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| <p><b>Year 4 – Animals including humans</b></p> | <p><b>Main Outcomes:</b></p> <ul style="list-style-type: none"> <li>Describe the simple functions of the basic parts of the digestive system in humans.</li> <li>Identify the different types of teeth in humans and their simple functions.</li> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul> | <p><b>Focus: Science – biology</b></p> |
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**What should I already know?**

- Animals, including humans, need the right types and amount of **nutrition** because they cannot make their own food.
- Their **nutrition** comes from what they eat.

**What I will do**

I will have weekly or blocked science lessons. In lessons, I will be taught a skill and I will gain knowledge and understanding through the process of scientific enquiry (observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources).

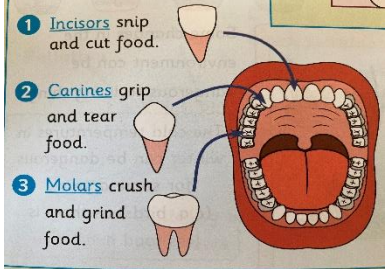
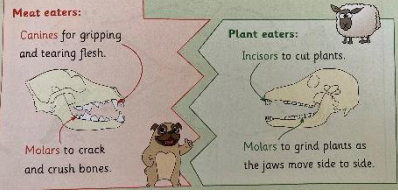
Possible lines of enquiry

- Compare the teeth of carnivores and herbivores, and suggest reasons for differences.
- Find out what damages teeth and how to look after them.
- Draw and discuss their ideas about the digestive system and compare them with models or images.

| Vocabulary           | Meaning   |
|----------------------|---|
| absorb               | to take into the bloodstream  |
| anus                 | the opening where your bowel movements (also known as <b>poor</b> or <b>faeces</b> ) come out             |
| canines              | the sharp pointy <b>teeth</b> in mammals' mouths  |
| carnivore            | an organism that eats mostly meat, or the <b>flesh</b> of animals   |
| chew                 | to grind food up using the <b>teeth</b>   |
| consumer             | a living thing that consumes (eats) another living thing for food, in order to get energy                 |
| diet                 | food that is eaten by a person or another organism  |
| digestion            | the breaking down of the food we eat into other substances that our bodies can <b>absorb</b> and use      |
| digestive system     | the system in the body where food is broken down and <b>nutrients</b> are <b>absorbed</b>                 |
| evidence             | a collection of facts or information that suggests whether something is true or false                     |
| faeces (poor)        | the body's solid waste left over from eating food   |
| food chain           | a diagram (picture) that shows which living things eat each other   |
| herbivore            | an animal that only eats plants such as vegetables, fruits, bulbs, grasses, roots, berries, and wood.     |
| impact               | the action or effect of one thing on another  |
| incisor              | a sharp and flat-edged tooth that is used for cutting food  |
| jaw                  | either of a pair of bones that form the framework of the mouth of vertebrate animals                      |
| large intestine      | part of the <b>digestive system</b> where water is <b>absorbed</b> .                                      |
| molar                | a large tooth with a bumpy surface that grinds up food  |
| nutrition/ nutrients | all the things in your food, such as vitamins, protein, fat, carbohydrates and more                       |
| oesophagus (gullet)  | the pipe in the <b>digestive system</b> that transports food from the mouth to the <b>stomach</b>         |
| omnivore             | an animal that eats both plants and other animals   |
| predator             | an animal that kills and eats other animals   |
| prey                 | an animal that is eaten and killed by predators   |
| producer             | something that produces its own food  |
| rectum               | a space at the end of the <b>large intestine</b> which acts as a temporary storage site for <b>faeces</b> |
| saliva               | spit, the clear liquid in your mouth that's made of water and other chemicals                             |
| small intestine      | part of the <b>digestive system</b> where <b>nutrients</b> from food are <b>absorbed</b> into the blood   |
| stomach              | part of the <b>digestive system</b> where food is churned up  |
| teeth                | the hard bony structures in the mouth used to <b>chew</b> food  |
| tongue               | the fleshy muscle inside the mouth which helps us to taste and swallow                                    |

**Resources**

Hamilton Science planning: animals including humans <https://www.hamilton-trust.org.uk/science/year-4-science/animals-including-humans-excuse-me-are-these-your-teeth/> (all planning also saved on SharePoint).

| Knowledge to understand  |   | Skills to learn  |  |
|--|---|--|--|
| <p>The <b>digestive system</b> breaks down food so the body can <b>absorb</b> it.</p>                        | <p><b>Mouth:</b> the <b>teeth</b> and <b>tongue</b> help us to <b>chew</b> food. The <b>tongue</b> helps us to swallow it.<br/> <b>Oesophagus (gullet):</b> food travels down here to the <b>stomach</b>.<br/> <b>Stomach:</b> this churns up food, which helps to break it down.<br/> <b>Small intestine:</b> here, food is broken down more. <b>Nutrients</b> from the food can then be <b>absorbed</b> into the blood (blood carries the <b>nutrients</b> around the body).<br/> <b>Large intestine:</b> here, water is <b>absorbed</b> into the body.</p> | <ul style="list-style-type: none"> <li>➤ asking relevant questions and using different types of scientific enquiries to answer them</li> <li>➤ setting up simple practical enquiries, comparative and fair tests</li> <li>➤ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>➤ identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>➤ using straightforward scientific evidence to answer questions or to support their findings.</li> </ul> <p>Cross-curricular (P.E. and computing)</p> <ul style="list-style-type: none"> <li>➤ to be physically active for sustained periods of time</li> <li>➤ to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>➤ to use technology safely, respectfully and responsibly</li> <li>➤ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that can accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> </ul> |  |
| <p>Humans have three main types of <b>teeth</b>.</p>   |    | <p>Equipment to become familiar with</p> <p>PowerPoint on laptops</p>  |  |
| <p>Humans get two sets of <b>teeth</b>.</p>  | <p><b>Milk teeth:</b> from about 6 months old to about 5-12 years old.<br/> <b>Permanent teeth:</b> from about 5 years old.</p>   |  |  |
| <p>Sugar left in the mouth after eating attracts bacteria which cause tooth decay.</p>                       | <p>Ways to look after your <b>teeth</b>:</p> <ul style="list-style-type: none"> <li>• brush twice a day</li> <li>• see the dentist regularly</li> <li>• don't eat too many sugary foods</li> </ul>  |  |  |
| <p><b>Carnivores</b> and <b>herbivores</b> have different types of <b>teeth</b> for different functions.</p> |    |  |  |

| Evidence of Learning  | How will I know what I've learnt?   |
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| <p>Science books<br/>           Photos<br/>           Videos<br/>           Pupil conferencing<br/>           Teaching and learning observations<br/>           Learning walks<br/>           Data analysis</p> | <p>See KS2 teacher assessment exemplification for science<br/> <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/763065/2018_key_stage_2_teacher_assessment_exemplification_science.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/763065/2018_key_stage_2_teacher_assessment_exemplification_science.pdf</a></p> <p>See also Hamilton Science_Assessment_Y4 (saved in planning folder on Sharepoint).</p> <p>KS2 quizzes:<br/> <a href="https://gcequiz.com/quiz/ks2-science-quizzes">https://gcequiz.com/quiz/ks2-science-quizzes</a><br/> <a href="https://churchfieldsjunior.com/test-your-skills-science/">https://churchfieldsjunior.com/test-your-skills-science/</a></p> |