Science Knowledge and Skills Overview – Year Animals inc Humans



National Curriculum Objectives	Sticky Knowledge	Key Vocabulary
 Pupils should be taught to 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. Pupils should be taught to identify that humans and some animals have skeletons and muscles for support, protection and movement. 	 Humans get their nutrition from what they eat. There are five food groups: fruit and vegetables, carbohydrates and starches, dairy, protein and sugars and fats. Nutrition involves drinking enough water and eating a balanced diet, including the right amount of items from the five food groups. Our bodies need a balanced diet to work properly. The human skeleton is made up of bone and grows as we grow. Our skull protects our brain and our ribs protect our heart and lungs. The ribcage is made up of curved bones and is found in the chest area. The spine is also known as your back bone. It is a strong, flexible column of ring-like bones that runs from your skull to your pelvis. The pelvis is a bony, cradle shaped structure located at the base of the spine. The body has many bones and these are connected through joints. Joints allow the body to make movements. Muscles are attached to bones by tendons and help the bones to move. Animals can be grouped according to their skeleton type. * Teaching point – assess understanding of and recap knowledge of the seven processes of living things (MRS GREN). 	Nutrition, fruit and vegetables, carbohydrates and starches, dairy, protein and sugars and fats, balanced diet, skeleton, bones, skull, ribcage, pelvis, spine, back-bone, chest, joints, muscles, tendons, protection, support, movement, exoskeleton, endoskeleton, hydroskeleton, movement, respiration, sensitivity, growth, reproduction, excretion
Links to NHFS core curriculum themes	Key Questions	Key Scientists
Sustainability – Growing your own fruit and vegetables and how this impacts the planet Aspirations – Looking after our bodies to support a healthy mind and life choices Equality – Paralympian sporting achievements	Why do we need a skeleton? What types of skeletons are there? Are all skeletons the same? Can something survive without a skeleton? What happens if we break a bone? How do we move? Are bones that are bigger, stronger? Why do we need joints? Why do muscles get tired? Can we 'break' muscles?	Stephen Hales (Botanist) Anna Atkins (Botanist & Photographer)
Prior Learning	Future Learning	Big Question
 In Year 2 children should: Know that animals, including humans, have offspring which grow into adults. Know the basic stages in a life cycle for animals, including humans. Find out 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. 	 In Year 4 children will: 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. 	Why do animals have skeletons? What is a healthy diet and why is it important?

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