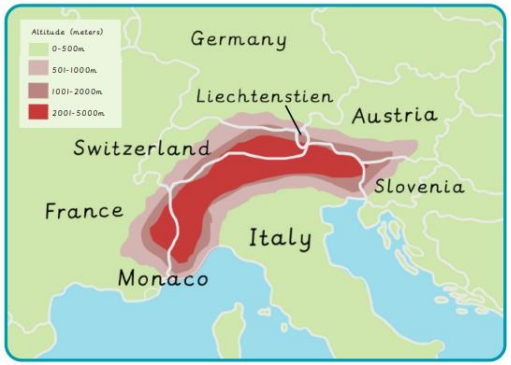
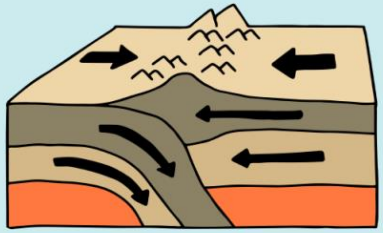
Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Geography - European Region	Theme	Diversity	Year Group	5
Key Question	What is life like in the Alps?				

What I should already know?

- ❑ Volcano formation
- ❑ Tectonic plate boundaries
- ❑ Causes of earthquakes
- ❑ Location of seas, oceans and continents
- ❑ Climate zones
- ❑ Physical and Human features of the UK.
- ❑ How to use a map and an atlas identifying features of a region.





Alpine mountains are fold mountains. They were formed when two tectonic plates pushed together and the ground was forced upwards.

Key learning:

- ❑ The Alps is a large mountain range in Europe, which is spread across the following eight countries: France., Monaco., Italy., Switzerland., Liechtenstein., Austria., Germany., Slovenia.
- ❑ The Alps is an example of fold mountains, formed when two tectonic plates are pushed together, forcing upwards the ground in between.
- ❑ Some of the highest mountains in Europe are in the Alps, including: Mont Blanc., Monte Rosa., Dom.
- ❑ There is snow on the mountains and glaciers. Glaciers are huge blocks of ice on top of the mountains. Water melting from the glaciers is one of the main sources of the rivers in the Alps, including: The Rhine., The Rhône., The Po.
- ❑ The rising temperatures associated with climate change are speeding up the rate at which glaciers are melting, threatening many plants with extinction and making the soil unstable.
- ❑ On the valley floors of the Alps, there is temperate, deciduous forest, which can be found at higher elevations. The largest extent of forest, however, is coniferous and the higher up the mountains you go, the less vegetation there is.
- ❑ People living in the Alps used to make a living from farming the land and from woodwork. Nowadays, however, they make more money from tourism, as millions of tourists visit the Alps every year to sightsee and to enjoy skiing, hiking and mountain biking.

What different types of Mountains are there?

There are five basic kinds of mountains:

- Fold Mountains (Folded Mountains)
- Fault-block Mountains (Block Mountains)
- Dome Mountains
- Volcanic Mountains
- Plateau Mountains

These different types of mountain names not only distinguish the physical characteristics of the mountains, but also how they were formed.

Climate

Most of the Alps have a mountain climate. It is much colder than the surrounding climate due to the height of the mountains. Lower regions of the Alps have a temperate climate.

Key Vocabulary

climate	Long-term weather conditions in a specific region.
climate change	A change in global or regional temperature and weather patterns over a long period of time.
fold mountain	A mountain created when two tectonic plates are pushed together, pushing the ground upwards.
glacier	A slow-moving mass of ice formed by the accumulation of compact snow on mountains.
hemisphere	A half of the Earth, divided by the Equator into the Northern and Southern Hemispheres.
land height	The position of a point above sea level.
latitude	How far north or south a place is located.
leisure	The use of free time for enjoyment.
longitude	How far east or west a place is located.
mountain climate	A mountainous region with a colder climate than the surrounding area, affected by the height of the mountains.
mountain range	A series of mountains located close together.
population	The number of people living in a particular place.
sea level	The base level for measuring land height on Earth.
recreational land use	Land use that provides leisure activities.
scale	The ratio of the distance on a map to the distance on the ground.
temperate forest	A biome containing deciduous trees at lower levels and coniferous trees at higher elevations
tourism	Travel for pleasure when people visit places of interest.
vegetation	All the plants that grow in a certain area.

Ridgeway Farm CE Academy - Knowledge Organiser:

Topic	Science -Living things and their habitats: Life Cycles	Theme	Diversity	Year Group	5

What I should already know?

- Notice that animals, including humans, have offspring which grow into adults.
- Living things need food, water and air to grow and live.
- Animals can be grouped into vertebrates (and then further into fish, reptiles, amphibians, birds and mammals) and invertebrates.

In this Science unit, we will be looking at the life cycles of mammals, amphibians, insects and birds. We will learn how to describe these life cycles and how they differ from one another.

Key learning:

- The life cycle of a mammal has four main stages: foetus, young, adolescent and adult.
- Most mammals: give birth to live young.; have mammary glands that produce milk to feed their young; are able to reproduce when they become adults.
- Amphibians are small vertebrates that need water or a moist environment to survive.
- The life cycle of a frog has four main stages: frogspawn, tadpole, froglet and adult frog. Tadpoles take around 14 weeks to transform into frogs.
- Insects are small animals that have three body sections, six legs and antennae, and usually lay eggs.
- There are four main stages of the life cycle of an insect: egg, larva, pupa and adult.
- Birds are vertebrates with wings, feathers and a beak.
- The life cycle of birds includes five stages: egg, hatchling, nestling, fledgling and adult bird.

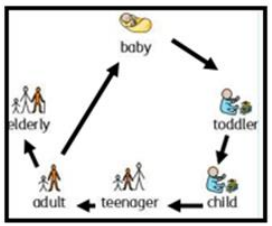
Key Vocabulary

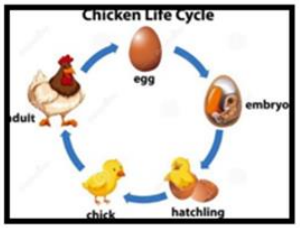
amphibian	a cold-blooded vertebrate that lives on land and in water and usually lays eggs
chrysalis	a specific type of pupa that occurs in the life cycle of butterflies
fledgling	a young bird that has grown feathers and is capable of leaving the nest but is still dependent on its parents for food and protection
froglet	an adolescent frog with a tail and legs
frogspawn	the eggs of a frog
hatchling	a baby bird that has just hatched from an egg
insect	a small animal that has three body sections, six legs and antennae
larva	the young form of an insect
life cycle	a series of stages a living thing goes through during its life
mammal	an animal with a spine and with fur or hair on its body, which gives birth to live young and feeds its young on milk
mammary gland	the organ of female mammals that produces milk
metamorphosis	the process by which the young form of an insect or amphibian changes into a distinct adult form
monotreme	a mammal that lays eggs, such as the platypus and the spiny anteater
nestling	a young bird that cannot fly yet and depends on its parents for food and protection
offspring	the young of a living thing
pupa	an insect after it has been a larva and before it becomes an adult, usually enclosed in a cocoon or hard case
tadpole	a baby frog that has a long tail and no legs

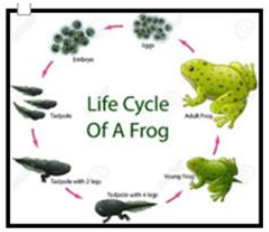
Life Cycles

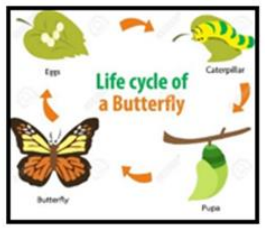
What is a Life cycle?

All animals, including humans, are born, they get older and bigger and some will go on to have children. In the end, all animals die. We call this a life cycle. Animals are small when they start life. Over time they grow bigger and their bodies change. When they are grown up, they might reproduce and have young animals of their own. These children will get older and may eventually also have children too, and so the life cycle keeps going!







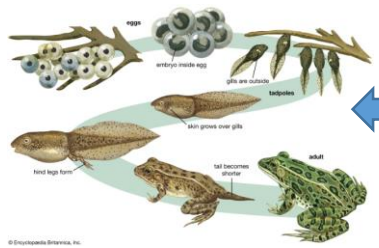


Metamorphosis

Metamorphosis is a process some animals go through to become adults. It is a series of physical changes. Metamorphosis is especially common in insects.

Many insects go through four stages of metamorphosis: egg, larva, pupa, and adult. An insect hatches from an egg into a wormlike larva. Caterpillars and maggots are examples of insect larvae. The larva eats a lot. As it grows, the larva molts, or sheds its outer covering. To begin the pupa stage, the larva often builds itself a protective covering, such as a cocoon. Inside this covering the pupa develops wings and adult body parts. It comes out of its covering as an adult. Beetles, butterflies, flies, and wasps are among the insects with four stages of metamorphosis. Some insects, such as grasshoppers and termites, have fewer stages.

Metamorphosis also happens in animals other than insects. Most amphibians go through metamorphosis. For example, a frog begins life as a tadpole. A tadpole has a short, oval body with a tail. It gradually develops legs and loses its tail to become an adult frog.



Through metamorphosis, a frog develops from an egg, to a tadpole and then to an adult.

Ridgeway Farm CE Academy - Knowledge Organiser:

Topic	Science -Living things and their habitats: Reproduction	Theme	Diversity	Year Group	5

What I should already know?

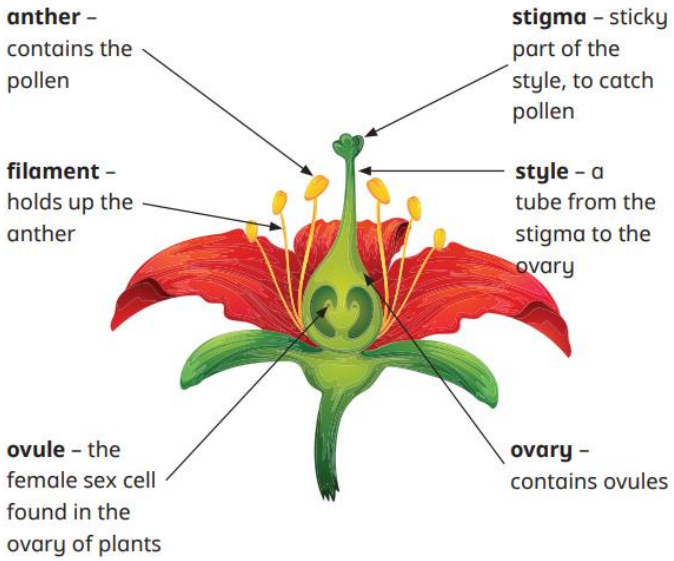
- Some examples of life cycles (including those of plants and humans).
- The processes of dispersal, fertilisation and germination.
- Reproduction is one of the seven life processes.
- Parts of a plant, their features and what their functions are.

In this Science unit, we will be describing the life process of reproduction in some plants and animals. We will find out about different types of reproduction, including sexual and asexual reproduction in plants. We will learn about pollination and fertilisation of flowers and how to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs.

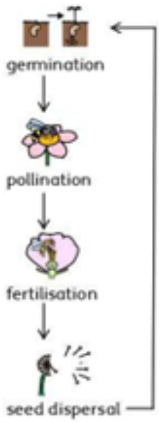
Key learning:

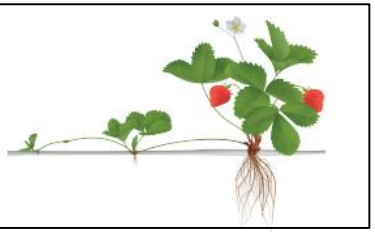
- The female part of a flowering plant is called the pistil, which consists of the stigma, style and ovary. The male part of a flowering plant is called the stamen, which consists of the anther and filament.
- The female sex cells in a plant are called ovules and are found in the ovary. The male sex cells in a plant are called pollen grains and are found on the anthers.
- Plants reproduce sexually through pollination. Pollination involves the transfer of pollen from the male anther of a flowering plant to the female stigma of a flowering plant.
- Fertilisation occurs when a male pollen grain joins with a female ovule inside an ovary. The fertilised ovule will then turn into a seed, which can then be dispersed to grow into a new plant.
- Asexual reproduction involves only one parent. Offspring produced by asexual reproduction are identical to the parent. Some plants reproduce asexually by producing new plants at the end of runners or by producing bulbs or tubers.

Flowering plant key parts



How do plants reproduce?





asexual reproduction - the production of identical offspring from only one parent. In this diagram of a strawberry plant, new plants are formed at the end of runners.

Key Vocabulary

anther	contains the pollen
asexual reproduction	the production of identical offspring from only one parent
bulb	a part of a plant with layers which stores food and produces new clone plants
clone	a plant or animal that was produced asexually and is identical to its parent
cutting	section of a plant that has been cut off a parent plant
fertilisation	the joining of a male and a female sex cell to create a new life
filament	holds up the anther
ovule	the female sex cell found in the ovary of plants
parent plant	the plant from which offspring are grown
pollen	tiny grains, which carry the male sex cell in plants
pollination	the transfer of pollen from the anther of a flowering plant to the stigma of a flowering plant
pistil	the female parts of a flowering plant
runner	a stem that grows horizontally along the ground and produces new clone plants
sexual reproduction	a process of making non-identical offspring which requires two parents
stamen	the male parts of a flowering plant
stigma	sticky part of the style, to catch pollen
style	a tube from the stigma to the ovary
tuber	a thick stem that grows underground that produces new clone plants

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	RE: Christianity	Theme	Diversity	Year Group	5
Key Question	What would Jesus do?				

What I should already know

- I know for Christians the holy texts are found in the Bible.
- I know the Bible is made up of lots of books.
- I know Jesus told special stories called parables, which are stories which have a hidden meaning.
- I can name some parables in the Bible.
- I know there are ten commandments which tell Christians how to live.

Key Learning

- The good news is not just about setting an example for good behaviour and challenging bad behaviour: it is that Jesus offers a way to heal the damage done by human sin.
- Christians see that Jesus' teachings and example cut across expectations – the Sermon on the Mount is an example of this, where Jesus' values favour serving the weak and vulnerable, not making people comfortable.
- Christians believe that they should bring this good news to life in the world in different ways, within their church family, in their personal lives, with family, with their neighbours, in the local, national and global community.

Key Vocabulary

Gospel- Christian belief in the 'good news' that Jesus brings. The four Gospels in the New Testament are Matthew, Mark, Luke and John.
Christian- A person who follows and believes in the teachings of Jesus, God and the Holy Spirit.
Bible- a religious holy book that is special to Christians and Jews
New Testament- The second half of the Bible that talks about the teachings and person of Jesus.
Jesus- the central figure of Christianity. Christians believe that he was God come to earth in flesh. Jesus says that his words give foundations for living.
Parable - a story in the Bible with a hidden meaning.

The Cross: Christians believe it is a symbol of the power of love.

The Greatest Commandment
Jesus summed up all the commandments by loving God and loving your neighbour as yourself.

Six sayings of Mother Teresa:
'God doesn't require us to succeed. He just requires us to try.'
'I am a pencil in God's hand. God is writing a love letter to the world.'
'Don't be satisfied with giving money to charity. Instead spread your love everywhere you go."
'Do something beautiful for God.'
'If you cannot feed one hundred people, then just feed one.'
'Give the world the best you have, and it may never be enough. Give your best anyway, for you see, in the end, it is between you and God.'

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Computing - Concept Maps	Theme	Diversity	Year Group	5

Key Learning

- To understand the need for visual representation when generating and discussing complex ideas.
- To understand the uses of a 'concept map'.
- To understand and use the correct vocabulary when creating a concept map.
- To create a concept map.
- To understand how a concept map can be used to retell stories and information.
- To create a collaborative concept map and present this to an audience.

Key Resources

purple mash

2Connect

Key Questions

What is a concept map?

A concept map is a pictorial way of showing relationships between concepts and ideas. A concept map allows you to show information, pictures and links to support an idea or concept.

How is information arranged on a concept map?

On a concept map ideas or concepts are organised into nodes which are linked together with lines to show how the concepts and ideas link together.

How does a concept map help share ideas?

A concept map in 2Connect allows many users to contribute to the map which means that ideas or concepts can be quickly amended or additional information provided.

Key Vocabulary

Concept
An idea in the form of a question.

Collaborate
Participating in an activity with more than one person working together.

Story Mode
A way to use a 2Connect concept map to create a piece of text.

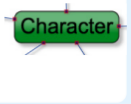
Concept Map
A tool for organising and representing knowledge. They form a web of ideas which are all interconnected.

Node
A way to represent concepts or ideas. Can contain text and\or an image.

Connection
Represent a relationship or link between two nodes or ideas.

Presentation Mode
A mode on 2Connect where nodes and connections are revealed gradually to be accompanied by a verbal presentation.

Key Images



Node

Connection

Resize node

Edit node

Show story

Begin Presentation

Collaboration Off

Collaboration On

Prior Learning:

• Use of 2Dos • Saving, opening and editing work • Sharing work • Copying and pasting • Mouse, keyboard and device skills.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Computing - Word Processing with Microsoft Word	Theme	Diversity	Year Group	5

Key Learning

- To know what a word processing tool is for.
- To add and edit images to a word document.
- To know how to use word wrap with images and text.
- To change the look of text within a document.
- To add features to a document to enhance its look and usability.
- To use tables within MS Word to present information.
- To introduce children to templates.
- To consider page layout including heading and columns.

Key Resources

purple mash

2Connect

Microsoft Word

Key Questions

What is a word processing tool used for?
A word processing tool is used to create, edit and print off a document. This can contain text, images, tables or charts. Documents are a type of file that portray information.

What features can you use to make a document more readable?
You can change the font format to give the document a theme and make it more readable. By changing the paragraph formatting, you can ensure the words are spaced evenly. You can add images and use text wrapping to ensure they are positioned well on the page.

How do you successfully add an image to a document?
If you have an image saved onto your computer, you click on insert – pictures – insert image from this device. You can resize and move the image and ensure it fits well on the page by changing the text wrap setting.

Prior Learning:

• Use of 2Dos • Saving, opening and editing work • Sharing work • Copying and pasting • General mouse, keyboard and device skills.

Key Vocabulary

Bulleted lists
A list with bullet points, used when the items do not have an order.

Copy and Paste
A way of transferring words or images from one location to another.

Cursor
The flashing vertical line that shows your place in a Word document.

Hyperlink
A clickable link from a document to another location, often a webpage.

Formatting
Changing the look of a document by selecting fonts, colours and how the text is spaced or aligned.

Word Processing tool
A program which allows you to write, edit and print different documents.

Caps Lock
A button on the computer keyboard which changes the letters to upper case (capital letters).

Copyright
When an image, logo or idea has a legal right to not be copied or used without the owner's permission.

Document
A type of file which shows written information and/or images and sometimes charts and tables.

Merge cells
A tool you can use when making a table to join cells which are next to each other in columns or rows.

Text wrapping
A feature which helps you place and position an image neatly on a page or within a paragraph of text.

Captions
Text under an image to provide more information about what is shown.

Creative Commons
Images where the copyright holder, often the creator, has given permission for the image to be used as long as the creator is attributed.

Font
A set of type which shows words and numbers in a particular style and size.

Page Orientation
The direction that the rectangular page is viewed. Portrait means longer side going upwards, Landscape means the longer side going sideways.

Readability
How easy and pleasant it is to read and understand a document.

Word Art
A way to treat text as a graphic so that you can add special effects to text.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Spanish - Healthy Lifestyles	Theme	Diversity	Year Group	5

Comer sano

phonics

b sound in:
- beber
- bebo

qu sound in:
- mantequilla

v sound in:
- vegetales

accents Accents indicate the vowel is stressed. As seen in the words natación.

ñ tilde This changes the 'n' to a 'ny' sound like in the English word 'onion'. As in the Spanish word añadir.

vocabulary

The nouns and determiners for 10 healthy foods and drinks.

The nouns and determiners for 10 unhealthy foods and drinks.

Language to describe healthy lifestyles:

Para tener una buena salud como...	Para tener una buena salud bebo...
To stay healthy I eat...	*To stay healthy I drink...*

grammar

The 1st person conjugation of high-frequency verbs:

como	bebo
'I eat' from the verb comer 'to eat'.	*'I drink' from the verb beber 'to drink'.*

Use of the negative:

no como	no bebo
I do not eat	*I do not drink*

What I will learn:

- [ ] Objective 1: I will improve my range of vocabulary by learning 10 new nouns and determiners for healthy foods/drinks.
- [ ] Objective 2: I will further improve my range of vocabulary by learning 10 more nouns and determiners for unhealthy foods/drinks.
- [ ] Objective 3: I will consolidate all the new language and focus on the plural indefinite article in Spanish as seen in this unit.
- [ ] Objective 4: I will improve my range of vocabulary by also learning key phrases for healthy and unhealthy habits.
- [ ] Objective 5: I will learn to follow a healthy recipe in Spanish and create my own using my new knowledge.

It would help if I already know::

- The letter sounds (phonics & phonemes) from 'Phonics & Pronunciation' lessons 1, 2 & 3.
- Language introduced from a wide range of Early Learning and Intermediate units.
- Our personal details from memory (name, age and where we live) and how to tell the time as seen in 'En el colegio' & 'El fin de semana'.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Music: Looping and remixing	Theme	Diversity	Year Group	5

Performing

Accuracy - were the notes and words right?

Timing - was the music played or sung in time?

Confidence - was the performance smooth?

Did you know?

A repeating section is known as:

- An ostinato in classical music.
- A riff in jazz.
- A loop in dance music.

Electronic dance music (EDM) is also known as dance music, club music, or simply dance. It is made for nightclubs and has lots of percussion and loops, and the tracks are 'mixed' into each other by a DJ.

Musical style: Electronic dance music

Electronic dance music (EDM) is also known as dance music, club music, or simply dance. It is made for nightclubs and has lots of percussion and loops, and the tracks are 'mixed' into each other by a DJ.

Vocabulary

Layers	The different instruments, rhythms or melodies that build the overall texture of a piece of music.
Loop	A repeated section of rhythm or melody.
Remix	A new version of an existing piece of music that has been altered with effects.
Fragment	A short section of music.
Melody line	The notes that make a melody.
Structure	The overall organisation of a piece of music. In a song, this could be the order that different parts are played in, for example verse, chorus, verse.
Backbeat	Rhythmic beat going along in the background to accompany the music.

Key knowledge:

- To know that dance music is usually produced using electronic percussion sounds, and recordings of the music are played by DJs in clubs or at festivals.
- To know that a loop is a repeated rhythm or melody, and is another word for ostinato.
- To know that remix is music that has been changed, usually so it is suitable for dancing to.

Prior Learning:

- To know that a 'loop' in music is a repeated melody or rhythm.
- Play syncopated rhythms with accuracy, control and fluency.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Art: Sculpture and 3D: Interactive installation	Theme	Diversity	Year Group	5

Key skills:

- Make an explosion drawing in the style of Cai Guo-Qiang, exploring the effect of different materials.
- Try out ideas on a small scale to assess their effect.
- Use everyday objects to form a sculpture.
- Transform and manipulate ordinary objects into sculpture by wrapping, colouring, covering and joining them.
- Try out ideas for making a sculpture interactive.
- Plan an installation proposal, making choices about light, sound and display.

Installation art
Three dimensional art that aims to transform a particular place.

'Support - Save Venice from drowning' by Lorenzo Quinn. © Frans Sellies Photography. All rights reserved 2022 / Bridgeman Images.

- Often large in scale.
- Location is important.
- Often made using everyday objects in new ways.
- Can be interactive.

Cai Guo-Qiang

- Guo-Qiang was born in 1957 in the Fujian Province, China.
- He grew up during China's Cultural Revolution, when explosions were part of everyday life.
- Guo-Qiang took part in demonstrations against political changes.
- He creates sculpture, drawings, installations and performance work.
- His art explores culture, politics and science and sometimes features explosions.

Key knowledge:

Formal elements:

- Form: An art installation is often a room or environment in which the viewer 'experiences' the art all around them.
- Form: The size and scale of three-dimensional artwork change the effect of the piece.

Knowledge of artists:

- Artists are influenced by what is going on around them; for example, culture, politics and technology.
- How an artwork is interpreted will depend on the life experiences of the person looking at it.
- Artists create works that make us question our beliefs.
- Art can be interactive; the viewer becomes part of it, experiencing the artwork with more than one of the senses.

Prior Learning:

●Join 2D shapes to make a 3D form. ● Join larger pieces of materials, exploring what gives 3D shapes stability. ● Shape card in different ways e.g., rolling, folding and choose the best way to recreate a drawn idea. ● Identify and draw negative spaces. ● Plan a sculpture by drawing. ● Choose materials to scale up an idea. ● Create different joins in card e.g., slot, tabs, wrapping. ● Add surface detail to a sculpture using colour or texture. ● Display sculpture.

atmosphere	The mood of an artwork, for example, mysterious or joyful.
concept	The idea behind an artwork.
location	The place where an artwork is displayed.
performance art	Artwork that is an event rather than an object.
scale	The size of an artwork.
viewer	The people who look at, or visit, your installation.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Design Technology: Cooking and Nutrition: Developing a recipe	Theme	Diversity	Year Group	5

Cross-contamination is when harmful bacteria from one food get onto another. To prevent it, use different coloured chopping boards for different types of food.

- Red - raw meat
- Blue - raw fish
- Yellow - cooked meat
- Green - salad and fruit
- Brown - root vegetables
- White - bakery and dairy

Spaghetti bolognese is a popular dish that can be adapted in many ways. Adapting and developing the recipe by adding, substituting and removing ingredients can ensure that it suits dietary needs and tastes.

adaptation	The process of changing something.
cook	To prepare food by heating it.
cross-contamination	When something harmful spreads from one food to another.
farm	To grow crops or keep animals as a business.
hygiene	Keeping things clean to prevent illness.
ingredients	The foods a recipe is made from.
label	Something that provides information about the product it is attached to.
nutrient	Substances that help living things stay healthy and grow.
nutritional value	The nutrients a food or recipe provides.
process	A series of actions.

Key skills:

- Explaining the farm-to-fork process.
- Researching existing recipes.
- Suggesting alternative ingredients.
- Analysing nutritional content.
- Writing an alternative recipe.
- Understanding cross-contamination.
- Using preparation skills.
- Designing a jar label.
- Making a developed recipe.

Key knowledge:

- Beef comes from cows reared on farms.
- Recipes can be adapted to suit nutritional needs and dietary requirements.
- Nutritional information is found on food packaging.
- Coloured chopping boards can prevent cross-contamination.
- Food packaging serves many purposes.

Farmers rear cows.

The cows are killed and the meat matures.

The meat is processed and packaged.

The food is transported to shops.

Customers buy beef products.

The food is consumed.

Nutritional value helps us understand how healthy a food is. Nutrition information on food labels can help us make better choices for our bodies by showing us the amounts of nutrients like fibre, protein and sugar.

Prior Learning:

- Know what makes a balanced diet.
- Know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.
- Peeling foods by hand or with a peeler.
- Cutting ingredients safely.
- Following and adapting a recipe.