## Science Project Overview Year 4 Animals including humans

Subject Knowledge (PoS)	Working Scientifically (PoS+Overview)	Working Scientifically Methods
Substantive knowledge	Disciplinary knowledge	Using different types of scientific
Basic parts of the digestive system in humans.	During years 3 and 4, pupils should be taught to use the following practical	enquiry to answer their own
See below.	scientific methods, processes and skills through the teaching of the	questions, including:
Oesophanus	programme of study content:	<ul> <li>observing changes over time,</li> </ul>
Food is squeezed and pushed into	<ul> <li>ask their own questions about what they observe</li> </ul>	<ul> <li>noticing patterns,</li> </ul>
the stomach.	• Make some decisions about which types of scientific enquiry are likely to	<ul> <li>grouping and classifying things,</li> </ul>
Food is broken into small particles by Enzymes and digestive acids	be the best ways of answering them, including: observing changes over	• carrying out simple comparative
the teeth and enzymes in saliva. break down the food and nutrients are released.	time, noticing patterns, grouping and classifying things, carrying out	and fair tests
	simple comparative and fair tests and finding things out using secondary	<ul> <li>and finding things out using</li> </ul>
	sources.	secondary sources
	• asking relevant questions and using different types of scientific enquiries	
Small intestine Large intestine	to answer them	
Nutrients are absorbed and passed into the bootstream.	<ul> <li>setting up simple practical enquiries, comparative and fair tests</li> </ul>	
Waste is removed.	<ul> <li>making systematic and careful observations and, where appropriate,</li> </ul>	
	taking accurate measurements using standard units, using a range of	
<ul> <li>Incisors: Incisors are used to slice into food in the</li> </ul>	equipment, including thermometers and data loggers	
mouth.	• gathering, recording, classifying and presenting data in a variety of ways	
	to help in answering questions	
• <b>Canines</b> : The small pointed teeth, which look a bit like	<ul> <li>recording findings using simple scientific language, drawings, labelled</li> </ul>	
vampire fangs, to the side of our incisors help to tear	diagrams, keys, bar charts, and tables	
food	<ul> <li>reporting on findings from enquiries, including oral and written</li> </ul>	
1000.	explanations, displays or presentations of results and conclusions	
• Molars: All molars are used for grinding food.	<ul> <li>using results to draw simple conclusions, make predictions for new</li> </ul>	
	values, suggest improvements and raise further questions	
	• identifying differences, similarities or changes related to simple scientific	
	ideas and processes	
	<ul> <li>using straightforward scientific evidence to answer questions or to</li> </ul>	
	support their findings.	
	<ul> <li>draw simple conclusions and use some scientific language, first, to talk</li> </ul>	
	about and, later, to write about what they have found out.	

Previous learning:	Preparing learning:	Bespoke to our school:
<ul> <li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals, including humans)</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). (Y2 - Animals, including humans)</li> </ul>	<ul> <li>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. (Y6 - Animals, including humans)</li> <li>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 - Animals, including humans)</li> <li>Describe the ways in which nutrients and water are transported within animals, including humans. (Y6 - Animals, including humans)</li> </ul>	There is a big emphasis on vocabulary recapping on previous learning about carnivores, omnivores and herbivores. We link this knowledge to the different teeth we have in our mouths and their functions. We talk about the
<ul> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y2 - Animals, including humans)</li> <li>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3 - Animals, including humans)</li> </ul>		importance of eating a varied diet with different food groups and drink.

## Vocabulary:

Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore,

## Misconceptions:

- your stomach is where your belly button is
- food is digested only in the stomach
- when you have a meal, your food goes down one tube and your drink down another
- the food you eat becomes "poo" and the drink becomes "wee"

## English Links:

Demon dentist

Maths links:		
Statistics: based on surveys of age and teeth types etc.		
Use bar charts and time graphs to present discrete/continuous data		
Use bar charts, pictograms, tables and other graphs to solve comparison, sum and difference problems		
Measurements:		
Solve problems using a different range of measures- especially if you use the investigation – How long is my gut?		
Famous Scientists to possibly study:		
Jane Goodall 1934 - (chimpanzees as omnivores)		
Explorify links:		
Thirsty work		
The damselfly's day		
Odd octopus		
Topsy turvy		
Weird walkers		
Spot the difference		
Which breakfast is best?		
What if we ate insects?		
Possible careers/jobs:		
Dentist (looks after teeth and gums), Doctor (works to keep people healthy and cure disease), Dietician (develops nutrition advice to improve people's diets),		
Nutritionist (studies nutrition in food and how it affects our bodies)		