No Limits
To Learning!

Topic Title: Animals Including Humans (Swords and Sandals)

Year Group: 4

Academic Year: 2022 - 2023

Science Intent: What are the different types of teeth and their functions?
How does the human digestive system work? Why are food chains important?

Animals including Humans:
Children will learn more about herbivores, carnivores and omnivores in the context of teeth, digestion and the food chain. In addition, they will extend their understanding of food chains to more complex chains and food webs.

<table>
<tr><td>Prior Scientific Learning/Linked Topics:

• Identify and name a variety of common animals that are carnivores, herbivores and omnivores (Year 1).
• Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food (Year 2).</td><td>Literacy Links (including texts/media used):</td><td>Maths Links:

Data handling/graphs</td></tr>
<tr><td>Scientific Knowledge

Objective from NC:

• describe the simple functions of the basic parts of the digestive system in humans</td><td colspan="2">Working Scientifically

Asking relevant questions and using different types of scientific enquiries to answer them
Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
Using straightforward scientific evidence to answer questions or to support their findings
Identifying differences, similarities or changes related to simple scientific ideas and processes</td></tr>
</table>

No Limits
To Learning!

• identify the different types of teeth in humans and their simple functions • construct and interpret a variety of food chains, identifying producers, predators and prey.	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Content:

Lesson 1: To be able to identify and classify carnivores, herbivores and omnivores.
Why do we eat? Children to share their ideas, then go through information on the slides. Explain that all animals, including humans, need to eat in order to survive. Animals all eat different things to get the right nutrients they need to be healthy. Show children the animals on the slides. What do you think might be different or similar about the diets of these two animals? Children to discuss ideas. Show children the terms 'carnivore', 'herbivore' and 'omnivore' on the slides. Do you know what these terms mean? Children to discuss ideas. Show children the definition for each of the terms. Can you think of any animals that are herbivores/carnivores/omnivores? How can we find out what an animal eats if we are not sure? Provide children with a set of Animal Cards showing a variety of animals. Challenge children to sort the animals into the Venn diagram on worksheet 1B. Make sure children have access to books and/or the internet to help them confirm the diets of any animals they are not sure about. – Identifying, grouping and classifying

Lesson 2: To be able to construct and interpret a variety of food chains.
Show children the picture of a food chain on the slides. What do you think this diagram is showing? Invite children to share their ideas, then go through the information about food chains on the slides and how they always start with a producer. Explain also that the arrows show the direction of energy in the food chain. Can you organise these animals into a food chain? Challenge children to do this with a partner and then check if they were right on the slides. Repeat with several other food chains. Provide children with the Organisms Sheet. Challenge children to create as many food chains as they can using the organisms on the sheet. Children to record the food chains. – Identifying, grouping and classifying

Lesson 3: To identify the different types of teeth in humans and identify their functions.
Ask children to feel their teeth with their tongues. What do your teeth feel like? Do all your teeth feel the same? Why do we have teeth? Explain that we have teeth to help us eat. Teeth help us cut and chew our food to break it down so we can swallow and start digesting it. Without teeth, all your food would have to be very mushy. Show children the picture of the teeth on the slides. Do all these teeth look the same? What are the differences between the different types of teeth? Go through the explanations of what incisors, molars and canines are for and where they are in the mouth. Show the individual picture of incisors, canines and molars and ask children to

identify what type of tooth each one is, what it is used for and why, then check if they were correct. Children to describe each of the different types of teeth and what they are used for. When finished, children to colour the incisors red, the canines blue and the molars green in the picture of the teeth. - Research

Lesson 4: To explore different ways of keeping teeth healthy.
Explain that humans have two sets of teeth during their lifetime: milk teeth and adult teeth. Milk teeth fall out and are replaced by adult teeth that are permanent. Why do you think we don't just have one set of teeth during our lifetimes? Children to share ideas, then go through the information on the slides. Show children the two people on the slides who have each lost a tooth. What impact will this have on each person and why? Invite children to share their ideas. Explain that children are supposed to lose their milk teeth, that it is natural and that a new tooth will grow in its place. Adults are not supposed to lose their adult teeth because another one will not grow back. Show children the pictures of tooth decay on the slides and explain that tooth decay can lead to cavities and tooth loss. How do you think people can make sure that their teeth stay healthy? Provide children with the Information Sheet and any other available sources. Challenge children to create a flier explaining what people should do to make sure that their teeth stay healthy. Explore the effects of acid on teeth. Discuss and set up a fair test using an egg to represent tooth. – Observation over time. – Comparative/Fair testing

Lesson 5: To investigate how the digestive system works.
We have already found out that our bodies need food to eat but have you ever wondered what happens to the food once you have swallowed it? On a mini-whiteboard or a piece of paper, ask children to sketch what they think the digestive system looks like inside their bodies. Encourage children to label any organs they know the names of. Show children the diagram of the digestive system on the slides. How similar is your diagram to this diagram? Children to discuss the similarities and differences with a partner. Have we found out how the digestive system works yet? What questions do we not know the answer to? Invite children to share their questions and list on the slides. Tell children that today they will be finding out the answers to some of these questions to help them work out what happens to their food once it is swallowed. children to write five questions they most want to find the answer to about what happens to their food once it has been swallowed. Stick the Fact Cards up around the room and provide any additional resources, e.g. books or posters. Children to then use the resources to see if they can find the answers to their questions.
Digestive system – discuss the journey of a biscuit. Introduce model body with organs. Discuss vocabulary and introduce new vocabulary. Draw digestive system with main organs placed correctly. – Research

Lesson 6: To be able to describe the functions of the basic parts of the digestive system.
Show children the diagram of the digestive system on the slides. Can you remember what each of these different organs is called? Children to share ideas, then check on the slides. Explain that today they will be exploring the journey food takes from the moment it enters the body to the moment it leaves the body. How long do you think it takes for food to pass through your system? Invite children to share their estimates, then explain that it can take between 24 hours and 72 hours for food to pass through your digestive system. Go through the information on the slides about how the digestive system works. children to use the words in the word box to label each of the parts of the digestive system. When finished, challenge children to describe in their own words how the digestive system works and record on the flow diagram.

No Limits
To Learning!

Carry out an investigation to see how acid helps to break food down quickly. How do you think we could do this? Invite children to share their ideas. Provide children with the Challenge Card showing suggestions for how they could test this. Children to choose a question they want to investigate, then plan their investigation. They can then carry out the investigation according to their plan and record the results. What did you find out about how acids break down food? Can you describe how our stomachs break down food using what we have found out? – Comparative/Fair testing
Key Vocabulary: Mouth, tongue, teeth, oesophagus, stomach, duodenum, small intestine, large intestine, pancreas, liver, rectum, anus, salivary glands, gallbladder, digestion, digest, digestive system, functions, glands, enzymes, acid. Tooth, teeth, incisors, canines, molars, premolars, humans, animals, gums, nerves, carnivore, herbivore, omnivore, decay, questions, scientific, non-scientific, practical enquiries, comparative tests, fair tests, variables. Erode, erosion, test, practical enquiry, fair test, comparative test, time intervals, observe, record, scientific language, conclusion, prediction, hypothesis.

Stunning Start/Marvellous Middle/Fabulous Finish: Stunning Start: TBC Marvellous Middle: TBC Fabulous Finish: TBC	OAA/Trips/Visits/Visitors: