Science | Year 3/4 – Animals including humans | 2020-21

1. 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
2. identify that humans and some other animals have skeletons and muscles for support, protection and movement
3. describe the simple functions of the basic parts of the digestive system in humans
4. identify the different types of teeth in humans and their simple functions
5. construct and interpret a variety of food chains, identifying producers, predators and prey

	Assessment guidance	Key learning	Key vocabulary
Animals including humans	Shows understanding of a concept using scientific vocabulary correctly	Animals, unlike plants which can make their own food, need to eat in order to get the nutrients they need. Food contains a range of different nutrients that are needed by the body to stay healthy – carbohydrates including sugars, protein, vitamins, minerals, fibre, fat, sugars, water. A piece of food will often provide a range of nutrients. Humans and some other animals have skeletons and muscles which help them move and provide protection and support (vertebrates and invertebrates, endoskeleton, exoskeleton and hydrostatic skeleton)) Food enters the body through the mouth. Digestion starts when the teeth start to break the food down. Saliva is added and the tongue rolls the food into a ball. The food is swallowed and passes down the oesophagus to the stomach. Here the food is broken down further by being churned around and other chemicals are added. The food passes into the small intestine. Here nutrients are removed from the food and leave the digestive system to be used elsewhere in the body. The rest of the food then passes into the large intestine. Here the water is removed for use elsewhere in the body. What is left is then stored in the rectum until it leaves the body through the anus when you go to the toilet. Humans have four types of teeth - incisors for cutting, canines for tearing, molars and premolars for grinding (chewing). Living things can be classified as producers, predators and prey according to their place in the food chain.	Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, vertebrates, endoskeleton, exoskeleton invertebrates muscles, support, protect, skull, ribs, spine, joints Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain
	Applying knowledge in familiar related contexts, including a range of enquiries	Classify food in a range of ways Use food labels to explore the nutritional content of a range of food items Plan a meal to contain a good balance of nutrients Use secondary sources to research the parts and functions of the skeleton Investigate pattern seeking questions such as • Can people with longer legs run faster? • Can people with bigger hands catch a ball better? Compare, contrast and classify skeletons of different animals Research the function of the parts of the digestive system Create a model of the digestive system using household objects Explore eating different types of food, to identify which teeth are being used for cutting, tearing and grinding Classify animals as herbivores, carnivores or omnivores according to the type of teeth they have in their skulls Use food chains to identify producers, predators and prey within a habitat Use secondary sources to identify animals in a habitat and find out what they eat	

Session sequence – Animals including humans

Session	Key learning	Activity
1	Living things can be identified through 7 life processes – MRS GREN (movement, respiration, sensitivity, growth, reproduction, excretion, nutrition)	Sort and categorise living and non-living based on the 7 functions.
2	Animals unlike plants (photosynthesis) cannot make their own food and need a balanced diet.	Research food groups and design a balanced meal for a healthy body.
3	Animals have skeletons – vertebrates have a back bone and invertebrates do not. Vertebrates have an endoskeleton, invertebrates either have an exoskeleton or a hydrostatic skeleton)	Animal skeleton sort – sort by type of skeleton –add in pros and cons for each type.
4	Names and functions of bones in a human – protection and support	Body parts orienteering – collect the bones and make a complete skeleton then add name and function labels – in mixed groups.
5	Muscles help our bodies move as they are attached to our bones via contracting and relaxing.	Complete some exercises and identify the muscles used. Make a model of an arm using card and elastic bands – explain how it works.
6	Identify the different types of teeth and their functions in humans – molar, incisor, canine, pre-molar and their functions	Find and label different types of teeth in humans, how are these different to animals? And does their diet affect the types of teeth they need?
7 and 8	How to look after our teeth and the effects different liquids have on tooth enamel. Oral hygiene – look at toothpaste, floss, interdental brushes etc – what jobs do these do?	Hard boiled eggs in different liquids investigation – plan, set up and record findings. Which is the best/worst liquid for our teeth? – fresh oj, high sugar cordial, low sugar cordial, cola, coffee (black)
9	Digestion starts when food is broken down in the mouth – the journey of the food through the body.	Child takes a bite of an apple – discuss what they think happens to it. Where does it go? How long does it take? Complete digestive mix up sheet.
10	Process of digestion	In groups make a human digestive system working model. How is it different from what they thought happened?
11	Classification of living things: producer, predator and prey and how the energy is transferred through food chains	Create an interactive food chain flap book and give examples of different food chains.