
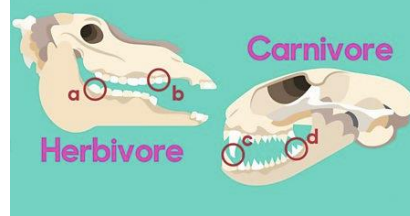
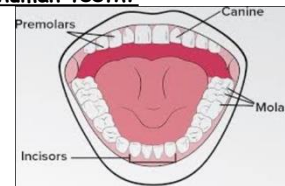
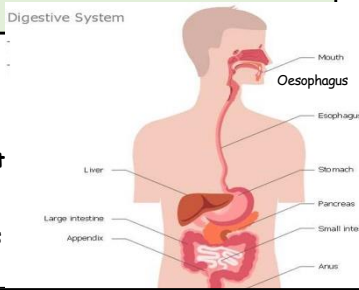
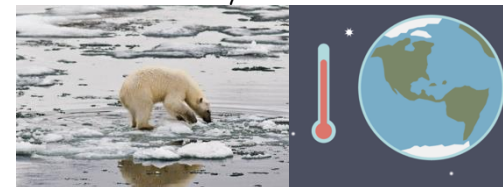


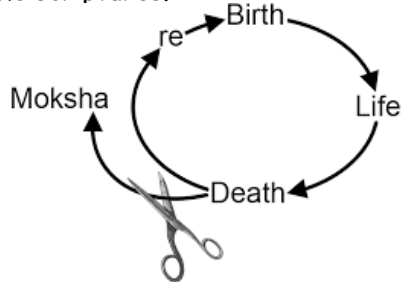



Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Science	Theme	Diversity	Year Group	4	
Key Question	What impact does changes to the environment have on animals?					
What should I already know? <ul style="list-style-type: none">• The parts of the human body and what they do.• All animals need water, air and food to survive.• The different ways in which humans are healthy.• Animals get nutrition from what they eat.• Humans and some animals have skeletons and muscles for support, protection and movement.• What carnivores, omnivores and herbivores are.• Excretion is one of the seven living processes.					Vocabulary	
What will I know by the end of the unit? What is the role of our teeth and how do we look after them? <ul style="list-style-type: none">• Teeth are used for cutting and chewing food.• They start the digestive process which gives us the energy we need to live.• Humans look after their teeth by brushing and flossing and ensuring that they do not eat foods high in sugar.• Not looking after teeth can lead to an increase in plaque and tooth decay.		What are the different names and functions of human teeth? <ul style="list-style-type: none">• Canines are pointed for tearing and ripping food - these are usually used when chewing meat.• Incisors are shovel shaped and help bite lumps out of and cutting food.• Premolars and molars are flat and they grind and crush food.				
						
The Digestive System <ul style="list-style-type: none">• The smell of food triggers saliva to be produced.• The digestive system begins with the mouth and teeth where food is ingested and chewed.• Saliva is mixed with the food which helps to break it up. When the food is small enough to be swallowed, it is pushed down the oesophagus by muscles to the stomach.• In the stomach, food is mixed further. The mixed food is then sent to the small intestine which absorbs nutrient from the food.• Any leftover broken down food then moves on to the large intestine.• The food minus the nutrients arrives in the rectum where muscles turn it into faeces. It is stored here until it is pushed out by the anus. This is called excretion.						
Impact of climate change on animals <p>Animals that are adapted to the specific environment where they live are more likely to survive than those that aren't. They have evolved over a long time to better survive these conditions. But as the climate changes, many habitats around the world are changing significantly or even being lost altogether. This is making life more difficult or impossible for living things.</p> <p>A change in climate may affect the vegetation that grows and this might mean there is not enough for the animals to eat. It may mean the animals cannot safely nest or build homes. Sometimes, the animals might be able to migrate or move to a new habitat but if not animals can be short of food and may die out. This puts certain species at risk of extinction.</p> <p>Many species are threatened by global warming. Sea temperatures are rising which impacts on the whole food chain. Certain creatures struggle to survive in warmer waters.</p> <p>If we all work together to tackle climate change, we can protect animals and the places they live</p>						
				adaptations	special features that plants and animals develop to suit the place where they live	
				evolve	the way that living things change over time	
				habitat	the natural environment in which an animal or plant normally lives or grows	
				vegetation	plants, trees and flowers	
				migrate	the movement of living things from one place to another	
				extinction	the permanent disappearance or elimination of a species	
				absorb	soak up or take in	
				canine	pointed teeth near the front of the mouth of humans and of some animals	
				carnivore	an animal that eats meat	
				decay	gradually destroyed by a natural process	
				digestion	breaking down ingested food material	
				enamel	the hard white substance that forms the outer part of a tooth	
				excretion	the process of eliminating faeces, urine, or sweat from the body	
				faeces	the solid waste substance that people and animals get rid of from their body by passing it through their anus	
				herbivore	an animal that only eats plants	
				incisor	the teeth at the front of your mouth which you use for biting into food	
				ingested	when animals or plants ingest a substance, they take it into themselves, for example by eating or absorbing it	
				intestines	the tubes in your body through which food passes when it has left your stomach	
				molar	the large, flat teeth towards the back of your mouth that you use for chewing food	
				muscles	something inside your body which connects two bones and which you use when you make a movement	
				oesophagus	the part of your body that carries the food from the throat to the stomach	
				omnivore	person or animal eats all kinds of food, including both meat and plants	
				organ	a part of your body that has particular purpose	
				plaque	a substance containing bacteria that forms on the surface of your teeth	
				premolar	two situated on each side of both jaws between the first molar and the canine	
				process	a series of actions used to produce something or reach a goal	
				saliva	the watery liquid that forms in your mouth and helps you to chew and digest food	
				stomach	the organ inside your body where food is digested before it moves into the intestines	



Ridgeway Farm CE Academy - Knowledge Organiser

Topic	RE	Theme	Diversity	Year Group	4
Key Question	What does it mean to be Hindu in Britain today? (part 1)				
Learning outcomes		Key knowledge			
<ul style="list-style-type: none">Describe some examples of what Hindus do to show their faith.Describe some ways in which Hindus express their faith through puja, aarti and bhajans.Explain similarities and differences between Hindu worship and worship in another religious tradition pupils have been taught.Make connections with some Hindu beliefs and teachings about aims and duties in life.Explain similarities and differences between Hindu worship and worship in another religious tradition pupils have been taught.		<ul style="list-style-type: none">Puja is how Hindus show their faith in God. Puja is Hindu worship.A puja tray is set up during worship. On the tray there is a small bell to wake the deity up for worship. Flowers which represent the beauty and fragrance of the created world. A diva lamp for aarti. Aarti symbolises that worship removes darkness. Water in a pot which represents life. A spoon is used to give water to worshippers after it has been blessed. A murti (or image of Hindu deity) to worship and sweets or sugar to offer food for the deity.Bhajans are worship songs devoted to different deities, some are fast and upbeat and some are peaceful and meditative. They have been developed to help worship.The word dharma means duty in Hinduism. There are 10 duties 1) not getting angry 2) being truthful in speech 3) working for justice 4) forgiving people 5) having children when you are married 6) trying not to quarrel 7) living a simple life 8) looking after your family 9) fulfilling religious duties such as worship 10) study the scriptures.The metaphor of 'life as a journey' can be used about Hindu aims and duties.The Hindu view of life is once you die, you are born again in another body, and live another life. This is called reincarnation.Hindus believe life is a cycle of birth, death and rebirth.You are not supposed to be aware of your past lives, your new life is good if you have been good in this life.Eventually, Hindus hope to not be reborn any more, they hope to join God and not live any more lives, which is called 'moksha'.			
Key vocabulary					
Mandir	A special place for Hindus to worship				
Dharma	Means duty in Hinduism				
Deities	The word in English often used for Hindu gods and goddesses. Deity means god				
Aarti	Light, which removes darkness (ratri)				
Puja	Act of worship for Hindus				
Bhajan	Hindu worship songs				
Moksha	The ultimate aim of Hinduism is to leave the cycle of rebirth and become one with god.				
Hindu	Someone who follows Hinduism				
Kama	Pleasure and enjoyment of life				
Reincarnation	The cycle of birth, death and rebirth. Key Hindu belief.				
Murti	Special statues or images of Hindu gods and goddesses.				
		Hinduism as a way of life			
		All Hindus believe in four core beliefs: dharma, karma, artha and moksha. Throughout their lives, Hindus attempt to behave in a way that provides good karma in this life and the next. In this way, Hinduism is not just a religion; it is a culture, a code of behaviour and a way of life.			



Ridgeway Farm CE Academy - Knowledge Organiser

Topic

Computing - Online safety

Theme

Diversity

Year Group

4

Key Learning

- To understand how children can protect themselves from online identity theft.
- To 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.

Key Resources

purple
mash



2Connect



2Investigate



SPAM

Key Questions

What is meant by a digital footprint?

A digital footprint is the information that exists about a person based upon sites that they have visited, searches that they have done, information that they have shared and other online behaviours.

What is SPAM?

SPAM messages are emails or online messages sent from a computer to many other users. The users are sent the email without requesting it. The purpose of SPAM is for advertising, phishing or malware.

What is meant by plagiarism?

Plagiarism refers to using someone else's work and claiming it to be your own.



Key Vocabulary

Attachment

A file, which could be a piece of work or a picture, that is sent with an email.

Cookies

A small amount of data generated by a website and saved by a web browser. Its purpose is to remember information about the user.

Malware

Software that is specifically designed to disrupt, damage, or gain unauthorised access to a computer system.

Ransomware

A type of malicious software designed to block access to a computer system until a sum of money is paid.

Virus

A piece of code which can copy itself and typically has a damaging effect on the device, such as corrupting the system or destroying data.

Citation

Making reference to the original source of a piece of information quotation or image.

Copyright

When the rights to something belong to a specific person.

Phishing

Practice of sending email pretending to be from reputable companies in order to persuade individuals to reveal personal information, such as passwords and credit cards numbers.

SMART rules

A set of rules based around the word SMART designed to help you stay safe when online. SMART represents the words Safe, Meet, Accept, Reliable, Tell.

Watermark

Watermarks are used mainly on images or videos to show who the content belongs to.



Ridgeway Farm CE Academy - Knowledge Organiser

Topic

Computing - spreadsheets

Theme

Diversity

Year Group

4

Key Learning

- To format cells as currency, percentage, decimal to different decimal places or fraction.
- To use the formula wizard to calculate averages.
- To combine tools to make spreadsheet activities such as timed times tables tests.
- To use a spreadsheet to model a real-life situation.
- To add a formula to a cell to automatically make a calculation in that cell.

Key Resources



Data

A collection of information, especially facts or numbers, obtained by observation, questions or measurement to be analysed and used to help decision-making.

Decimal place

The position of a digit to the right of a decimal point. In 2Calculate, the number of decimal places to be displayed can be chosen.

Key Images



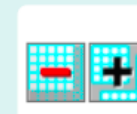
Open, close or share a file



Save your work



Open a previously saved file



Increase or decrease spreadsheet size



Advanced mode



Formula Wizard



Format Cell Toolbox



Charts



Totals toolbox



Image Tools



Controls Toolbox



Random Number



Spin



Equals



Timer



To Copy



To Cut



To Paste

Key Vocabulary

Average

A number expressing the typical value in a set of data. Also known as the mean. It is calculated by dividing the sum of the values in the set by their number.

Spreadsheet

A computer program that represents data in cells in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells.

Formula

A group of letters, numbers, or other symbols which represents a scientific or mathematical rule. The plural of formula is formulae.

Percentage

'per' 'cent' means number of parts per hundred.

Timer

When placed in the spreadsheet, clicking the timer adds 1 to the value of the cell to its right every second until it is clicked again.

Column

Boxes running vertically in a spreadsheet.

Budget

The amount of money available to spend on a project.

Chart

A diagram that represents data. Charts include graphs and other diagrams such as pie charts or flowcharts.

Spin Tool

This tool changes a number to the right of it by one each time an arrow is pressed.

Random Number Tool

This tool, when clicked, will generate a random number.

Formula Wizard

Use the formula wizard or type into the formula bar to create a formula in a cell, this will calculate the value for the cells based upon the value of other cells in the spreadsheet.

Place value

This is the value of each digit within a number. For example 354, the 3 = 3 hundreds, the 5 = 5 tens and the 4 = 4 ones.

Row

Boxes running horizontally in a spreadsheet.

Line graph

A line graph is used to display information which can change over time. For example, temperature at different times of the day.



Mi familia

phonics

ca sound in:
• única

ci sound in:
• cien 100

co sound in:
• único


cu sound in:
• cuarenta 40
• cincuenta 50

accents Accents indicate the vowel is stressed. As seen in the words tí-o and ú-ni-ca.

stress placement Words that end in a vowel, 'n' or 's' are normally stressed on the second to last syllable like her-ma-no.

vocabulary

The nouns and determiners for family members.



The 2 words for the possessive adjective 'my' in Spanish.

mi **mis**

Numbers 1-70 in Spanish:

10 20 30 40 50 60 70

High-frequency verbs

se llama **tiene**

he/she is called he/she has

grammar

To fully understand the role of gender and plurality in the choice of possessives.

mi hermano **mi hermana**

Singular possessive adjective

mis abuelos



To move from the 1st person conjugation of high-frequency verbs to 3rd person singular.

tengo **tiene**

I have he/she has

What I will learn:

- ☐ Objective 1: I will learn the nouns and determiners for several family members in Spanish.
- ☐ Objective 2: I will learn how to move from using the determiner 'a' with a family member noun to a possessive adjective 'my' in Spanish.
- ☐ Objective 3: I will learn to answer the question '¿Tienes hermanos?' (Do you have any brothers or sisters?)
- ☐ Objective 4: I will learn how to introduce family members, learning to use 'se llama' (he/she is called).
- ☐ Objective 5: I will use my knowledge of larger numbers to be able to describe the age of family members.



Musical style: Rock and Roll

Rock and roll was created in America in the 1950s after the war and was made to depict happiness and a new life. The name comes from the phrase 'rocking and rolling' which was used by mariners to explain the movement of a ship, which influenced the dance steps.



Rock and roll stems from jazz, gospel and blues music and uses the blues structure and chords. It often has a fast tempo with strong vocals, which may use screaming and shouting. Rock and roll formed the basis of our modern day rock music.

Vocabulary

Bass line

The lowest part of the music, played by a bass or bass guitar in rock and roll.

Walking bass

A bass line that moves step by step using pitches that are next to each other.

Notation

The way that music is written so that others can play it.

In time

Playing or singing at the same speed as the music.

Hand jive

A rock and roll dance where you move your hands a lot!



In tune

Singing or playing with the correct pitch.

Tempo

The speed or pace of the music. It can change throughout a piece of music.

Dynamics

The volume of the notes. This often changes throughout a piece of music.

Pitch

How high or low a note sounds.

Instruments



Electric bass



Drum



Double bass

Electric guitar





Ridgeway Farm CE Academy - Knowledge Organiser

Topic

Art - painting and mixed media

Theme

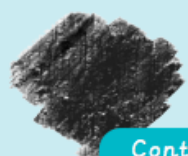
Diversity

Year Group

4

Composition	Putting different elements together in a pleasing way
Hue	Describing an exact colour: sky blue, dark green, rose pink
Proportion	How big a part of something looks compared to the rest of it
Shade	Adding black to a colour makes a shade
Shadow	A dark area created when light is blocked
Still life	An artwork showing a collection of things that don't move, e.g. objects rather than people
Tint	Adding white to a colour makes a tint
Tone	How light or dark a colour is

Creating contrast



Contrasting texture



Contrasting colours



Using tints and shades can help a painted object appear three-dimensional



Painting techniques



Dabbing



Stippling



Pointillism



Adding texture to paint



Washes



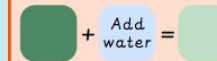
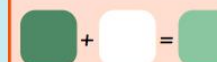
Using different tools

Colour mixing



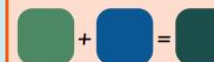
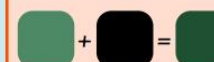
Making colours lighter:

+ a lighter colour
+ water
+ white



Making colours darker:

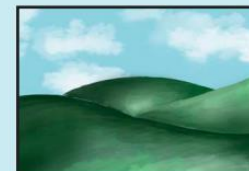
+ a darker colour
+ black



Still life



Portrait



Landscape



Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Design Technology - mechanical systems - slingshot car	Theme	Diversity	Year Group	4
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Aesthetic	How an object or product looks.
Air resistance	The level of drag on an object as it is forced through the air.
Chassis	The body of a car.
Design	To make, draw or write plans for something.
Design criteria	A set of rules to help designers focus their ideas and test the success of them.
Function	The purpose of an object (for example a chair needs to hold a person when sitting down); or how the product works (for example a torch needs to provide light in a dark space).
Graphics	Images which are designed to explain or advertise something.
Kinetic energy	The energy that causes an object to move.
Mechanism	The parts of an object that move together as part of a machine.
Net	A flat 2D shape, that can become a 3D shape once assembled.
Structure	Something that has been made and put together and can usually stand on its own (eg a building, a bridge, a chair).

Did you know?



Some of the first toy cars were made in 1901, that's over 100 years ago!

Key facts

Front view



Side view



Bird's-eye view



Which vehicle has the least air resistance?

