Subject: Science (Animals including humans)

Year Group	What knowledge would we like to know?	What skills would we like to know?	How else could we challenge the pupils?	Vocabulary
R				
Y1	• 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, including pets) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	• Ask simple questions and recognise that they can be answered in different ways • Use simple equipment to observe closely • Perform simple tests • Identify and classify • Use his/her observations and ideas to suggest answers to questions • Gather and record data to help in answering questions	Name and locate parts of the human body, including those related to the senses, and describe the importance of exercise, balanced diet and hygiene for humans. Describe the basic needs of animals for survival and the main changes as young animals, including humans, grow into adults. Identify whether things are alive, dead or have never lived describe and compare the observable	**Y1** head body skeleton limb joint brain eyelash eyesight pupil sound ear sign language vibration deafness tongue mouth taste flavour sweet touch fingertips skin organ smell odour nose nostril nose hair
Y2	• Understand that animals, including humans, have offspring which grow into adults	• Ask simple questions and recognise that they can be answered in different ways		**Y2** life cycle grow survive independent adult

	• 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	including use of scientific language from the national curriculum • Use simple equipment to observe closely including changes over time • Perform simple comparative tests • Identify, group and classify • Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns • Gather and record data to help in answering questions including from secondary sources of information	features of animals from a range of groups. Group animals according to what they eat, describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships.	foetus womb helpless toddler develop offspring inherit gene resemble differences reproduction hatchling chick bar chart predict caterpillar transformation larva chrysalis metamorphosis frog amphibian frogspawn tadpole froglet
Y3	• 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	• Ask relevant questions and use different types of scientific enquiries to answer them • Set up simple practical enquiries, comparative and fair tests • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Name, locate and describe the functions of the main parts of the digestive, musculoskeletal, and circulatory systems, and can describe and compare different reproductive processes and life cycles, in animals. Describe the effects of diet, exercise, drugs and lifestyle on how their bodies function. Name, locate and describe the functions of the main	**Y3** nutrition carbohydrate protein vitamin mineral nutrition label portion energy balanced diet vertebrate invertebrate endoskeleton exoskeleton hydrostatic skeleton humerus ulna radius tibia fibular endoskeleton vertebrate skull rib cage spine muscle contract hamstrings biceps diaphragm

		• Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • Identify differences, similarities or changes related to simple scientific ideas and processes • Use straightforward scientific evidence to answer questions or to support his/her findings	parts of plants, including those involved in reproduction and transporting water and nutrients. Use the observable features of plants, animals and micro-organisms to group, classify and identify them into broad groups, using keys or in other ways. Construct and interpret food chains. Explain how environmental changes may have an impact on living things. Use the basic ideas of inheritance, variation and adaptation to describe how living things have changed over time and evolved; and describe how fossils	
Y4	• 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	• Ask relevant questions and use different types of scientific enquiries to answer them • Set up simple practical enquiries, comparative and fair tests • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions		**Y4** digestive system oesophagus stomach small intestine large intestine saliva peristalsis absorbs liver gall bladder incisors canines molars jaw gum enamel plaque tooth decay cavity fluoride ecosystem producer consumer prey predator food web tundra hide interdependence threatened

		• Identify differences, similarities or changes related to simple scientific ideas and processes • Use straightforward scientific evidence to answer questions or to support his/her findings	are formed and provide evidence for evolution.	
Y5	• Describe the changes as humans develop to old age	• Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Use test results to make predictions to set up further comparative and fair tests • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • Identify scientific evidence that has been used to support or refute ideas or arguments		**Y5** foetus dependent adolescent puberty reproduce gestation pregnant duration extreme breeding womb umbilical chord embryo trimester midwife growth spurt childhood motor skills milk teeth constant adolescence puberty hormones mood swing develop lifestyle keratin elasticity cataracts neurodegenerative
Y6	• Identify and name the main parts of the human circulatory system, and describe the	• Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary		**Y6** circulatory system atrium ventricle vessel

	functions of the heart, blood vessels and blood • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Describe the ways in which nutrients and water are transported within animals, including humans	• Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Use test results to make predictions to set up further comparative and fair tests • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • Describe and evaluate their own and other people's scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources • Group and classify things and recognise patterns		valves vessel artery vein capillary microscope blood plasma platelet white blood cell red blood cell absorb diffusion osmosis concentration nutrients diet exercise heart rate BPM pulse drug painkiller stimulant depressant hallucinogens