



# Scotholme Science

Foundation 1

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# Subject- Science



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## Threshold Concepts and Milestones

Threshold Concept	Foundation Stage 1	Content
<p><b><u>Work scientifically</u></b>            This concept involves learning the methodologies of the discipline of science.</p>	<ul style="list-style-type: none"> <li>• Explore and observe using magnifying glasses, tweezers, pipettes, magnets etc.</li> <li>• With support sort and classify.</li> <li>• With support of and adult talk about their findings.</li> </ul>	<p>Use magnifying glasses to look at a range of objects. Talk about what you can see.</p> <p>Use tweezers to develop dexterity.</p> <p>Use pipettes to suck up and squirt water.</p> <p>Sort a range of resources by shape/colour/type etc Talk about your sorting choices.</p>

<p><b><u>BIOLOGY 1</u></b>  <b>Understand plants</b>  This concept involves becoming familiar with different types of plants, their structure and reproduction.</p>	<ul style="list-style-type: none"> <li>• Explore the natural world around them talking about things they find with an adult.</li> <li>• With the support of an adult plant seeds and help to look after plants in the nursery garden.</li> </ul>	<p>Visit the allotment and talk about what you can see. Collect natural things and use the senses to observe them. Talk about them.</p> <p>Grow a selection of seeds and care for them. Observe what is happening each day. Plant seedlings outside and look after them, talking about what is happening and how they are changing. Take photographs at each stage and sequence them. Give reasons for your choice.</p>
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## BIOLOGY 2

### **Understand animals and humans**

This concept involves becoming familiar with different types of animals, humans and the life processes they share.

- Explore and talk with an adult about animals in the environment.
- Identify and name common animals kept as pets, on a farm, in a jungle.
- Match some common animals to their babies and begin to learn the names.
- With support manage their own basic hygiene needs including going to the toilet and hand washing.
- Be able to put on their own coat and with support fasten this.
  
- Willingly try a range of healthy food during snack time.

Read a wide range of animal stories. Talk about the animals and their features.

Understand where you might find different animals and why. Look at animal babies and talk about how they have changed to become adults.

Develop personal independence through routines.

Snack time: arrange regular food tasting sessions and encourage children to try new foods. Touch, observe, smell and describe new foods. Take photographs of new foods and display.

<p><b><u>BIOLOGY 3</u></b>  <b>Investigate living things</b>  This concept involves becoming familiar with a wider range of living things, including insects and understanding life processes.</p>	<ul style="list-style-type: none"> <li>• Explore and talk with an adult about mini-beasts in the nursery garden.</li> <li>• Begin to identify common mini-beasts such as butterflies spiders and worms.</li> </ul>	<p>Which minibeasts can you find in the Nursery garden? Can you name them, using information you have read in stories?  Observe minibeasts using magnifying glasses. Talk about what you can see.</p>
<p><b><u>BIOLOGY 4</u></b>  <b>Understand evolution and inheritance</b>  This concept involves understanding that organisms come into existence, adapt, change and evolve and become extinct.</p>		<p>Talk about babies. How do they change as they grow? What can you do now that you could not do when you were a baby?</p>
<p><b><u>CHEMISTRY</u></b>  <b>Investigate materials</b>  This concept involves becoming familiar with a range of materials, their properties, uses and how they may be altered or changed.</p>	<ul style="list-style-type: none"> <li>• Explore everyday materials talking about similarities and differences.</li> <li>• With support identify different materials in the classroom.</li> <li>• Explore a range of natural materials.</li> </ul>	<p>Use your senses to talk about a range of different materials. How do they feel, smell etc.?  What are the materials used for?  Name materials that are in the local surroundings. What is special about individual materials?  Which natural materials can you collect outside? Make a display.</p>

<p><b><u>PHYSICS 1</u></b>  <b>Understand movement, forces and magnets</b>  This concept involves understanding what causes motion.</p>	<ul style="list-style-type: none"> <li>• Play with magnets, exploring their characteristics.</li> <li>• Play with cars and ramps.</li> <li>• Play with push and pull toys.</li> </ul>	<p>Experience a range of moving toys and understand pushing/pulling/turning/lifting  Talk about what happens when you play with magnets.  What happens when you push the car? What do the wheels do?  Which vehicle can travel the furthest.  Explore a real car. Talk about its features and how it moves.</p>
<p><b><u>PHYSICS 2</u></b>  <b>Understand light and seeing</b>  This concept involves understanding how light and reflection affect sight.</p>	<ul style="list-style-type: none"> <li>• Talk about day time and night time.</li> <li>• Explore and play with shadows when appropriate.</li> </ul>	<p>Read stories about night and day. Talk about night and day.  What do they look like? What happens when it is night time?  How do we know when it is daytime?  Look at shadows on the playground. Talk about what you can see.</p>
<p><b><u>PHYSICS 3</u></b>  <b>Investigate sound and hearing</b>  This concept involves understanding how sound is produced, how it travels and how it is heard.</p>	<ul style="list-style-type: none"> <li>• Listen to and talk about sounds in the environment.</li> </ul> <p>With support make recordings and listen to their voice and the voice of their friends.</p>	<p>Listen to different sounds including a wide range of music. Talk about what you can hear.</p> <p>Shut your eyes and talk about the different sounds you can hear.  Listen to a recording of your voice and your friends' voices.  Sing a song and record it. Play it for others to hear.</p>

<p><b><u>PHYSICS 4</u></b>  <b>Understand electrical circuits</b>  This concept involves understanding circuits and their role in electrical applications.</p>	<p>Play with toys powered by a battery.</p>	<p>Talk about what the battery does to the toy. Take out the battery and compare what the toy can do then with what it can do when the battery is working.</p>
<p><b><u>PHYSICS 5</u></b>  <b>Understand the Earth's movement in space</b>  This concept involves understanding what causes seasonal changes, day and night.</p>	<p>Identify different kinds of weather and talk about these.</p> <p>Observe the daily weather and talk about this with an adult.</p>	<p>Look out of the window and describe the weather each day. How do our clothes change in different types of weather?</p> <p>Splash in puddles/walk in the wind/touch the snow and ice/stand and feel the sun etc.</p> <p>How does weather make us feel and why?</p>