

Gawber Primary School

Science Small Steps

BIOLOGY	Animals including Humans	Year 4
Science Knowledge End Points:	• 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 other animals have skeletons and muscles for support, protection and movement. • Describe the simple functions of the basic parts of the digestive system in humans • 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.	
Small Steps / Learning Goals:	1) To define the word 'nutrition'. 2) To know that animals, including humans, are unable to make their own food and that they get their nutrition from the food they eat. 3) To know that humans need food from different food groups. 4) To recognise what a balanced diet is and why it is beneficial for a human to eat a balanced diet. 5) To compare the diet of a human with the diet of other animals. 6) To know that humans need different amounts of foods depending on their age, gender, activity level etc. 7) To recognise the effect on the human body that eating too much / too little food than needed has 8) To suggest a healthy / unhealthy meal for a particular human 9) To know that a human has a skeleton and has a basic knowledge of what the skeleton looks like. 10) To know that the skeleton is made up of many separate bones. 11) To know that limbs have more than one bone so that the limb can bend. 12) To know that bones are different shapes and sizes. 13) To know the basic names of some parts of the skeleton, e.g. knee bone, rib, skull, hip bone (pelvis), back bone (spine). 14) To know that many other animals have a skeleton. 15) To name the internal organs that parts of the skeleton protect – skull protects the brain, ribs protect the heart and lungs. 16) To understand that bones can be broken and talk about what an x-ray is. 17) To describe what a human body would be like without a skeleton. 18) To know that muscles are needed in order for us to move parts of our body. 19) To know that muscles are attached to bones 20) To know, in simple terms, what the human digestive system is, e.g. it is the part of the body where food is converted into nutrients that the body needs. 21) To name the main parts of the human digestive system, e.g. mouth, oesophagus, stomach, intestines...etc 22) To describe the journey food and drink takes through the human body using the names of the body parts, e.g. teeth chew the food, stomach breaks down the food, intestines absorb nutrients. 23) To know approximately whereabouts in the human body the digestive system is. 24) To name the three main types of teeth in humans and explain their function, e.g. molars for crushing, chewing and grinding food; canines for cutting / ripping food; incisors for biting through food.	

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	25) To identify which teeth are which (molars, canines and incisors) when looking in own mouth, someone else's mouth or at a model of teeth. 26) To know how to look after own teeth and why it is important to do so. 27) To explain what a food chain is. 28) To know that some animals eat plants (herbivore), some animals eat meat (carnivore) and some eat both (omnivore). 29) To recognise and name some common animals that have plants as their food source, e.g. cows, sheep, horses. 30) To recognise and name some common animals that have animals as their food source, a cat, an insect eating bird 31) To recognise and name some common animals that have both plants and animals as their food source, e.g. humans 32) To know that an animal that eats another animal is a predator. 33) To know that an animal eaten by another animal is the prey. 34) To know that a food chain always starts with a plant (a producer). 35) To understand that the arrow in a food chain means 'is eaten by' and that this also means 'gives energy to'. 36) To place plants and animals in the correct order to make a food chain, e.g. rose bush, greenfly, bird. 37) To Know about Adelle Davis and the Science she studied and some discoveries she made	
Key Vocabulary:	Function, food and nutrition, food groups and diet. Skeleton, support, movement, protection, muscle, ligament, tendon, vertebrate and invertebrate. Digestive system, mouth, tongue, teeth, oesophagus, stomach, small intestine, large intestine, anus. Teeth, incisor, canine, molar, jaw, enamel. Food chains, producers, predators, prey, predator, herbivore, carnivore.	
Enquiry Skills:	Ideas for each Enquiry Type: Comparative and Fair tests: How does the angle that your elbow / knee is bent affect the circumference of your upper arm / thigh? How does the skull circumference of a girl compare with that of a boy? In our class, are omnivores taller than vegetarians? Identify and Classify: How do the skeletons of different animals compare? What are the names for all the organs involved in the digestive system? How can we organise teeth into groups? Observation over time: How does our skeleton change over time? (From birth to death) How does an egg shell change when it is left in cola? Pattern Seeking: Do male humans have larger skulls than females? Are foods that are high in energy always high in sugar? Research: Why do different types of vitamins keep us healthy and which foods can we find them in? How do dentists fix broken teeth?	Working Scientifically • To identify and group animals with and without skeletons and observe and compare their movement. • To explore ideas about what would happen if humans did not have skeletons. • To compare and contrast the diets of different animals (including their pets) and decide ways of grouping them according to what they eat. • To research different food groups and how they keep us healthy and design meals based on what they find out. • To compare the teeth of carnivores and herbivores and suggest reasons for the differences. • To make own digestive system • To make teeth out of playdough