

**YEAR 2**

**Working scientifically**  
 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:

**Vocabulary**

- 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.

question answer observe  
 observing equipment identify  
 classify sort group record  
 diagram chart map data compare  
 contrast describe biology  
 chemistry physics

**Programme of study, skills and vocabulary**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Uses of everyday materials	Materials	Animals including humans	Living things and their habitats	Plants	Plants

**Stories**

[Teaching science through stories | STEM](#)

[story-links-list.pdf](#)

[Book Lists for Primary Science Topics \(booksfortopics.com\)](#)

[diverse-representation-in-science-book-corner-suggestions-1.pdf](#)

**The Tin Forest**  
 (Helen Ward)

**Traction Man**  
 (Mini Grey)

**Three Little Pigs**  
 (Lesley Sims)



**Handa's Surprise**  
 (Eileen Brown)

**Once There Were Giants**  
 (Martin Waddell and Penny Dale)

**Tadpole's Promise**  
 (Jeanne Willis and Tony Ross)



**Jack and the Beanstalk**  
 (Richard Walker)

**Ten Seeds**  
 (Ruth Brown)

**A Seed Is Sleepy**  
 (Dianna Aston)



**The Gruffalo**  
 (Julia Donaldson)

**Meerkat Mail**  
 (Emily Gravett)

**No Place Like Home**  
 (Jonathon Emmett)



**Job titles**

[01 stem-careers-by-topic-1.pdf](#)

<b>Living things and their habitats</b>	<p><b>Key objectives</b> explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p> <p>identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<p><b>Specific skills</b> Pupils might work scientifically by: sorting and classifying things according to whether they are living, dead or were never alive, and recording their findings using charts. They should describe how they decided where to place things, exploring questions for example: 'Is a flame alive? Is a deciduous tree dead in winter?' and talk about ways of answering their questions. They could construct a simple food chain that includes humans (e.g. grass, cow, human). They could describe the conditions in different habitats and micro-habitats (under log, on stony path, under bushes) and find out how the conditions affect the number and type(s) of plants and animals that live there.</p>	<p><b>Vocabulary</b> living dead never alive habitats micro-habitats food food chain sun-grass-cow-human alive healthy logs leaf litter stony path under bushes shelter seashore woodland ocean rainforest conditions hot/ warm/ cold dry/ damp/ wet bright/ shade/ dark</p>
	<p><b>Big question?</b></p>	<p><b>Famous names/inventions</b> Rachel Carson- Marine Pollution</p> <p>Liz Bonnin Conservationist</p> <p>Eugenie Clark- marine biologist</p>	
<b>Uses of everyday materials</b>	<p><b>Key objectives</b> identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p><b>Specific skills</b> Pupils might work scientifically by: comparing the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs); observing closely, identifying and classifying the uses of different materials, and recording their observations.</p>	<p><b>Vocabulary</b> Wood metal plastic glass brick rock paper cardboard squashing bending twisting stretching metal – coins, cans, cars, table, legs wood – matches, floors, telegraph poles spoons – plastic, wood, metal John Dunlop- rubber Charles Macintosh- waterproof fabric</p>
	<p><b>Big question?</b></p>	<p><b>Famous names/inventions</b> Charles Macintosh-Waterproof material</p> <p>John MacAdam- Tarmac</p>	
<b>Animals including humans</b>	<p><b>Key objectives</b> notice that animals, including humans, have offspring which grow into adults</p> <p>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p><b>Specific skills</b> Pupils might work scientifically by: observing, through video or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.</p>	<p><b>Vocabulary</b> grow adults nutrition reproduce survival water food air exercise hygiene egg-chick-chicken egg-caterpillar-pupa-butterfly spawn-tadpole-frog lamb-sheep baby-toddler-child-teenager-adult</p>

	Big question?	<p>Famous names/inventions</p> <p>Florence Nightingale Pioneer of modern nursing in GB</p> <p>Elizabeth Garrett Anderson - First British female physician and surgeon</p> <p>Steve Irwin -Wildlife expert</p> <p>Robert Winston Human Scientist</p>	
Everyday materials	<p><b>Key objectives</b></p> <p>Distinguish between and object and the material from which it's 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>Specific skills</b></p> <p>Pupils might work scientifically by: performing simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?'</p>	<p><b>Vocabulary</b></p> <p>material wood plastic glass metal water rock properties hard soft stretch stiff shiny dull rough smooth bendy waterproof absorbent brick paper fabrics elastic foil</p>
	Big question?	Famous names/inventions	
Plants	<p><b>Key objectives</b></p> <p>observe and describe how seeds and bulbs grow into mature plants</p> <p>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p><b>Specific skills</b></p> <p>Pupils might 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.</p>	<p><b>Vocabulary</b></p> <p>water light suitable temperature grow healthy germination reproduction</p>
	Big question?	<p>Famous names/inventions</p> <p>Captain Cook- Botanists</p> <p>Agnes Arber Botanist</p> <p>Alan Titchmarsh- Botanist &amp; Gardener</p>	

