

**Year Four Science Term Two: Digestion**  
***What happens to the food we eat?***

**Working Scientifically**

I can take measurements using different equipment and units of measure.  
 I can record my findings in a range of ways.  
 I can make accurate measurements using standard units.  
 I can record and present what I have found using scientific language, drawings, labelled diagrams, bar charts, keys and tables.  
 I can explain my findings in a variety of ways. (Such as display, oral presentation or writing.)  
 I can find patterns in my evidence or measurements.  
 I can make a prediction based on something I have found out.

**Scientific knowledge and understanding**

I can identify and name the basic parts of the human digestive system.  
 I can describe the function of the organs of the human digestive system.  
 I can identify the simple function of different types of human teeth.  
 I can compare the teeth of herbivores and carnivores.  
 I can explain what a simple food chain shows.

**Learning Challenge Questions**

What caused that racket?!  
 How do our ears work?  
 What do we mean by the pitch and volume of sound?  
 Does sound have the same intensity the further you move away from the source?  
 How do telephones work and how has this changed over time?

**Mastery**

I can record more complex data and results using a range of scientific diagrams, classification keys, tables, bar charts, line graphs and models.  
 I can report findings from investigations through written explanations and conclusions.

**Wow and Outdoor Learning**

Wow – doctors for the day! Watch footage of food travelling through the human body. Children make their own training videos in groups to explain this to trainee doctors. ICT – green screening.  
 Eat a piece of chocolate and track its journey through the body.  
 Create a dance which shows the movement of food through the body.  
 Use our time working on the school allotment to discuss food chains, photosynthesis and how organic matter to enriches the soil.

**Maths**

I can record data and results using a range of tables, bar charts, line graphs and models.  
 I can measure and calculate time intervals (looking at the journey of chocolate through the body.)  
 Graph work on food types.

**English**

I can write an adventure story: Imagine being shrunk and swallowed by mistake!  
 I can make useful notes from informative video clips by summarising ideas, condensing sentences and identifying key words.

**Year Four Science Term Three: Living things and their habitats**  
***Which animals and plants thrive in your locality?***

**Working Scientifically**

I can take measurements using different equipment and units of measure.  
 I can record my findings in a range of ways.  
 I can make accurate measurements using standard units.  
 I can record and present what I have found using scientific language, drawings, labelled diagrams, bar charts, keys and tables.  
 I can explain my findings in a variety of ways. (Such as display, oral presentation or writing.)  
 I can find patterns in my evidence or measurements.  
 I can make a prediction based on something I have found out.

**Scientific knowledge and understanding**

I can use a classification key to group a variety of living things (plants, vertebrates, invertebrates)  
 I can compare the classification of common plants and animals to living things found in other places. (Eg. Under the sea, prehistoric.)  
 I can name and group a variety of living things based on feeding patterns. (Producer, consumer, predator, prey, herbivore, carnivore, omnivore.)

**Learning Challenge Questions**

Which wild flowers will we find within a km of our school?  
 How would Georgia O' Keeffe have painted these flowers?  
 Which birds can we see from our classroom window?  
 How can we encourage more birds to visit our school?  
 Why did dinosaurs die out?  
 Why are there wild animals in danger of extinction today?

**Mastery**

I can use data such as graphs and diagrams to answer specific scientific questions.  
 I can record more complex data and results using a range of scientific diagrams, classification keys, tables, bar charts, line graphs and models.  
 I can report findings from investigations through written explanations and conclusions.

**Wow and Outdoor Learning**

A series of sensory/mindfulness/sketching/collecting data sessions in the wildflower garden.  
 Trip to Incredible Edible and/or Delamere Forest.  
 Sketching and photography linked to Georgia O' Keeffe art project.

**Maths**

I can classify plants and birds then graph my data.  
 I can present my data using a range of tables, bar charts and line graphs.

**English**

Develop fact files and Spotters Guides to wild flowers and endangered animals.

**Art/DT**

Can they create all the colours they need?  
 Can they use their sketch books to adapt and improve their original ideas?

Can they design a bird table to attract birds to our allotment?  
 Can they create mood in their paintings?

## Term Two: What did the Romans do for us?

Term Two: What did the Romans do for us?	
History knowledge, skills and understanding	Learning Challenge Questions
I can place periods of history on a timeline showing periods of time.	Who were the Romans? When did the Romans arrive and leave Britain?
I can explain how events from the past have helped shape our lives.	How did the Romans change Britain when they settled here? Did Britain have roads before the Romans arrived? How did the Romans build roads? What did the Romans do for Britain?
I can recognise that the lives of wealthy people were very different from those of poor people. I know that people who lived in the past cooked and travelled differently and used different weapons from ours.	How was life different for rich and poor Romans? Why were the Romans so keen to take a bath? What food did they eat and how did they eat it? What did the Romans do for fun? How did the Romans defend themselves?
I understand that wars have happened throughout history and are often associated with invasion, conquering or religious differences.	How did the Roman Empire begin and spread? Would you have preferred to be an invader or settler? Who were the Gladiators? Did the Romans believe in God? What was life like for a Roman soldier?
I appreciate how items found belonging to the past are helping us to build up an accurate picture of how people lived in the past.	What is a mosaic? Where would we find them? What can we learn from them?
I can research what it was like for a person in a given period from the past and use photographs and illustrations to present my findings. I can research two versions of an event and say how they differ.	How did the Celtic way of life differ from the Romans? Who was Julius Caesar? Who was Boudicca? What happened in AD 60?
Mastery	Wow and Outdoor Learning
I can effectively communicate knowledge and understanding orally and in writing, offering my point of view based upon what I have found out. I can give more than one reason to support an historical argument.	Roman day in school, including a Roman banquet Chester trip to Dewa Museum, including marching through the streets of Chester Roman soldier training session Roman battlefield formation and battle re-enactment
Maths	English
I understand what the Romans used as numbers. I can read Roman Numerals up to 100. I can round up time differences into centuries and decades.	I can write a Roman myth. I can write and publish a menu for a Roman feast. I can write a diary entry of either a Roman slave or a Roman soldier.

## Year Four Science Term Two: Sound

### *Listen up!*

#### Working Scientifically

I can take measurements using different equipment and units of measure.

I can record my findings in a range of ways.

I can make accurate measurements using standard units.

I can record and present what I have found using scientific language, drawings, labelled diagrams, bar charts, keys and tables.

I can explain my findings in a variety of ways. (Such as display, oral presentation or writing.)

I can find patterns in my evidence or measurements.

I can make a prediction based on something I have found out.

#### Scientific knowledge and understanding

I can describe a range of sounds and explain how they are made.

I can describe and explain how a sound travels from a source to our ears.

I can compare sources of sound and explain how the sounds differ.

I can explain how to change a sound (louder/softer).

I can explain what happens to sound as it travels away from its source.

I can investigate how different materials can affect the pitch and volume of sounds.

I can explain how to change the pitch of a sound.

#### Learning Challenge Questions

What caused that racket?

How do our ears work?

What do we mean by the pitch and volume of sound?

Does sound have the same intensity the further you move away from the source?

How do telephones work and how has this changed over time?

#### Mastery

I can explain why sound gets fainter or louder according to the distance.

I can explain why and how pitch and volume can be changed.

I can work out which materials give the best insulation for sound.

I can design a pair of ear muffs which will block out sound effectively.

#### Wow and Outdoor Learning

Wow 'sound day' including: visitor to explain why some people cannot hear and how scientific technology helps them to hear, sound experiments.

Measuring the distance sound travels at long distances (inside and outside).

Going on a sound walk through school, the playground and field.

#### Maths

I can create tables and graphs to present my results.

I can accurately measure sound and distance using standard units of measure and using appropriate equipment.

#### English

I can write up experiments in sequence using sequential language and scientific vocabulary.

I can make useful notes from informative video clips by summarising, condensing and identifying key words.

**Year Four Science Term Three: States of Matter**  
***Solid, liquid or gas?***

**Working Scientifically**

I can set up a fair test to make comparisons.  
 I can plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated.  
 I can suggest predictions and improvements.  
 I can decide which information needs to be collected and decide on the best way to collect this.  
 I can use my findings to draw a simple conclusion.

**Scientific knowledge and understanding**

I can compare and group materials based on their states of matter.  
 I can explain what happens to materials when they are heated or cooled.  
 I can measure the temperature at which different materials change state.  
 I can use measurements to explain changes to the state of water.  
 I can link change of state to the water cycle.

**Learning Challenge Questions**

How can you classify solids, liquids and gases?  
 How do we measure temperature and how does temperature vary during the day and across the world?  
 How can water be a solid, liquid and gas?  
 Which other materials change when they are heated or cooled?  
 Where do puddles on the playground disappear to?  
 Why do windows sometimes steam up?

**Mastery**

I can record more complex data and results using a range of scientific diagrams, classification keys, tables, bar charts, line graphs and models.  
 I can report findings from investigations through written explanations and conclusions.

**Wow and Outdoor Learning**

'Exciting Experiments' day. Children will work scientifically in groups to set up experiments and investigations associated with changing state, such as exploring the effect of temperature on substances such as chocolate, butter and cream.  
 Puddle evaporation experiment on the playground.

**Maths**

I can record, measure and record temperature.  
 I can present my data using a range of tables, bar charts and line graphs.

**English**

I can write an explanation text: Where do puddles on the playground disappear to?