

SCIENCE PROGRESSION (BIOLOGY ELEMENTS) – SKILLS AND CONTENTS AT TOLLERTON SCHOOL

Area of Biology	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Working Scientifically</p>	<ul style="list-style-type: none"> *asking simple questions and recognising that they can be answered in different ways *observing closely, using simple equipment *performing simple tests *identifying and classifying *using their observations and ideas to suggest answers to questions *gathering and recording data to help in answering questions. 		<ul style="list-style-type: none"> *asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests *making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers *gathering, recording, classifying and presenting data in a variety of ways to help in answering questions *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, 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. 		<ul style="list-style-type: none"> *planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary *taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate *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 	
<p>Animals, including Human</p>	<ul style="list-style-type: none"> *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. 	<ul style="list-style-type: none"> *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. 	<ul style="list-style-type: none"> *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. 	<ul style="list-style-type: none"> *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. 	<ul style="list-style-type: none"> *describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> *Identify and name the main parts of the 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

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<p>Plants</p>	<p>*identify and name a variety of common wild and garden plants, including deciduous and evergreen trees *identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>*observe and describe how seeds and bulbs grow into mature plants *find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>*identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. *explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant *investigate the way in which water is transported within plants *explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>			
<p>Living Things and Habitats (Includes Year 6 Evolution and Inheritance)</p>		<p>*explore and compare the differences between things that are living, dead, and things that have never been alive *identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other *identify and name a variety of plants and animals in their habitats, including micro-habitats *describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>		<p>*recognise that living things can be grouped in a variety of ways *explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment *recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>*describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird *describe the life process of reproduction in some plants and animals.</p>	<p>*describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals *give reasons for classifying plants and animals based on specific characteristics. *recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago *recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents *identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>

