## Scope and sequence

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| **Topic 1**  
Plant parts: roots and stems | 8 | State the functions of a plant's roots  
State the functions of a plant's stem |
| **Topic 2**  
Plant parts: branches and leaves | 12 | Explain how leaves help plants make food  
Describe how branches support leaves |
| **Topic 3**  
Looking at flowers | 16 | Compare different flowers  
Explain that the flowers of some plants become fruits that contain seeds  
Collect and draw specimens |
| **Topic 4**  
Germination and growth | 20 | Describe the stages of germination  
Observe and record the germination and growth of a bean  
Describe the conditions needed for germination |
| **Topic 5**  
How animals respond to heat and cold | 26 | Describe some different ways in which animals respond to heat and cold  
Describe how animals may use the heat of the sun to warm their bodies or use their bodies or their environment to avoid overheating  
Show the cooling effect of water as it evaporates and the insulating properties of fur |
| **Topic 6**  
How animals are born and grow | 30 | Classify animals as oviparous (egg-layers) or viviparous (live-bearers)  
Discuss the connection between the number of eggs or litter size and the degree of care from the parents |
| **Topic 7**  
How my body grows | 36 | Describe the different stages of human growth and development  
Identify how the children in your class have changed and grown |
| **Topic 8**  
Different kinds of food | 40 | Explain why we need food  
Group foods according to type  
Explain some of the effects that different food types have on the body |
| **Topic 9**  
A balanced diet | 44 | Explain that a good diet has a mixture of different foods  
Plan a healthy meal  
Identify foods that should be avoided in excess |
| **Topic 10**  
Keeping food clean and safe | 48 | Explain that germs cause disease  
Identify routes through which food becomes contaminated  
Know that proper hygiene, cooking and preserving keeps food safe |
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| **Topic 11** What is matter?  | 54   | Explain that the things around us are made from matter  
|                               |      | Explain that matter has mass and takes up space  
|                               |      | Use a balance to compare masses  
|                               |      | Show that the mass of material remains unchanged when it is together or in parts                                                                                                                      |
| **Topic 12** Investigating materials | 58   | Describe the different properties of materials  
|                               |      | Identify different materials and the purposes for which they are used  
|                               |      | Relate the properties of materials to their uses                                                                                                                                                    |
| **Topic 13** States of matter | 62   | Classify matter as solid, liquid or gas  
|                               |      | Compare the properties of the different states of matter                                                                                                                                            |
| **Topic 14** Changing state   | 66   | Observe and give examples of freezing, condensing, evaporating, melting, boiling  
|                               |      | Discuss how the mass and volume of water change when it changes state                                                                                                                              |
| **Topic 15** Light and colour | 70   | Classify light sources as natural or artificial  
|                               |      | Investigate the properties of light from different sources  
|                               |      | Demonstrate that light travels in straight lines  
|                               |      | Make a spectrum (rainbow) from white light  
|                               |      | Make invisible ink                                                                                                                                                                               |
| **Topic 16** The sun, the Earth and the moon | 76   | Describe the motion of the Earth around the sun  
|                               |      | Explain why we have day and night  
|                               |      | Identify and compare the sun, the Earth and the moon                                                                                                                                               |
| **Topic 17** The changing moon | 80   | Describe the motion of the moon around the Earth  
|                               |      | Explain why the shape of the moon appears to change (the phases of the moon)  
|                               |      | Describe the relationship between the phases of the moon and the months of the year                                                                                                               |
| **Topic 18** The planets      | 84   | Name the eight planets of the Solar System  
|                               |      | Describe the main features of each planet                                                                                                                                                           |