Bowesfield Primary - Science End of Key Stage Expectations - Key Stage One and Two

Key Stage One
Working scientifically. The pupil can, using appropriate scientific language from the national curriculum:

- ask their own questions about what they notice
- use different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions:
- observing changes over time
- noticing patterns
- grouping and classifying things
- carrying out simple comparative tests
- finding things out using secondary sources of information
- communicate their ideas, what they do and what they find out in a variety of ways

Science content
The pupil can:
Year 1

- name and locate parts of the human body, including those related to the senses.
- describe and compare the observable features of animals from a range of groups
- group animals according to what they eat
- describe seasonal changes
- distinguish objects from materials, describe their properties, identify and group everyday materials

Year 2

- describe the importance of exercise, a 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.
- describe the basic needs of plants for survival and the impact of changing these and the main changes as seeds and bulbs grow into mature plants.
- identify whether things are alive, dead or have never lived.
- describe how animals get their food from other animals and/or from plants, and use simple food chains to describe these relationships.
- name different plants and animals and describe how they are suited to different habitats
- distinguish objects from materials, describe their properties, identify and group everyday materials and compare their suitability for different uses

Key Stage Two
Working Scientifically. The pupil can, using appropriate scientific language from the national curriculum:

- describe and evaluate their own and others' scientific ideas related to topics in the national curriculum (including ideas that have changed over time).
- use evidence from a range of sources.
- ask their own questions about the scientific phenomena that they are studying, and select the most appropriate ways to answer these questions, recognising and controlling variables where necessary (i.e. observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests, and finding things out using a wide range of secondary sources)
- use a range of scientific equipment to take accurate and precise measurements or readings, with repeat readings where appropriate.
- record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways.
- raise further questions that could be investigated, based on their data and observations

Science Content
The pupil can:
Year 3

- name and describe the functions of the main parts of the digestive musculoskeletal
- name, locate and describe the functions of the main parts of plants and discuss how water is transported water and nutrients
- understand how light is formed
- describe the requirements plants need for life and growth
- describe how fossils are formed
- identify and group rocks
- describe the effects of simple forces that involve contact that act at a distance (magnetic forces, including those between like and unlike magnetic poles)

Year 4

- name and describe the functions of the main parts of the digestive system
- construct and interpret food chains
- understand and explain how environmental changes may have an impact on living things
- describe the relationship between the pitch of a sound and the features of its source; and between the volume of a sound, the strength of the vibrations and the distance from its source.
- describe the characteristics of different states of matter and group materials on this basis; and describe how materials change state at different temperatures, using this to explain everyday phenomena, including the water cycle
- use the idea that sounds are associated with vibrations, and that they require a medium to travel through, to explain how sounds are made and heard

Year 5

- describe and compare different reproductive processes and life cycles in animals
- name, locate and describe the functions of the main parts of plants, including those involved in reproduction
- group and identify materials, in different ways according to their properties, based on first-hand observation; and justify the use of different everyday materials for different uses, based on their properties
- identify and describe what happens when dissolving occurs in everyday situations; and describe how to separate mixtures and solutions into their components
- describe the effects of simple forces that involve contact (air and water resistance, friction) and gravity
- identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force
- identify, with reasons, whether changes in materials are reversible or not
- describe the shapes and relative movements of the Sun, Moon, Earth and other planets in the solar system; and explain the apparent movement of the sun across the sky in terms of the Earth's rotation and that this results in day and night

Year 6

- name and describe the functions of the main parts of the digestive and circulatory systems
- describe the effects of diet, exercise, drugs and lifestyle on how the body functions
- use the observable features of plants, animals and micro-organisms to group, classify and identify them into broad groups, using keys or other methods
- use the basic ideas of inheritance, variation and adaptation to describe how living things have changed over time and evolved
- provide evidence for evolution
- use the idea that light from light sources, or reflected light, travels in straight lines and enters our eyes to explain how we see objects
- use simple apparatus to construct and control a series circuit, and describe how the circuit may be affected when changes are made to it; and use recognised symbols to represent simple series circuit diagrams