





Science Knowledge and Skills Overview – Year Four Animals including Humans

National Curriculum Objectives	Sticky Knowledge	Prior/Future Learning
<ul style="list-style-type: none"> Pupils should be taught to describe the simple functions of the basic parts of the digestive system in humans. Pupils should be taught to identify the different types of teeth in humans and their functions. Pupils should be able to construct and interpret a variety of food chains, identifying producers, predators and prey. 	<ul style="list-style-type: none"> Digestion is the process through which the body absorbs nutrients from food. The digestive process begins with the mouth, teeth and tongue. The tongue aids in chewing and swallowing. The oesophagus is like the food highway that takes your dinner from your mouth down into your stomach so that digestion can begin. The stomach is filled with powerful acids that break down the food into smaller pieces. The stomach also lets us know when we are hungry. The small intestine absorbs nutrients and minerals from the food. 90% of food absorption takes place in the small intestine. The large intestine absorbs water from the remaining indigestible food. Indigestible food leaves the body as faeces. The front teeth are called incisors and are used for cutting food. The four sharp teeth are called canines and are used for ripping and tearing. The teeth at the back of the mouth are called the molars and are used for chewing and grinding. The outside of our teeth are covered with enamel for protection. The inside of a tooth has blood vessels and nerves. Producers are the beginning of the food chain because they produce their own food e.g. green, leafy plants. Predators are animals, including humans, which hunt or prey on other animals (in the wild this is needed for survival). Prey refers to an animal that is sought, captured and eaten by a predator. 	<p><u>In Year 3 children should:</u></p> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food; they get their nutrition from what they eat. Know how nutrients, water and oxygen are transported within animals and humans. Know about the importance of a nutritious, balanced diet. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
<p>Links to NHFS core curriculum themes</p>		<p><u>In Year 5 children will:</u></p> <ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals. Describe the changes as humans develop to old age.
<p>Sustainability – food chains, extinction, vegetarian, pescatarian, vegan, conservation</p> <p>Aspirations – Dentist, marine biology, health professionals</p> <p>Equality – Access to dentistry</p>		
<p>Vocabulary</p>		
<p>Digestion, oesophagus, stomach, small intestine, large intestine, absorption, rectum, faeces, nutrients, minerals, acids, incisors, canines, molars, enamel, protection, blood vessels, nerves, food chain, producer, predator, prey, survival.</p>		<p>BIG Question. . .</p> <p>What do our bodies do with the food we eat?</p>
<p>Key Scientists</p>		
<p>Marie M. Daly (Biochemist) Pierre Fauchard (Physician)</p>		
<p>Key Questions</p>		
<p>What different types of food are there?</p> <p>Why do we need a variety of different foods?</p> <p>Do all organisms eat the same things?</p> <p>Why do some people need different diets? (weightlifter vs marathon runner)</p> <p>Why are teeth important?</p> <p>What happens to our food?</p> <p>What is our digestive system?</p> <p>How does our food turn into faeces and urine?</p>	<p>How does an egg shell change when it is left in cola, milk, water, vinegar? What does this tell us about oral hygiene?</p>	<p>How do dentists fix broken teeth?</p>
<p>In our class, are omnivores taller than vegetarians?</p> 	<p>What are the names for all the organs involved in the digestive system? Look at examples of teeth. Can we organise them into groups?</p> 	<p>Are foods that are high in energy always high in sugar?</p>  

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