St James' Church of England Primary School
Key Learning in Science - Animals

Key Learning: Animals, including Humans		
Key Learning	**Notes and Guidance (Non-statutory)**	**Working Scientifically Featured Skill**
Pupils should be taught to: **KS1: Year 1: Part 1 – Animals, Including Humans Humans** ▪ **Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.** ▫ Recognise that humans are animals. ▫ Compare and describe differences in their own features (eye, hair, skin colour, etc.). ▫ Recognise that humans have many similarities.	**KS1: Year 1** Pupils should have plenty of opportunities to learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes.	Pupils might work scientifically by: **KS1: Year 1** • Using their observations to compare and contrast animals [humans] at first hand or through videos and photographs. • Using their senses to compare different textures, sounds and smells.
Year 1: Part 2 - Animals, Including Humans Other Animals ▪ **Identify and name a variety of common animals including fish, amphibians, reptiles, birds 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 (fish, amphibians, reptiles, birds and mammals, and including pets).** ▫ Find out and describe how animals look different to one another. ▫ Group together animals according to their different features ▫ Recognise similarities between animals: Structure: head, body, way of moving, senses, body covering, tail.	**Year 1** *Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study. Pupils should become familiar with the common names of fish, amphibians, reptiles, birds and mammals, including those that are kept as pets.*	**Year 1** • *Using their observations to compare and contrast animals at first hand or through videos and photographs.* • *Describing how they identify and group them..* • *Grouping animals according to what they eat.* • *Using their senses.*

▫ Animals have senses to explore the world around them and to help them to survive. ▫ Recognise that animals need to be treated with care and sensitivity to keep them alive and healthy. ▫ Animals are alive; they **move**, **feed**, grow, use their **senses** and reproduce.		
Year 2: Animals **Survival and growth** This unit could be done at the same time as **'Environment'** unit on **'Living Things and their Habitats'** ▪ **Notice that animals, have offspring which grow into adults.** ▪ **Find out about and describe the basic needs of animals, for survival (water, food and air).** **See also 'Health'** unit on **'How we grow and stay healthy'** for 'humans' link.	**Year 2** *Pupils should be introduced to the basic needs of animals for survival.* *They should also be introduced to the process of reproduction and growth in animals. The focus at this stage should be on questions that help pupils to recognise growth; they should not be expected to understand how reproduction occurs. The following examples might be used: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb.*	**Year 2** • *observing, through video or first-hand observation and measurement, how different animals grow;* • *asking questions about what things animals need for survival suggesting ways to find answers to their questions.*
Key Learning (continued)	Notes and Guidance (continued) (Non-statutory)	Working Scientifically (continued) Featured Skill
LKS2: Year 3: Animals, Including Humans **Humans – Skeletons and Movement** ▪ **Identify that humans and some other animals have skeletons and muscles for support, protection and movement.** ▫ Identify animals (vertebrates) which have a skeleton which supports their body, aids movement & protects vital organs (be able to name some of the vital organs). ▫ Identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to	**LKS2: Year 3** *Pupils should be introduced to the main body parts associated with the skeleton and muscles, finding out how different parts of the body have special functions.*	**LKS2 : Year 3** • *Identifying and grouping animals with and without skeletons.* • *Observing and comparing their movement; exploring ideas about what would happen if humans did not have skeletons.* *Could possibly link to some PE and Health related aspect during this unit as no other health units are covered in the NC2014 Statutory Yr3 Curriculum.* ○ *Researching how our bodies move and what our bodies can do and*

support themselves, move and protect their vital organs. ▫ Know how the skeletons of birds, mammals, fish, amphibians or reptiles are similar (backbone, ribs, skull, bones used for movement) and the differences in their skeletons. ▫ Know that muscles, which are attached to the skeleton, help animals move parts of their body. ▫ Explore how humans grow bigger as they reach maturity by making comparisons linked to body proportions and skeleton growth – e.g. do people with longer legs have longer arm spans? Is the size of our head related to our height, etc. ▫ Recognise that animals are alive; they **move**, feed, **grow**, use their senses and reproduce.		*researching different exercises/sports/pastimes and how they can work different parts of our bodies and different muscle groups.*
LKS2: Year 4 – Animals, Including Humans **Humans – Teeth and Digestion** ▪ **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 (NB: this point can be taught during the year 4 unit linked to environment).** ▫ Describe how teeth and gums have to be cared for in order to keep them healthy.	**LKS2: Year 4 - Animals, including humans** *Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them understand their special functions.*	**LKS2: Year 4** • *Comparing the teeth of carnivores and herbivores.* • *Suggesting reasons for differences.* • *Finding out what damages teeth and how to look after them.* • *Drawing and discussing their ideas about the digestive system and comparing them with models or images.*

Key Learning (continued)	Notes and Guidance (continued) (Non-statutory)	Working Scientifically (continued) Featured Skill
UKS2: Year 5: Human Life cycles (incl. reproduction) (See also the unit 'ENVIRONMENT: Habitats and Life Cycles' as these can be taught alongside one another) ▪ **Describe the changes as humans develop to old age.** ▫ Animals are alive; they move, feed, grow, use their senses, **reproduce**, breathe/respire and excrete.	**UKS2: Year 5** *Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.* *(This should be linked with the school's PSHEE policy and scheme of work)*	**UKS2: Year 5** • *Researching the gestation periods other animals and comparing them with humans.* • *Finding out and recording the length and mass of a baby as it grows.*
UKS2: Year 6: Animals, Including Humans Circulatory System and Exercise ▪ **Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.** ▪ **Recognise the impact of exercise on the way their bodies function.** ▪ **Describe the ways in which nutrients and water are transported within animals, including humans.** ▫ The heart is a major organ and is made of muscle. ▫ The heart pumps blood around the body through vessels and this can be felt as a pulse. ▫ The heart pumps blood through the lungs in order to obtain a supply of oxygen ▫ Blood carries oxygen and other essential materials to different parts of the body. ▫ During exercise muscles need more oxygen so the heart beats faster and our breathing and pulse rates increase.	**UKS2: Year 6** *Pupils should build on their learning from years 3 and 4 about the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function.*	**UKS2: Year 6** • *Exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.* Additional suggestions beyond NC2014 to support pupils working scientifically and to provide an opportunity to use ICT to collect and interpret data ○ *Observing/measuring changes to breathing, heart beat and or pulse rates after exercise*

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Key

- ▪ Solid Square Bullet Points (plus **bold text)** – NC2014 statutory requirements for Knowledge and Conceptual Understanding
- ▫ Hollow Square Bullet Point – Suggested additional learning to consider from Lancashire
- • Solid Round Bullet Points – NC2014 non-statutory 'Working Scientifically' suggestions
- ○ Hollow Round Bullet Point – Further suggestions for 'Working Scientifically' opportunities

Green Text – Used to highlight the suggested 'Working Scientifically' skill or enquiry to focus on

Blue Text – Used to highlight non-statutory opportunities for studying a famous scientist (past or present)