

**Pioneer Federation**  
**Medium term plan**  
**Ks1- Cycle 2, Term 6**  
**Science**



<b>Subject:</b> Science	
<b>Key Concept/ Theme:</b> Animals including humans	
<b>Prior Learning links:</b> Year 1: Identify and name a variety of common animals that are birds, fish, amphibians, reptiles and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles and mammals, and including pets). Identify, name draw and label the basic parts of the human body and say which parts of the body is associated with each sense. Year 2: Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Year 3: 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 Identify that humans and some animals have skeletons and muscles for support, protection and movement.	
<b>Vocabulary:</b>  Digestive system – , oesophagus, stomach, small intestine, liver, pancreas  Protein, vitamin, mineral, carbohydrate, fats, energy, growth, repair saliva  Teeth – Incisors, canines, premolars, molars  Foodchain – producer, consumer, predator, prey	
<b>Individual schools:</b> Use wild spaces within schools- pond, long grass, different habitats and use of forests in forest school if possible.	
1.	<b>Deeper learning question for the term:</b> Why do we need to know about the function of the teeth, stomach and digestive system? <b>Prior learning reconnection (year group, cycle &amp; term):</b> Last term they learnt about living things and their habitats and which will help when learning about food chains in the local areas and applying understanding. Year 3 c1 t4, Year 2 C2 T1 and year 1 C1T5, C1 T5 C2 T3 <b>LO:</b> Let's learn about the functions of the different types of teeth? <b>Enquiry skill:</b> Questioning

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	<p><b>Activity:</b> Children to observe their own teeth and look at positions of teeth on photos. Find out about teeth then they make their own jaws with teeth- challenge the children to put them in the right order and then label them and describe their job. Children to test chewing food and see which teeth are best for different foods and explain why. Make sure throughout the lesson you explain why tooth brushing and visits to the dentist are so important- link to healthy foods choices.</p> <p>Set up a class experiment with eggs and get the children to think of the types of questions they can ask about the experiment- come back after experiment and answer their questions using diagrams.</p> <p><a href="https://www.bbc.co.uk/cbbc/watch/operation-ouch-do-try-this-at-home-experiment-5">https://www.bbc.co.uk/cbbc/watch/operation-ouch-do-try-this-at-home-experiment-5</a></p> <p><b>Future learning links:</b> Links to PSHE with healthy choices and will build up knowledge for Year 6 unit about other body functions like the circulatory system and impact of diet.</p>
2.	<p><b>Deeper learning question:</b> What happens when we chew food?</p> <p><b>Reconnection:</b> What are the purpose of different teeth? Can you name the teeth?</p> <p><b>LO:</b> Let's learn about the digestive system and what happens when we chew.</p> <p><b>Enquiry skill:</b> observation, conclusions</p> <p><b>Activity:</b> Allow children an opportunity to discuss what they think happens to bread when we place it in our mouths.</p> <p>Each of the children can begin to chew some bread (do not swallow). Chew for a minute and observe how it changes. Stop chewing and think about what is the liquid that has mixed in with the food. Leave the ball of food in mouth for three minute and then observe its taste. It should have become sweeter as saliva contains a chemical (an enzyme, salivary amylase) which digests food to a sugar. This is a chemical change. Swallow the chewed food and ask them to immediately eat another piece of bread. The sweetness should be easier to detect now.</p> <p>Recording:</p> <p>The children could draw a simple flow diagram to show what happens to the piece of bread.</p>
3	<p><b>Deeper learning question:</b></p> <p><b>Reconnection:</b> What happens to food in our mouths so it is ready to enter our digestion system?</p> <p><b>LO:</b> Let's learn about the stomach and its function in the digestive system.</p> <p><b>Activity:</b> Modelling - The stomach: Give each child a zip loc bag and a couple of crackers or piece of bread. The bag is like the stomach - a muscle that squeezes the food. First have them pour a little orange juice or coke into the bag to act as the "digestive juices." Observe what begins to happen to the bread. Then have them squeeze the bag for two minutes. Note changes in the bread - it turns to liquid and is ready to be absorbed into the small intestine and into the blood stream. The children could draw what happened in their model, and then uses this to explain what happens in our stomachs.</p>
4	<p><b>Deeper learning question:</b> Is the digestive system an important part of your body?</p> <p><b>Reconnection:</b> What happens in the stomach? Can you explain what you know about how the food travels from the mouth to the stomach?</p> <p><b>LO:</b> Let's learn about the function of the intestine and colon in the digestive system.</p> <p><b>Activity:</b></p> <p>Learn about the digestive system. <a href="https://www.bbc.co.uk/teach/class-clips-video/ks2-ks3-biology-journey-through-the-digestive-system/zr33wty">https://www.bbc.co.uk/teach/class-clips-video/ks2-ks3-biology-journey-through-the-digestive-system/zr33wty</a>  <a href="https://www.bbc.co.uk/bitesize/articles/z8bntrd#zhggg7h">https://www.bbc.co.uk/bitesize/articles/z8bntrd#zhggg7h</a></p> <p>Drama/modelling – Acting out the digestive system</p>

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	<p>A chain of children could represent the food. Other children form a line, each of them holding a label of one of the parts of the body involved in digestion:</p> <ul style="list-style-type: none"><li>• The food is chewed up in the mouth (i.e. the chain of children begin to break up)</li><li>• Digestive juices lubricate the food and break it down further</li><li>• The stomach will secrete gastric juices that contain hydrochloric acid and the enzyme pepsin to break down the proteins.</li><li>• The small intestine produces enzymes that break down the food further.</li><li>• As the food passes along the small intestine into the large intestine the products of digestion are absorbed into the body.</li><li>• In the colon excess water is reabsorbed.</li><li>• The remaining material passes into the rectum where it is stored until ready to be passed out of the body</li></ul> <p><b>Recording</b></p> <p>The children could work in groups. Each group draws around one of their members on a large sheet of paper. Together, they draw the different parts of the digestive system and stick them in the correct place inside the outline of the body. Next to each organ, the children can stick a label explaining the function of that organ. Or they could write a diary of a piece of food- they could write as if they were the piece of food.</p>
5	<p><b>Deeper learning question:</b> What do animals in our wildlife area eat?</p> <p><b>Reconnection:</b> What happens in the intestine and colon? Can you explain what you know about how the food travels through the body?</p> <p><b>LO:</b> Let's learn about food chains in our local environment.</p> <p><b>Enquiry skill:</b> So what? And identifying important information.</p> <p><b>Activity:</b> Begin by asking the children to list some of the things that we eat. Explain that we are part of a food-chain; the food has come from somewhere else and we have eaten it. Model to the children how we can trace back the origins of some of our natural food. For example, they might have eaten a beef burger. The beef was part of a cow that fed on grasses. After a few examples they should see that every food-chain has plants at its base.</p> <p>Survey – What do animals in our wildlife area eat?</p> <p>Be aware that you are unlikely to find all your wildlife animals eating. However the children can look for clues. They might find caterpillars on the underside of cabbage leaves; they might see butterflies or bees on flowers or pond skaters gathering around another dead invertebrate.</p> <p>Record their observations using a table then children to link to their knowledge from last term as to why they have found these.</p>
6	<p><b>Deeper learning question:</b> What are food-chains and are they different?</p> <p><b>Reconnection:</b> What clues did you find out about food chains in your local environment?</p> <p><b>LO:</b> Let's learn about food chains in the wider world.</p> <p><b>Activity:</b> Modelling - Food-chain headbands: Make some headbands from strips of card that have been stapled together. Have a pile of cards with an organism on to be stuck on. For a small group of children (around 6) provide them each with a headband and each with an organism card- make sure the children don't see the picture. Ensure that each pile of organism pictures can exist in the same food-chain. After they have put on their headbands, they must try to organise themselves in a food-chain without telling each what they are. To extend this, children can decide what other animals could have eaten some of the animals in their food chain. Make links to the animal's teeth and whether they are carnivore, herbivore omnivores.</p>

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	The children to be challenged to find out more about food-chains of animals and plants all around the world. Children to draw some of their food-chains. Each time they must ensure that the arrow shows the direction in which the energy is being passed.
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7	Quiz
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**End points:**

To know that teeth are used for cutting and chewing food, they start the digestive process which gives us the energy we need to live.

Humans look after their teeth and ensuring that they do not eat lots of foods high in sugar.

Not looking after teeth can lead to an increase in plaque and tooth decay.

To know the names and function of the teeth.

To know the name the different parts of the digestive system and their functions.

To identify the carnivore, herbivore and omnivores in a food chain and make connections to the types of teeth they have and why.

To describe a food chain and identify producers, predators and prey.