

Introduction

In this unit about *Animals Including Humans*, children will expand on their learning from year 3 about how animals, including humans, need to get nutrition from what they eat. They will explore the different organs of the digestive system in humans and the functions of teeth in both humans and animals. Firstly, children will learn about the different types of teeth and the importance of good dental hygiene, before planning and carrying out an investigation into tooth decay using an egg as a model tooth. They will then learn about the parts and functions of individual organs of the human digestive system and carry out their own scientific demonstration of the process using everyday household items. Children will then learn more about herbivores, carnivores and omnivores in the context of teeth, digestion and food chains. They will extend their understanding of food chains from key stage 1 to include more complex chains, using the terms 'consumers' and 'producers' and compare food chains in different habitats. Finally, children will compare the teeth of different types of animals and apply their understanding to make links with their role in the food chain.

Accompanying this unit is a helpful [Knowledge Organiser](#). The Knowledge Organiser collates the subject knowledge for the unit and is used throughout this unit. [Reasoning Cards](#) to develop deeper thinking skills in science are also provided with this unit.

Health and Safety

Lessons 1 and 2

The tooth decay investigation uses hard-boiled eggs and other food and drink products. Please be aware of any allergies in your class prior to carrying out this investigation and adapt as appropriate. These lessons use hard-boiled eggs to represent teeth; however, if this is not appropriate, then marble chips can be used. As part of lesson 2, children look at their own teeth using a mirror to identify different types. If this is not appropriate for the children in your class, then the accompanying Teeth Picture Resource can be used as an alternative activity.

These resources have been provided for educational purposes only and are not intended in any way to be advice to be relied upon. We do not warrant that the information is accurate and we do not accept any responsibility if you do. Twinkl therefore accepts no liability for any health issues/allergies/injuries/accidents/near misses to you or to third parties that could arise from relying on any information within these resources and nor does it accept liability for any health issues/allergies/injuries/accidents/near misses to you or any third parties which could arise from the implementation of the instructions within this resource.

Some ingredients and/or materials used might cause allergic reactions or health problems. You should ensure that you are fully aware of the allergies and health conditions of those taking part. If you have any concerns about your own or somebody else's health or wellbeing, always speak to a qualified health professional. Activities listed within the resource should always be supervised by an appropriate adult. Please make sure you are aware that children may put craft items into their mouths, and that they should wash their hands afterwards. By using this resource, you acknowledge that it is the responsibility of supervising adults to ensure the safety of children in their care and that we will accept no liability as a result of the activity.

Lesson 4

This lesson includes a practical demonstration of the digestive system using household equipment, food and drinks. Please be aware of any allergies in your class prior to carrying out this investigation and adapt as appropriate.

Some ingredients and/or materials used might cause allergic reactions or health problems. You should ensure that you are fully aware of the allergies and health conditions of those taking part. If you have any concerns about your own or somebody else's health or wellbeing, always speak to a qualified health professional. Activities listed within the resource should always be supervised by an appropriate adult. Children should be supervised when using sharp items such as scissors or other tools. Please make sure you are aware that children may put craft items into their mouths, and that they should wash their hands afterwards. By using this resource, you acknowledge that it is the responsibility of supervising adults to ensure the safety of children in their care and that we will accept no liability as a result of the activity.

Home Learning

Parts of the Digestive System

In this task, children can consolidate their learning on the organs of the digestive system. They label the different parts on a diagram, using a word bank for support. An extra challenge is provided which asks children to describe the journey of a piece of food through the digestive system. They can explain what happens at each stage of the process and the organs that are involved.

Food Chain Pyramid

In this task, children can consolidate their learning on food chains. They use the template to construct a food chain pyramid which shows a different food chain on each side. Children can label each step of the food chain with the correct scientific vocabulary, using the word bank for support. Children are then invited to research food chains further in the extra challenge, where they can compare food chains across different habitats and ask their own scientific questions.

Interests and Talents/Broader Development

Children may be interested in developing their knowledge of the digestive systems and teeth of different animals or animal groups. Inviting a vet or zookeeper into school would enable children to gain this experience.

Some children may be interested in dentistry or learning more about digestive health. Visits from a dentist or doctor could help to further children's understanding in these areas.

Encourage the children to think of questions that they could ask to broaden their understanding. They may like to improve their knowledge and understanding of different animals' diets following on from the work in this unit.

Digital Resources

The following resources are not essential to use as part of the PlanIt unit; however, they would help children to revise and consolidate the learning in the lessons. Please be aware that in order to access these digital resources, you will need to have an 'Ultimate' subscription.

[Interactive PDF: Home Learning: Science: Year 4: Teeth](#)

[Digestive System Pairs Game](#)

[Digestive System Diagram Matching Activity](#)

[Functions of the Digestive System Parts Matching Activity](#)

[Animal Teeth Game](#)

[Food Chain Card Game](#)

[Dental Dash - Teeth Care Game](#)

Assessment Statements

By the end of this unit...

Working Towards the Expected Level:

Scientific Knowledge

- With support, children can name the different types of teeth found in humans. They can match the type of tooth with its function.
- With support, children start to explain what tooth decay is and how to look after our teeth.
- With support, children can describe the simple functions of the basic parts of the digestive system in humans.
- With support, children can construct and interpret a variety of food chains, identifying producers, predators and prey.

Working Scientifically

- With support, children can set up and carry out simple comparative and fair tests. They start to observe changes over time.
- With support, children can draw simple conclusions from their results and suggest improvements to investigations. They can record findings using drawings and keys.
- With support, children can use straightforward scientific evidence to answer questions or to support their findings.
- With support, children can gather, record, classify and present data in a variety of ways to help in answering questions.
- With support, children can identify similarities, differences, patterns and changes relating to simple scientific ideas and processes. Insert sentence here.

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Working At the Expected Level:

Scientific Knowledge

- Children can name the different types of teeth found in humans. They can explain their function.
- Children can explain what tooth decay is and how to look after our teeth.
- Children can describe the simple functions of the basic parts of the digestive system in humans.
- Children can construct and interpret a variety of food chains, identifying producers, predators and prey.

Working Scientifically

- Children can set up and carry out simple comparative and fair tests. They can observe changes over time.
- Children can draw simple conclusions from their results and suggest improvements to investigations. They can record findings using drawings and keys.
- Children can use straightforward scientific evidence to answer questions or to support their findings.
- Children can gather, record, classify and present data in a variety of ways to help in answering questions.
- Children can identify similarities, differences, patterns and changes relating to simple scientific ideas and processes.

Working At Greater Depth:

Scientific Knowledge

- Children can independently name the different types of teeth found in humans, including wisdom teeth. They can explain their function.
- Children can confidently explain the process of tooth decay, referring to specific parts of the tooth, and can explain how to look after our teeth.
- Children can confidently describe the simple functions of the basic parts of the digestive system in humans.
- Children can confidently and independently construct and interpret a variety of food chains, identifying producers, predators and prey.

Working Scientifically

- Children can independently set up and carry out simple comparative and fair tests. They can observe changes over time in detail.
- Children can independently draw detailed conclusions from their results and suggest multiple improvements to investigations. They can record findings using drawings and create their own keys.
- Children can confidently use straightforward scientific evidence to answer questions or to support their findings.
- Children can confidently gather, record, classify and present data in a variety of ways to help in answering questions.
- Children can confidently identify similarities, differences, patterns and changes relating to simple scientific ideas and processes.

Lesson Breakdown

1. Tooth Decay

Setting up simple practical enquiries, comparative and fair tests.

Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Identify the different types of teeth in humans and their simple functions.

To discuss how to keep teeth healthy; plan and set up an investigation into tooth decay.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Highlighters/coloured pencils
- Transparent beakers/jars of equal size and shape
- Labels for the beakers/jars
- Measuring jugs
- Spoons

Resources That May Need Purchasing:

- Eggs (to be hard-boiled) or marble chips, if using eggs is not appropriate.
- A selection of drinks (cola, orange juice, milk, water, etc.)



90 mins

2. Types of Teeth

Identify the different types of teeth in humans and their simple functions.

Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

To draw conclusions from an investigation about keeping teeth healthy and to identify and examine different types of teeth.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Mirrors
- Model of the teeth (if available)
- Whiteboards and pens



90 mins

3. Parts of the Digestive System

Describe the simple functions of the basic parts of the digestive system in humans.

To identify the parts of the digestive system and their function.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Scissors
- Gluesticks
- Large paper (to draw around the outline of a child)
- Sticky notes



60 mins

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4. The Digestion Process

Describe the simple functions of the basic parts of the digestive system in humans.

Use straightforward scientific evidence to answer questions or to support their findings.

To demonstrate and explain the process of digestion.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Scissors
- Gluesticks
- Sticky notes
- Measuring jugs
- Large plastic trays e.g. drawers
- Bowls
- Spoons

Resources That May Need Purchasing:

- Green and yellow food colouring (other colours would work, if not available)
- Loaf of sliced bread
- Cartons of orange juice
- Sealable plastic bags e.g. sandwich bags
- Kitchen roll
- Pairs of tights/ stockings (one leg needed per group)
- Potato mashers



75 mins

5. Food Chains

Construct and interpret a variety of food chains, identifying producers, predators and prey.

Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.

To construct food chains for different habitats and explain findings using the correct scientific language.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Pencils
- Scissors
- Sticky notes



60 mins

6. Animal Teeth

Construct and interpret a variety of food chains, identifying producers, predators and prey.

Identifying differences, similarities or changes related to simple scientific ideas and processes.

Using straightforward scientific evidence to answer questions or to support their findings.

Insert success criteria here.

Resources

[Lesson Pack](#)

Standard School Equipment:

- Pencils
- Sticky notes



60 mins