**Science- progression**

**Animals including humans**

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| Reception: * Comments and asks questions about aspects of their familiar world such as the natural world.
* Can talk about some of the things they have observed such as animals, plants, natural and found objects.
* Talks about why things happen and how things work.
* Developing an understanding of growth, decay and changes over time.
* Shows care and concern for living things and the environment.
* Looks closely at similarities, differences, patterns and change.
* **ELG: Children know about the similarities and differences in relation to places, objects, materials and living things. They talk about the features of the own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.**
* ***Practical exploration of the senses based around what children notice, feel and observe through; accessing indoor and outdoor learning environments (e.g. sensory garden; provision of varied materials, substances and textures for exploration e.g. tough spots, mud kitchen, sand pit, water play; focused learning activities such as food tasting).***
* ***Daily discussions - What can you see/hear/smell? What do you notice today? What does this feel like?***
* ***Focussed learning to introduce key vocabulary linked to body parts – Lucinda and Godfrey.***
* ***Learning and discussion linked topics/activities e.g. under the sea, minibeasts, arctic animals, dinosaurs. Introduction of some specific vocabulary e.g. reptile, carnivore, herbivore and some animal body parts.***
* ***Learning and discussion linked topics/activities which introduces children to healthy living including healthy and unhealthy food and snacks and the importance of staying active and exercise.***
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| Year 1: * **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**

**Working Scientifically*** identifying and classifying
* using their observations and ideas to suggest answers to questions

**Link to Teacher Assessment Framework*** 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 and compare the observable 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

Recap – * Body parts (animals/human – **reinforce Lucinda and Godfrey**)
* Animal names and types (e.g. arctic, dinosaur, sealife, minibeasts)
* key questions – how can we stay healthy? What are healthy foods?

**Vocabulary**: Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Omnivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak**Working scientifically vocabulary**: question, answer, sort, group, compare, describe |
| Year 2:* **notice that animals, including humans, have offspring which grow into adults**
* **find out about 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**

W**orking Scientifically*** using their observations and ideas to suggest answers to questions

**Link to Teacher Assessment Framework*** 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
* 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

Recap:* identify and name common animals (see Y1 vocabulary)
* body parts of common animals and humans
* human senses

**Vocabulary**: Survival, Water, Air, Food, Adult, Baby, Offspring, Kitten, Calf, Puppy, Exercise, Hygiene**Working scientifically vocabulary**: identify, classify, contrast, biology |
| Year 3:* **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**

**Working Scientifically*** asking relevant questions and using different types of scientific enquiries to answer them
* setting up simple practical enquiries and fair tests
* recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
* using results to draw simple conclusions.

**Link to Teacher Assessment Framework*** 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 body functions.

Recap:* human and animal offspring
* basic human and animal needs – exercise, food, hygiene.

**Vocabulary:** Movement, Muscles, Bones, Skull, Nutrition, Skeletons**Working scientifically vocabulary**: observation, fair test, accurate measurements, data, record (drawings, labelled diagrams, keys, bar charts, tables), explanation, differences, similarities, changes |
| Year4:* **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**

**Working Scientifically*** asking relevant questions and using different types of scientific enquiries to answer them
* setting up simple practical enquiries and fair tests
* recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
* reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
* using results to draw simple conclusions,
* using results to make predictions for new values, suggest improvements and raise further questions
* identifying differences, similarities or changes related to simple scientific ideas and processes
* using straightforward scientific evidence to answer questions or to support their findings.

**Link to Teacher Assessment Framework*** 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.
* Construct and interpret food chains.

Recap:* nutrition – animal and human diet
* skeletons and muscles – movement and protection

**Vocabulary**: Mouth, Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine, Herbivore, Carnivore, Canine, Incisor, Molar**Working scientifically vocabulary**: relevant questions, scientific enquiry,  |
| Year 5: * describe the changes as humans develop to old age

Recap:* digestive system
* teeth and their functions
* food chains – producers/predators/prey

**Vocabulary**: Foetus, Embryo, Womb, Gestation, Baby, Toddler, Teenager, Elderly, Growth, Development, Puberty**Working scientifically vocabulary**: identify, classify and describe |
| Year 6: * **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 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

**Working scientifically:*** recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
* using test results to make predictions to set up further comparative and fair tests
* reporting and presenting 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
* identifying scientific evidence that has been used to support or refute ideas or arguments.

**Link to Teacher Assessment Framework*** 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 body functions.

Recap:* human aging process

**Vocabulary**: Circulatory, Heart, Blood Vessels, Veins, Arteries, Oxygenated, Deoxygenated, Valve, Exercise, Respiration**Working scientifically vocabulary:** record data (scientific diagrams. labels, classification keys, tables, scatter graphs, bar graph and line graph), predictions, report and present (conclusions, casual relationships, explanations, degree of trust, oral and written display and presentation), evidence (support, refute ideas or arguments) |