

## Year 1 Science

ALL TOPICS will be taught using practical scientific methods

### Seasonal Changes

<b>Objectives</b>	<b>Notes and guidance</b>	<b>Activities/Experiments</b>
<p>-Observe the apparent movement of the Sun during the day.</p> <p>-Observe changes across the four seasons.</p> <p>-Observe and describe weather associated with the seasons and how day length varies.</p>	<p>-Pupils should observe and talk about the weather, the seasons and how the Sun seems to move during the day.</p>	<p>-Pupils might work scientifically by: observing and recording the apparent movement of the Sun during the day, for example in a sequence of photographs or moving Teddy so he stays in the sunshine; making tables and charts about the weather and displays of what happens in the world around them, including day length, as the seasons change.</p> <p>- Create a rainstorm; Clear tray of water, put shaving foam on the top and then drip different amounts of blue dye on the top and looks like rain.</p>

## Plants and their environment - Life Cycle

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none"> <li>-Observe and describe how seeds and bulbs grow into mature plants.</li> <li>-Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul>	<ul style="list-style-type: none"> <li>-Pupils will use the local environment throughout the year to observe how plants grow (including seeds, bulbs, fruit and vegetables, deciduous and evergreen bushes and trees). -</li> <li>Introduce the requirements of plants for growth and survival, as well as the process of reproduction and growth in plants.</li> <li><b>Note:</b> Seeds and bulbs need water to grow but do not need light; seeds and bulbs have a store of food inside them.</li> </ul>	<ul style="list-style-type: none"> <li>-Work scientifically by: observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.</li> </ul>

## Materials- Properties

Objectives	Notes and guidance	Activities/Experiments
<ul style="list-style-type: none"> <li>-Distinguish between an object and the material from which it is made.</li> <li>-Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</li> <li>-Describe the simple physical properties of a variety of everyday materials.</li> <li>-Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> <li>-Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> <li>-Pupils will find out about people who have developed useful materials; Dunlop and Brunel. (C/C - History)</li> </ul>	<ul style="list-style-type: none"> <li>-Pupils should explore, name and discuss everyday materials so that they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent. Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil.</li> </ul>	<ul style="list-style-type: none"> <li>-Sort toys based on child's chosen criteria.</li> <li>-What's the best material for a doll's house? Mr Wolf's jumper? Etc</li> <li>-Pupils might work scientifically by: performing simple tests to explore questions such as: 'What is the best material for an umbrella? ... for lining a dog basket? ... for curtains? ... for a bookshelf? ... for a gymnast's leotard?'</li> </ul>

## Animals including Humans- Classifying and Life cycles

Objectives	Notes and guidance	Activities/Experiments
<p>-Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.</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 (birds, fish, amphibians, reptiles, mammals and invertebrates, and including pets).</p> <p>-Notice that animals have offspring that grow into adults</p>	<p>-Pupils should use the local environment throughout the year to study animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study. Pupils should become familiar with the common names of birds, fish, amphibians, reptiles, mammals and invertebrates, including pets.</p> <p>-Pupils should be introduced to the concept and process of growth eg pupa, caterpillar, butterfly; spawn, tadpole, frog</p>	<p>-Pupils might work scientifically by: using their observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them; grouping animals according to what they eat, and using their senses to compare different textures, sounds and smells.</p> <p>-could observe through videos and observations. Could use the school pond to identify frog spawn.</p>