lord's favour."

Luke 4: 18-19

Key Questions

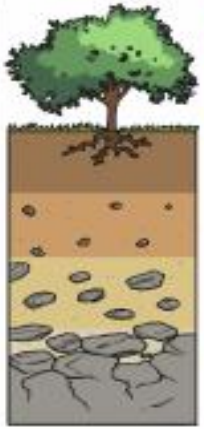
- In what ways is serving emphasised in the classroom and throughout the school?
- How can you help children to appreciate their energy and use it for the good of others?
- In what ways may a school community draw on the power of the Holy Spirit?
- How can good news change the way you feel?
- How can good news bring life?

Vocabulary

life, good news, Resurrection, Pentecost, Holy Spirit, fellowship

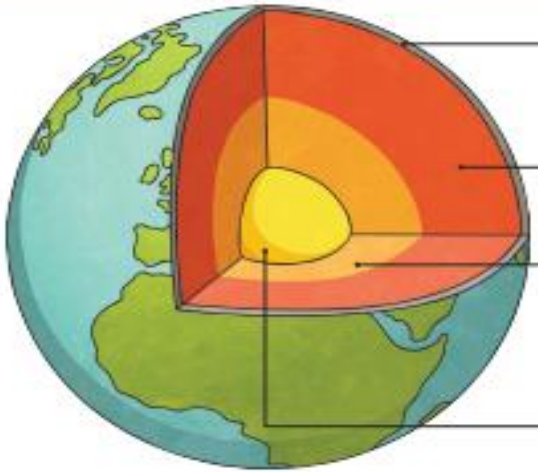
Geography

Key Vocabulary	
cumulonimbus cloud	Large thunderstorm clouds.
erupt	To suddenly burst out causing lava to explode out of the earth's surface.
fossils	The remains of plants or animals that lived a long time ago which can be found deep in the earth.
magma	Extremely hot, liquid rock.
tectonic plates	The earth's crust is made up of large areas called tectonic plates that join together.



Layers of Soil	
humus	Rotting dead leaves and animals.
topsoil	Plant's roots grow here. Very few rocks.
subsoil	Rocks and stones. Full of nutrients. Tree roots may reach. Fossils.
bedrock	A mass of rocks. Fossils.

Layers of Earth



Crust
Thin outer layer. Hard rock. 10km–90km thick.

Mantle
Extremely hot rock that flows. 3000km thick.

Outer core
Iron and nickel. Mostly liquid with some rocky parts. 4000°C.

Inner core
Iron and nickel. Hottest layer at over 5000°C.

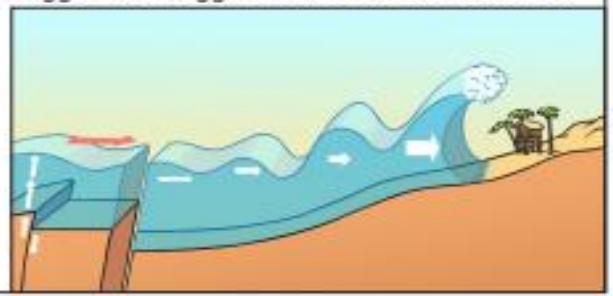
Geography

Volcanoes

- Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it.
- Active volcanoes have erupted in the last 10 000 years.
- Dormant volcanoes haven't erupted in the last 10 000 years but may erupt again.
- Extinct volcanoes aren't expected to erupt again.

Tsunamis

- A tsunami is a giant wave caused by a huge earthquake under the ocean.
- The earthquake causes a large amount of water to be displaced very quickly causing a series of waves.
- As the waves travel through shallower water near land, they get bigger and bigger. The wave crashes onto the land causing devastation to buildings and sometimes even lives.



Tornadoes

- A tornado is a swirling funnel of air that forms when warm air rises from near the ground into big cumulonimbus clouds.
- There can be thunder and lightning at the same time.
- You can see tornadoes due to the dust and water droplets caught in the clouds.
- Storm chasers are film-makers and scientists who head towards the storms. They film the tornadoes and collect data about them.
- Most tornadoes happen in Tornado Alley in America – more than 500 each year.
- Tornadoes can happen in the UK but only around 30 per year.

Earthquakes

- Earthquakes are caused when the earth's tectonic plates suddenly move.
- Most earthquakes occur near the tectonic plate boundaries.
- Earthquakes can cause lots of damage to roads, buildings and property.

Science

Key Vocabulary	
organisms	This is another word that can be used to mean 'living things'.
life processes	The things living things do to stay alive.
respiration	A process where plants and animals use oxygen gas from the air to help turn their food into energy.
sensitivity	The way living things react to changes in their **environment**.
reproduction	The process through which young are produced.
excretion	The process by which living things get rid of waste products.
nutrition	The process of obtaining food to provide living things with energy to live and stay healthy.
habitat	The specific area or place in which particular animals or plants may live.
environment	An **environment** contains many **habitats** and these include areas where there are both living and non-living things.
endangered species	A plant or animal where there are not many of their species left and scientists are concerned that the species may become **extinct**.
extinct	When a species has no more members alive on the planet, it is **extinct**.

Life Processes

To stay alive and healthy, all living things need certain conditions that let them carry out the seven **life processes**:

Movement
Respiration
Sensitivity
Growth
Reproduction
Excretion
Nutrition

Changes to an **environment** can be natural or caused by humans. Changes to an **environment** can have positive as well as negative effects. Here are some examples of things that can change an **environment**.

Natural

- earthquakes
- storms
- floods
- droughts
- wildfires
- the seasons

Human-Made

- deforestation
- pollution
- urbanisation
- the introduction of new animal or plant species to an **environment**
- creating new nature reserves

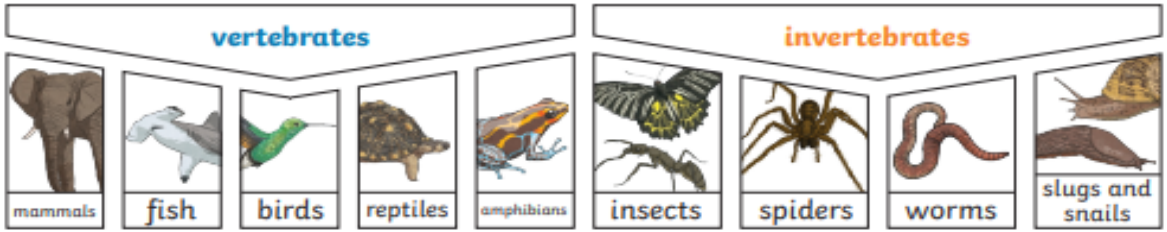
Plants and animals rely on the **environment** to give them everything they need. Therefore, when **habitats** change, it can be very dangerous to the plants and animals that live there.

Science

Key Vocabulary	
classification	This is where plants or animals are placed into groups according to their similarities.
vertebrates	Animals with a backbone.
invertebrates	Animals without a backbone.
specimen	A particular plant or animal that scientists study to find out about its species.
characteristics	The distinguishing features or qualities that are specific to a species.

Plants can be sorted into many different groups. For example:

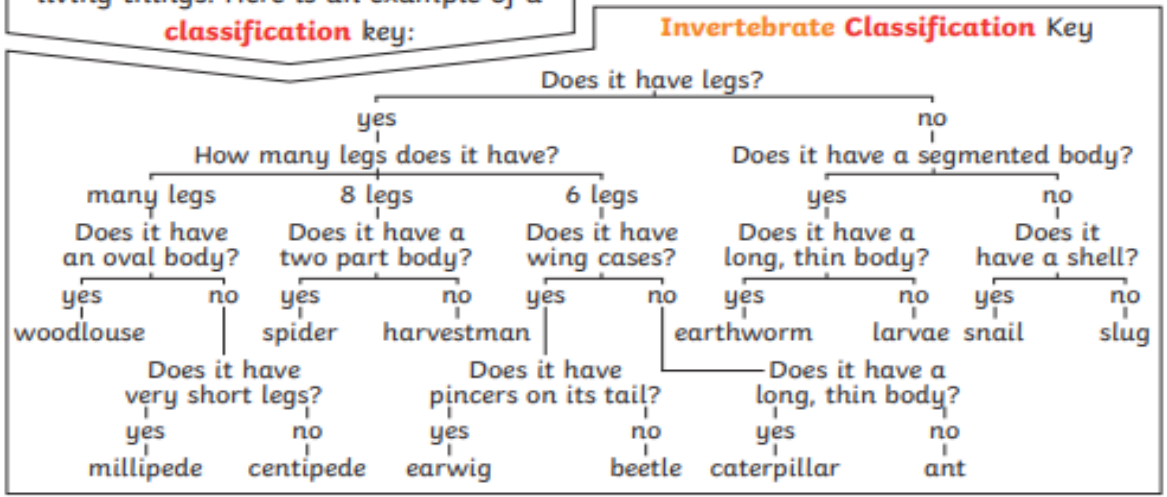
Animals can be grouped in lots of different ways based upon their characteristics.



Vertebrates can be separated into five broad groups.

You could sort invertebrates you might see around school in different ways, such as in this example. The vast majority of living things on the planet are invertebrates.

You can use classification keys to help group, identify and name a variety of living things. Here is an example of a classification key:



Computer Science

Internet Safety

In this module we will look at the following objectives:

- To understand how pupils can protect themselves from online identity theft.
- Understand that information put online leaves a digital footprint or trail and that this can aid identity theft.
- To Identify the risks and benefits of installing software including apps.
- To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.
- To identify appropriate behaviour when participating or contributing to collaborative online projects for learning.
- To identify the positive and negative influences of technology on health and the environment.
- To understand the importance of balancing game and screen time with other parts of their lives.

Art

Year 4 Skills

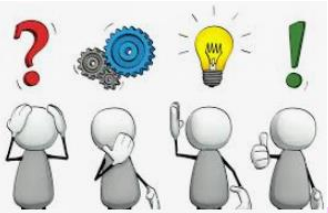
In our Art lessons we will be focusing on paint technique and sketching from real life examples. We will gain deeper understanding of line and tone.

In Design and Technology we will look at exploring how to generate ideas, considering the purposes for which they are designing to make labelled sketch drawings from different views showing specific features.

Music

This half term Year 4 are incredibly lucky as they will be learning to play the ukulele with Mrs Ayles. The children will learn in half class groups and will complete other music based work with Mrs Kenway when it is not their turn to play ukulele.
With Mrs Kenway we will look at some African drum rhythms and creating some musical scores linked to our learning.

Foundation Subject IMPACT QUESTIONS



Geography – What are the four layers of the Earth called?
Can you name and describe the four natural phenomenon we learnt about?

Science – Why can changes to a natural environment be a bad thing?
What are some of the natural and man made changes that happen to environments?

Computer Science – What is a digital footprint and why is it important?
Why is it important to balance screen time with other activities?

PE – What are the positions you can play in a game of rounders or cricket?
What type of throw is best to use when fielding in a game of rounders or cricket?

Art / Design Technology – How can the use of line and tone create a strong image?
Why does a sketch help us plan a design?

Music – Can you remember the names for the parts of the ukulele?
How do you draw a musical score?