**SCIENCE WEEKLY PLANNING SHEET - ANIMALS INCLUDING HUMANS**

**Term: Autumn 1 Year: 4**

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| **Week 1**   1. **Focus:** Function of the digestive system in humans.   *SE3 identifying, classifying and grouping*  *SE 5 research using secondary sources*  **Activity:**  **Begin by sticking the scientific enquiry sheet on the first page in the books and talking about what it means.**  Ask the children what they think happens to their food when they eat it. Where does it go first? Talk about the functions of the teeth and tongue and the importance of saliva. What happens next to your food? Demonstrate by squeezing a tube of toothpaste/tomato puree how food goes down the oesophagus. What happens to it there? Show the children a picture of a stomach. Give each child a ziploc bag and ask them to use a sharpie to draw a stomach on the bag. Give them a piece of bread and add some soda. Explain that **t**he bag is your “stomach”, the soda is your “stomach acid” and the bread your food. Close the bag. Shake and knead the contents. Ask them to watch how the bread breaks down and becomes nearly a liquid itself. Explain that our stomach contains acid to help break down our food.  Ask the children what they think happens next. Pour the contents of one of the ‘stomachs’ through one leg of a pair of tights held over a tray. Explain to the children that the food next goes through your small intestine which is narrow but very long (6.5 metres). As it passes through the soda will pour through the hole in the tights. Explain that this is how the intestines absorb water and nutrients through its wall. The solid material which the body does not need will continue to the large intestine which is short but wider. Ask the children where they think this solid material ends up?  Recap the journey so far on a diagram showing Ask the children where they think the food goes next. Give them a picture of the digestive system and the definition to learn **‘Digestive system - the parts of the body that work together to turn food and liquids into the fuel that the body needs’.** Recap the ‘journey’ of the food as the children draw its route through the body. For more able children explain the role of the liver in making bile to help the stomach absorb fats and removing toxins and the role of the gallbladder in storing bile.  Using their picture of the digestive system as a reference ask the children to join together large paper models of each part to recreate the whole system. Children will then research the function of each part using laptops/Ipads using the following page (less able children can match the functions to the correct part) recording them in their books.  <https://kidshealth.org/en/kids/digestive-system.html>  They can then use the following game to reinforce their understanding <https://www.sheppardsoftware.com>  /health/anatomy/digestion/digestion\_tutorial.htm  **Outcome: Children will be able to identify parts of the digestive system and match up the parts to their function**  **Resources:** Ziploc bags, bread, t-shirt with the digestive system on, large pictures of the parts of the digestive system, Ipads/laptops, soda, one leg from an old pair of tights, toothpaste/puree tube | **Week 2**   1. **Focus:** Teeth and functions.   *SE3 identifying, classifying and grouping*  **Activity: Ask the children to** look at your own teeth using a mirror. Ask questions such as how many do you have? Are they all the same? How are they different? Match up large scale pictures of the different teeth to their functions. Identify in a model of inside the mouth. Given pictures of different food type match to which teeth you think you would use when you eat it.  **Outcome: Children will be able to recognise the different teeth and describe their function**  **Resources:** mirrors, large scale pictures of teeth, model of inside the mouth |
| **Week 3**   1. **Focus:** How do we look after our teeth?   *SE 4 fair testing and comparing*  **Activity:**  Visit from a dentist.  Before the visit ask how we look after our teeth and write any questions that we would like to know the answers to e.g. where are our second set of teeth when we are born? Write leaflets for younger children or create a video teaching them how to look after their teeth.  **Outcome: The children will be able to talk about how to look after their teeth**  **Resources:** | **Week 4**   1. **Focus:** Compare teeth of carnivores, herbivores and omnivores   *SE3 identifying, classifying and grouping*  *SE2 looking for patterns*  **Activity:**  Look at the teeth of different dinosaurs and try to work out if they ate meat, plants or both from the shape of their teeth. Use secondary sources to find out if you were right.  Present the children with a set of interesting questions to research e.g. Do all animals have teeth? Which animal has the most teeth? Which animal has the biggest teeth? Do fish have teeth?  **Outcome: The children will be able to identify how the size and shape of an animals teeth is different dependent on their diet**  **Resources:** |
| **Week 5**   1. **Focus:** Interpret food chains (identify prey, predator and producers.)   *SE3 identifying, classifying and grouping*  **Activity:**  Give out pictures of predators and prey and ask the children to sort them into groups using their prior knowledge. Use a picture of a food chain and try to work out what it is telling us. Given the definition of a predator and prey, a consumer and a producer label these on the food chain. They should then order the animal pictures from the first activity showing the correct predator and prey relationships. These can be presented in different ways e.g. on plastic cups to stack, on pyramids. Using the information from last week decide which animals are higher up the food chain ie carnivores and which are herbivores. Children then record this information in their books using arrows to correctly point to the next animal in the chain.  **Outcome: The children will be able to interpret food chains**  **Resources:plastic cups with parts of the food chain on** | **Week 6**   1. **Focus:** Impact of breaks in food chains (identify prey, predator and producers.)   *SE 5 research using secondary sources*  **Activity:**  Consider the poster about life without plants and the impact it would have on life on earth. Research the knock-on effect of cutting down the rainforest on the animals that live there and their food chains. Look at the effect of losing other links in the chain e.g. overpopulation of certain animals if predators are lost. Act this out by making children producers, prey or predators and then removing one of these from the chain.  **Outcome: The children will be able to talk about the impact of breaks in food chains to other parts in the food chain**  **Resources:** |
| **Week 7**  **Focus: Challenge -** Which liquid does the least damage to egg shells?  *SE 4 fair testing and comparing*  *SE 1 observation over time*  **Activity:** Explain to the children that  Eggshells have a similar chemical composition to our tooth enamel, making them react similarly with other chemicals. This can help us understand what stains tooth enamel. When we brush an eggshell with fluoridated toothpaste, it strengthens the shell and protects it from acid, just like it does for our tooth enamel. Set up a fair test to see the effect of putting pieces of eggshell in different liquids  **Outcome: The children will be able to carry out and interpret a fair test then talk about the effect of different liquids on teeth**  **Resources:**  Egg shells, coca-cola, milk, vinegar, orange juice, toothpaste | **Week 8**  **Focus: Review, reinforce and assess**  **Activity:**  Begin by looking at the results of the eggshell test from last week.  Provide activities to review and reinforce the knowledge and skills learnt in this unit. Assess the children’s learning and plan follow up intervention/extension lessons. Provide opportunities for children to recall and use the vocabulary used in the unit and link to previous units as appropriate.  Give the children stickers with the names of the 5 types of scientific enquiry skills on and ask the children to stick these in their books where they think they have used those skills  **Outcome:** Children will be able to talk and write about what they have learnt about the digestive system, teeth, food chains  **Resources: vocabulary cards to match, pictures to trace, stickers with scientific enquiry skills on** |

**ANIMALS INCLUDING HUMANS**

**Digestive system** - the parts of the body that work together to turn food and liquids into the fuel that the body needs

**Herbivore** - an animal or insect that only eats vegetation, such as grasses, fruits, leaves, vegetables, roots and bulbs

**Carnivore** - an animal which eats mostly meat.

**Omnivore** - an animal that feeds on plants and other animals

**Predator** – an animal that hunts and kills its own prey.

**Prey** -  an animal being hunted, caught, and eaten by another animal

**Food** **chain** - the order in which living things, depend on each other for food.