



# Kexborough Primary School : Curriculum Planning

## Science : Year 1

The principal focus of science teaching in Key Stage 1 is to enable pupils to **experience** and **observe phenomena**, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to **be curious** and **ask questions** about what they **notice**. They should be helped to **develop their understanding of scientific ideas** by using **different types of scientific enquiry** to **answer their own questions**, including **observing changes** over a period of time, **noticing patterns**, **grouping** and **classifying** things, carrying out **simple comparative tests**, and **finding things out** using **secondary sources** of information. They should begin to use **simple scientific language** to talk about what they have **found out** and **communicate their ideas** to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of **first-hand practical experiences**, but there should also be some use of **appropriate secondary sources**, such as books, photographs and videos. **'Working scientifically' is described separately in the programme of study, but must always be taught through and clearly related to the teaching of substantive science content in the programme of study.** Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Pupils should **read and spell scientific vocabulary** at a level consistent with their increasing word reading and spelling knowledge at key stage 1

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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.

### SCIENTIFIC SKILLS

Planning, Communication and Sources	Enquiring and Testing / Obtaining and Presenting Evidence	Observing and Recording	Considering Evidence and Evaluating
<ol style="list-style-type: none"> <li>1. Draw simple pictures</li> <li>2. Talk about what they see and do</li> <li>3. Use simple charts to communicate findings</li> <li>4. Identify key features</li> <li>5. Ask questions</li> </ol>	<ol style="list-style-type: none"> <li>6. Test ideas suggested to them</li> <li>7. Say what they think will happen</li> <li>8. Use first hand experiences to answer questions</li> <li>9. Begin to compare some living things</li> </ol>	<ol style="list-style-type: none"> <li>10. Make observations using appropriate senses</li> <li>11. Record observations</li> <li>12. Communicate observations orally, in drawing, labelling, simple writing and using ICT</li> </ol>	<ol style="list-style-type: none"> <li>13. Make simple comparisons and groupings</li> <li>14. Say what has happened</li> <li>15. Say whether what has happened was what they expected</li> </ol>

### SCIENTIFIC KNOWLEDGE—PLANTS

National Curriculum—Statutory PoS Substantive Knowledge	Language / Vocabulary Substantive Knowledge	Experiences	Cross curricular / Inter Disciplinary
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	<b>COMMON</b> : wild plants. garden plants, deciduous, evergreen  <b>PLANT</b> : leaf, leaves, root, bud, flower, blossom, petals, stem  <b>TREE</b> : deciduous, evergreen, trunk, branches, leaf, root  Fruit, vegetables, bulb, seed	Understanding how to plant a seed.  Watching and making observations of how a plant grows over time.  Investigating what a plant needs to grow.  Field work around the school grounds by comparing evergreen/deciduous trees and wild and garden plants.  Comparing vegetables and fruit.  Comparing plants throughout the seasons.	Instruction writing  Links with music.

### SCIENTIFIC KNOWLEDGE— ANIMALS INCLUDING HUMANS

National Curriculum—Statutory PoS Substantive Knowledge	Language / Vocabulary Substantive Knowledge	Experiences	Cross curricular / Inter Disciplinary
<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p><b>COMMON ANIMALS:</b> fish, amphibians, reptiles, birds, mammals, pets</p> <p><b>SENSES:</b> tongue— taste; nose—smell; eyes—vision; skin—touch; ears—hearing</p> <p><b>BODY :</b> head, legs, eyes, neck, knees, hair, arms, face, mouth, elbows, ears, teeth</p> <p><b>OMNIVORES :</b> meat and plants, human,</p> <p><b>CARNIVORES :</b> meat eaters, cat, dog, lion, tiger, fox, shark, whale, eagle, hawk, snake, tyrannosaurus rex</p>	<p>Field work using senses to understand what they can taste, smell, see, hear and touch.</p> <p>School trip to look at how different animals live.</p> <p>Comparing different animals based on appearance and where they live.</p>	<p>Animal riddles through writing.</p>

### SCIENTIFIC KNOWLEDGE—EVERYDAY MATERIALS

National Curriculum—Statutory PoS Substantive Knowledge	Language / Vocabulary Substantive Knowledge	Experiences	Cross curricular / Inter Disciplinary
<p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p><b>MATERIALS :</b> wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil</p> <p><b>PROPERTIES:</b> hard / soft; stretchy /stiff; shiny / dull; rough / smooth; bendy / not bendy; waterproof / not waterproof; absorbent / not absorbent</p>	<p>Investigation work: Best material for an umbrella.</p> <p>Feeling different materials and describing what they are like.</p> <p>Comparing materials and understanding that some objects are made with more than one material.</p> <p>Understand that different materials have the same property.</p>	<p>DT: Design, make and evaluate making a boat that floats.</p>

### SCIENTIFIC KNOWLEDGE— SEASONAL CHANGES

National Curriculum—Statutory PoS Substantive Knowledge	Language / Vocabulary Substantive Knowledge	Experiences	Cross curricular / Inter Disciplinary
<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>	<p><b>SEASON :</b> summer, autumn, winter, spring, day, daytime</p> <p><b>WEATHER :</b> wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold</p>	<p>Field work: Using senses to compare seasons.</p> <p>Compare and constant what happens in each season.</p>	<p>Art work</p> <p>Report writing</p>