Swalwell Primary School

End of Year Group Expectations

End of KS1

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:

• name and locate parts of the human body, including those related to the senses [year 1], and 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 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

• describe seasonal changes

• 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.

Year 1

Year 2

End of LKS2

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
- ask their own questions about the scientific phenomena that they are studying, and select the most appropriate ways to answer these questions
- record data and results using scientific diagrams and labels, classification keys, tables, bar and line graphs
- draw conclusions, explain and evaluate their methods and findings

Science content

The pupil can:

- name and describe the functions of the main parts of the digestive and musculoskeletal systems
- name, locate and describe the functions of the main parts of plants, including those involved in transporting water and nutrients
- construct and interpret food chains
- describe the requirements of plants for life and growth; and explain how environmental changes may have an impact on living things
- describe how fossils are formed
- group and identify rocks in different ways according to their properties, based on first-hand observation
- 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 light from light sources, or reflected light, travels in straight lines and the formation and size of shadows
- 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
- 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 effects of simple forces and their relationships (magnetic forces, including those between like and unlike magnetic poles)

Year 3 Year 4

End of UKS2

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), using 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:

- name and describe the functions of the main parts of the circulatory systems and describe and compare different reproductive processes and life cycles in animals
- describe the effects of diet, exercise, drugs and lifestyle on how the body functions
- name, locate and describe the functions of the main parts of plants, including those involved in reproduction
- 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 and provide evidence for evolution

• 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
• identify, with reasons, whether changes in materials are reversible or not
• 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 and the formation shape and size of shadows
• describe the effects of simple forces that involve contact (air and water resistance, friction) that act at a distance and gravity
• identify simple mechanisms, including levers, gears and pulleys, that increase the effect of a force
• 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
• 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 5
Year 6