Lower Peover C of E Primary School

Progression in Science under the 2014 National Curriculum

Biology

Life Processes & Living Things	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
Key Questions:	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
1) Living things can be classified according to observable features	• Can they sort some plants by size? • Can they sort some animals by body covering, e.g. scales, fur and skin?	• Can they sort living things into groups and say why they sorted them in that way? • Can they compare how plants grow in different conditions by making measurements? • Can they identify and compare a variety of plants and animals found in different habitats and microhabitats? • Can they collect weather data about a local habitat and use it to explain the plants and animals they will find there? • Can they explain how animals get their food and draw a simple food chain?		• Can they recognise that living things can be grouped in a variety of ways • Can they explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • Can they compare the classification of common plants and animals to living things found in other places? (under the sea, prehistoric) • Can they name and group a variety of living things based on feeding patterns? (producer, consumer, predator, prey, herbivore, carnivore, omnivore)		• Can they 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? • Can they give reasons for classifying plants and animals based on specific characteristics? • Can they sub divide their original groupings and explain their divisions? • Can they group animals into vertebrates and invertebrates?

Challenges	• Can they sort some plants by those that can be eaten and those that cannot? • Can they sort some animals on a simple branching diagram with features such as meat eaters and non-meat eaters; swim and cannot swim?	• Can they classify living things into groups according to a range of criteria they have been given?		• Can they explore the work of pioneers in classification? (e.g. Carl Linnaeus)		• Can they explain why classification is important? • Can they readily group animals into reptiles, fish, amphibians, birds and mammals?
2) Habitats provide living things with what they need		• Can they 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? • Can they identify and name a variety of plants and animals in their habitats, including micro-habitats? • Can they 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? • Can they find out and describe how plants need water, light and a suitable temperature to grow and stay healthy?	• Can they 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?	• Can they recognise that environments can change and that this can sometimes pose dangers to living things?		

		• Can they match certain living things to the habitats they are found in? • Can they explain the differences between living and non-living things? • Can they describe some of the life processes common to plants and animals, including humans? • Can they decide whether something is living, dead or non- living?				
Challenges		• Can they name some characteristics of an animal that help it to live in a particular habitat? • Can they describe what animals need to survive and link this to their habitats?		• Can they give reasons for how they have classified animals and plants, using their characteristics and how they are suited to their environment?		

3) Living things exhibit variation and adaptation and these may lead to evolution	• Can they describe how an animal is suited to its environment?					• Can they recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago? • Can they recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents? • Can they identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution? • Can they explain the process of evolution and describe the evidence for this? • Can they talk about the life of Charles Darwin?
Challenges						• Can they explain how some living things adapt to survive in extreme conditions? • Can they analyse the advantages and disadvantages of specific adaptations, such as being on two rather than four feet? • Can they begin to understand what is meant by DNA?

4a) Life exists in a variety of forms and goes through cycles – Plants	• Can they identify and name a variety of common wild and garden plants, including deciduous and evergreen trees? • Can they identify and describe the basic structure of a variety of common flowering plants, including trees? • Can they explore and compare the differences between things that are living, dead, and things that have never been alive?	• Can they observe and describe how seeds and bulbs grow into mature plants? • Can they describe what plants need to grow, stay and survive? • Can they explain that plants grow and reproduce?	• Can they identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers? • Can they investigate the way in which water is transported within plants? • Can they explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal?		• Can they describe the life cycles of common plants? • Can they describe and explain the process of respiration in humans and plants? • Can they talk with knowledge about birth, reproduction and death of familiar animals or plants?	
Challenges	• Can they name the main parts of a flowering plant?	• Can they describe what plants need to survive and link it to where they are found? • Can they explain that plants grow and reproduce in different ways?	• Can they classify a range of common plants according to many criteria (environment found, size, climate required, etc.)? • Can they explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and speed dispersal?		• Can they observe their local environment and draw conclusions about life-cycles? (for example, the vegetable garden or plants in a shrubbery) • Can they compare the life cycles of plants and animals in their local environment with the life cycles of those around the world, e.g. rainforests?	

4b) Life exists in a variety of forms and goes through cycles – Animals	• Can they identify, name and classify a variety of common animals including fish, amphibians, reptiles, birds, mammals and invertebrates? • Can they identify, name and classify a variety of common animals that are carnivores, herbivores and omnivores? •Can they compare the differences between different animals? • Can they sort photographs of living things and non-living things? • Can they describe how an animal is suited to its environment?	• Can they notice that animals, including humans, have offspring which grow into adults and have offspring of their own? • Can they find out about and describe the basic needs of animals, including humans, for survival (water, food and air)? • Can they explain why animals have offspring? • Can they describe the life cycle of some living things? (e.g. egg, chick, chicken) • Can they describe why exercise and a balanced diet are important for humans?	• Can they 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 – a nutritious balanced diet • Can they describe how nutrients, water and oxygen are transported within animals and humans?		• Can they describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird, a common plant? • Can they describe the changes as humans develop to old age?	
Challenges	• Can they point out differences between living things and non-living things? • Can they name a range of wild animals?	• Can they explain that animals reproduce in different ways?	• Can they classify living things and non-living things by a number of characteristics that they have thought of? • Can they explain how people, weather and the environment can affect living things? • Can they explain how certain living things depend on one another to survive?		• Can they create a timeline to indicate stages of growth in certain animals, such as frogs and butterflies?	

5) The human body has a number of systems, each with its own function	• Can they describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)? • Can they identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense?	• Can they describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene?	• Can they describe and explain the skeletal system of a human? • Can they describe and explain the muscular system of a human?	• Can they describe the simple functions of the basic parts of the digestive system in humans? • Can they identify the different types of teeth in humans and their simple functions? • Can they construct and interpret a variety of food chains, identifying producers, predators and prey?	• Can they describe the life process of reproduction in some plants and animals? • Can they explain what puberty is?	• Can they identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood? • Can they recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function? • Can they describe the ways in which nutrients and water are transported within animals, including human? • Can they identify and explain the function of the organs of the human gaseous exchange system? (lungs, nose, throat, bronchi, bronchial tubes, diaphragm, ribs, breathing) • Can they name the major organs in the human body? • Can they locate the major human organs? • Can they make a diagram that outline the main parts of a body?

Challenges	• Can they name some parts of the human body that cannot be seen?		• Can they explain how the muscular and skeletal systems work together to create movement?	• Can they classify living things and non-living things by a number of characteristics that they have thought of? • Can they explain how people, weather and the environment can affect living things? • Can they explain how certain living things depend on one another to survive?		• Can they explore the work of medical pioneers, for example, William Harvey and Galen and recognise how much we have learnt about our bodies? • Can they compare the organ systems of humans to other animals? • Can they make a diagram of the human body and explain how different parts work and depend on one another?