

Science Long Term Plan unit overview 2025-26, 2026-27

(adapted from Kapow mixed-age curriculum v2022)

Class/phase	Term	2025-26 Cycle A		2026-27 Cycle B	
Reception *A fourth unit of work 'Changing Seasons' takes place throughout the year.	Aut	<p style="text-align: center;">Animal Adventures</p> <p>Exploring habitats where animals big and small live—from spiders to sloths and farms to forests—pupils use their observations to sort animals based on their similarities and differences. They observe and compare the homes and behaviours of various animals, understanding how different environments meet their needs. Through outdoor activities, songs and creative tasks, pupils develop a deeper connection to the natural world.</p>		<p style="text-align: center;">Animal Adventures</p> <p>See Cycle A</p>	
	Spr	<p style="text-align: center;">I am a scientist</p> <p>Exploring processes and changes in the natural world, children build important foundations for working scientifically. They are introduced to the first step in scientific enquiry - asking questions. Through hands-on activities, pupils discover that objects move when pushed or pulled and some float while others sink. They guess what might happen to ice in different conditions and investigate ways to melt chocolate.</p>		<p style="text-align: center;">I am a scientist</p> <p>See Cycle A</p>	
	Sum	<p style="text-align: center;">Our beautiful planet</p> <p>Exploring the outdoor environment, pupils use their senses to identify and describe natural objects, including flowering plants. Through role-play, they learn about plant parts by creating pretend medicine for unwell toys. By planting seeds, pupils discover that water and sunlight are essential for growth. They also learn the importance of caring for the planet, considering practical actions they can take to protect it.</p>		<p style="text-align: center;">Our beautiful planet</p> <p>See Cycle A</p>	
Class/phase	Term	2025-26 Cycle A		2026-27 Cycle B	
Year 1/2	Aut	<p style="text-align: center;">Sensitive bodies (B)</p> <p>Familiarising themselves with the basic parts of the human body, children investigate their senses through stimulating experiences that highlight how we interact with the world around us. They work scientifically, using their senses to make observations, spot patterns and use data to answer questions. They develop an understanding of how science can support those who have lost sensory function and consider how firefighters use their senses at work.</p> <p>This unit builds on Y1 Science unit <i>Animals including Humans</i> (24/25) and PSHE unit <i>My Body and Growing Up</i></p>	<p style="text-align: center;">Seasonal changes (A)</p> <p>Reflecting on their own experiences, children learn about the four seasons and the weather associated with each. Pupils explore how seasonal changes affect trees, daylight hours and our choices about outfits. They plan and carry out their own weather reports, considering the knowledge required for this job.</p> <p>This builds on learning in Reception about changes in seasons, and the unit <i>Sunshine and Showers</i>. In 24/25 children in Year 1 learnt about seasons through forest school sessions, but not in Science.</p>	<p style="text-align: center;">Introduction to plants (A)</p> <p>This unit of work builds on Cycle A unit '<i>Our beautiful planet</i>' from 2025/26</p>	<p style="text-align: center;">Everyday materials (B)</p> <p>This will be the first time that children have been explicitly taught about materials and their properties in Key Stage 1. Previously, they will have learnt about materials in Reception in Art, DT and through forest school.</p>
	Spr	<p style="text-align: center;">Habitats (A)</p> <p>Considering the life processes that all living things have in common, pupils classify objects into alive, was once alive or has never been alive. Pupils explore global habitats, naming plants and animals that can be found there. They learn how a range of different living things depend on each other for food or shelter. Pupils explore this further by creating food chains to show the sequence that living things eat each other for energy to grow and stay healthy.</p> <p>This unit of work builds on the 24/25 Y1 unit '<i>Plants</i>' and children's forest school learning.</p>	<p style="text-align: center;">Life cycles and health (A)</p> <p>Studying the life cycles of various animals, children learn what animals need to survive and how they change over time. Pupils collect data that allows them to observe changes in their peers, while also developing their ability to take measurements and record data. They consider how scientific knowledge helps people to make healthy choices.</p> <p>This unit of work continues and develops learning from <i>Sensitive Bodies</i> in Autumn Term. The spacing, with a term in between, is intentional to support long-term learning and remembering.</p>	<p style="text-align: center;">Comparing animals (B)</p> <p>This unit of work builds on learning from the units <i>Life cycles and health</i> and <i>Habitats</i> in cycle A, or in the unit <i>Animal Adventures</i> in Reception.</p>	<p style="text-align: center;">Uses of everyday materials (B)</p> <p>This unit of work continues and develops learning from <i>Everyday Materials</i> in Autumn Term. The spacing, with a unit in between, is intentional to support long-term learning and remembering.</p>
	Sum	<p style="text-align: center;">Microhabitats (B)</p> <p>Developing their understanding of scientific enquiry, pupils learn that scientists use a range of skills to answer questions. They discover that microhabitats provide what minibeasts need to survive and carry out a survey to find out where different minibeasts live in the school grounds. They practise asking scientific questions and follow a method to investigate which conditions woodlice prefer. Pupils explore the job role of a botanist by identifying flowering plants.</p> <p>This unit of work continues and develops learning from <i>Introduction to Habitats</i> in Spring Term. The spacing, with a unit in between, is intentional to support long-term learning and remembering.</p>	<p style="text-align: center;">Ocean protectors (A)</p> <p>Consolidating knowledge of life cycles, habitats and food chains, children explore the ocean and rock pools. They investigate what happens to litter when it is left in water to better understand the choices we make about materials available. Pupils role-play as marine biologists to collect data about population sizes to plot as pictograms and to better understand how we can protect the oceans.</p> <p>This unit brings together the learning from across the school year, helping children to make connections between related concepts.</p>	<p style="text-align: center;">Plant growth (A)</p> <p>This unit of work continues and develops learning from <i>Introduction to Plants</i> in Autumn Term. The spacing, with units in between, is intentional to support long-term learning and remembering.</p>	<p style="text-align: center;">Fairytale science (B)</p> <p>This unit brings together the learning from across the school year, helping children to make connections between related concepts.</p>

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Year 3/4	Aut	<p><u>Light and shadows (A)</u> Identifying examples of light sources, children learn that light is needed to see and how its absence causes darkness. Children investigate reflection and shadow formation, including how different factors affect shadows. They explore how shadows can be used to entertain in the arts and create shadow puppets to recount how different people work or experiment with light.</p> <p>This is the first time children will be learning explicitly about light and shadows. Some children may make connections to the themes of light and dark in art.</p>	<p><u>Movement and Nutrition (A)</u> Studying the human skeleton, children identify key bones and compare them to other animals explaining the role within the body. Pupils explore how changes in muscles result in movement and the implications these discoveries have in the scientific development of prosthetic limbs. They study how energy is used by the body, what constitutes a balanced diet in humans and how research contributes to nutritionist expertise.</p> <p>This unit builds on children's previous learning about body parts in PSHE/RSE and learning about nutrition from DT cookery units.</p>	<p><u>Forces and magnets (B)</u></p> <p>This is the first time children will be learning explicitly about forces and magnets.</p>	<p><u>States of matter (B)</u></p> <p>This is unit revisits and builds on learning from Year 1 and Year 2 in 24/25 about materials and their properties. Children will need to be reminded that not all solids share the same properties..</p>
	Spr	<p><u>Rocks and Soil (A)</u> Studying rocks and their properties, children learn how to classify rocks and identify how they were formed. They look at the work of paleontologists to learn about fossil formation and use models to explore how fossils tell us about the past. Pupils investigate the physical properties of rocks and link these to their particular uses. Pupils also explore soil formation, separate soil using a sedimentation jar and test soil drainage.</p> <p>This is the first time children will be learning explicitly about rocks and soil. Some children will have prior knowledge if they remember learning about fossils in their <i>Dinosaurs</i> unit of work Reception – several years ago.</p>	<p><u>Digestion and Food (A)</u> Using models, children describe the function of key organs in the digestive system. Pupils identify the types of human teeth to create their own model and investigate factors that impact our dental health. They compare human teeth to other animals' and consider this in the light of prior knowledge about predators, prey and food chains. Children take on the role of a naturalist investigating animal faeces for clues about diet, digestion and dentition.</p> <p>This unit of work continues and develops learning from <i>Movement and Nutrition</i> in Autumn Term. The spacing, with units in between, is intentional to support long-term learning and remembering.</p>	<p><u>Sound and vibrations (B)</u></p> <p>This is the first time children will be learning explicitly about sound and vibrations in science. Some Y4 children may make connections to prior learning from Cycle A about the movement of light particles, travelling in waves. Other children may make cross-curricular connections to learning in music about pitch and volume.</p>	<p><u>Classification and changing habitats (B)</u></p> <p>Children in Year 3 will be able to make connections to science learning from Y1/2 in 2025/26 and the Kapow science units about habitats and microhabitats. Children in Y4 will not have learnt about animal habitats since Y2 in 2024/25 when they learnt about Animals and Habitats in autumn term and then Microhabitats in summer term.</p>
	Sum	<p><u>Electricity and Circuits (A)</u> Exploring appliances that use electricity in their setting, children learn how to work with electricity safely and build circuits. Pupils investigate electrical conductors and insulators and explore the relationship between the number of bulbs and bulb brightness. Real scenarios and historical discoveries inform children about scientific progression and home safety.</p> <p>This is the first time children will be formally learning about electricity in science. Cross-curricular connections could be made to learning about computer systems from Computing.</p>	<p><u>How does food affect muscle fatigue? (A)</u> Using practical investigations, pupils develop their working scientifically skills by exploring how food influences muscle fatigue. Revisiting learning on digestion, nutrition and energy, they plan and carry out a comparative test, measuring muscle endurance before and after eating. Gathering and recording data carefully, pupils analyse their findings and evaluate the reliability of their test. They extend their understanding by investigating whether food can provide chemical energy to power an electrical circuit, before presenting their results clearly to others.</p> <p>This unit brings together the learning from across the school year, connecting related concepts.</p>	<p><u>Plant reproduction (B)</u></p> <p>When this unit is taught for the first time in 26/27 children will not have any recent experience of learning about plants and plant structures. Children in Y4 will have previously learnt about plants in Y2 (24/25) and children in Y3 last learnt about green plants in Y1 (24/25). Therefore it would be advisable to spend some time in guided reading learning reading n/fiction texts about plants and plant structures before beginning this unit.</p> <p>In future cycles, children will be able to revisit and build on their prior learning about <i>Plant Growth</i> from Y1/2 cycle B.</p>	<p><u>How does wind force affect seed dispersal? (B)</u></p> <p>Using different wind speeds to disperse seeds, pupils measure how force affects the distance they travel. They consider how seeds are shaped differently and how this links with the way they are dispersed. Extending the enquiry, pupils measure the volume of different wind speeds to better explain their results. They explore biomimicry, considering how seed shapes have contributed to product design.</p> <p>This unit of work revisits prior learning about <i>forces and magnets</i> (autumn term cycle B) and <i>plant reproduction</i>.</p>

Class/phase	Term	2025-26 Cycle A		2026-27 Cycle B	
Year 5/6	Aut	<p>Life cycles and reproduction (B)</p> <p>Studying animal life cycles, children learn about the significance of reproduction for a species' survival. Pupils compare asexual and sexual reproduction in plants and grow cuttings to measure and plot root growth over time. Children compare the life cycles of mammals, birds, amphibians and insects identifying key differences. They analyse secondary data to investigate how the amphibian life cycle is affected by predators and climate change.</p> <p>This unit of work links to prior learning from <i>Living Things</i> units taught in 24/25. However, children will have learnt slightly different core knowledge and concepts depending on whether they were previously in Badger, Otter or Fox class. Pre-topic assessment will therefore be necessary before teachers plan and teach this unit.</p>	<p>Unbalanced forces (B)</p> <p>Building on their knowledge of forces, children explore gravity, air resistance and water resistance in more depth and consider the effect of these forces being unbalanced. They demonstrate key principles in the classroom and plan investigations to further their understanding of the effects of these forces. Pupils test their ideas using models and compete to build the most effective pulley system.</p> <p>Whilst most children in Year 6 and some Y5 will have previously studied forces two years ago, in Year 3 and Year 4 (23/24), they studied different concepts depending on the class they were in. For example, some children were in Y4 (Otter class 23/24 mixed 4-5) and learnt about forces of resistance and measuring forces; whereas some children were in a mixed-age Y3/4 class (Badger class 23/24) and learnt about forces and magnetism. Therefore, it will be essential to do some pre-reading in whole-class guided reading lessons about forces before teaching this unit. A pre-topic assessment of prior knowledge is also recommended before planning and teaching this unit.</p>	<p>Mixtures and separation (A)</p> <p>Y5 children will be learning about mixtures and separation for the first time. For many Y6 children (Otter class 24/25) they have previously been introduced to separating mixtures as part of their prior learning about reversible changes.</p>	<p>Properties and changes (A)</p> <p>For many Y5 and some Y6 children (Badger class 24/25) this will build on their prior learning from <i>States of Matter</i> in Y3/4. For Y6 children (Otter class 24/25) this will build on their prior learning about <i>Changing States</i> in Y4.</p>
	Spr	<p>Earth and space (A)</p> <p>Exploring some of the key celestial bodies in our Solar System, children learn their names and compare their movements. Pupils discover the relationship between the Earth's rotation and daylight, making models to represent their knowledge. They make their own sundials and consider how and why humans' ideas about the universe have changed over time.</p> <p>Some Y6 children who were in the Y4/5 Otter class in 23/24 Cornerstones Cycle A have previously learnt about <i>Earth and Space</i> (including orbits and phases of the moon). The remaining children will be learning about Earth and Space for the first time.</p>	<p>Circulation and health (A)</p> <p>Studying the human circulatory system, children learn about the role of the heart, blood and blood vessels and use models to demonstrate their function. They explore how lifestyle choices affect our health and use secondary sources to help them play the role of healthcare professionals advising patients. Pupils devise their own investigation to look at the relationship between exercise and heart rate, applying their knowledge of variables and then analysing secondary data to understand fitness better.</p> <p>All Y6 children, and most Y5 children (with the exception of children who were in Badger class last year) have learnt about how blood travels around the body. However Y6 who were in Fox class last year, haven't learnt about the body's organs for two years. So, it will be important to do some pre-reading for the Y5 children who were in Badger class and the Y6 who were in Fox class to ensure they know or remember the necessary pre-requisite knowledge before the unit begins. A pre-topic assessment, before planning, is recommended.</p>	<p>Classifying big and small (B)</p> <p>For many Y5 and some Y6 children (Badger class 24/25) this will build on their prior learning about classification during the <i>Living Things and Underwater Habitats</i> unit in Y3/4. For Y6 children (Otter class 24/25) this will build on their prior learning about <i>Living Things</i> in Y4 autumn term.</p>	<p>Circuits, batteries and switches (B)</p> <p>For Y5 children (Badger/Kingfisher class 25/26) this will build on their prior learning from <i>Electricity and Circuits</i> in Y4. For some Y6 children (Otter class 24/25, not Badger class 24/25) this will build on their prior learning about <i>Electricity</i> in Y4 summer term. Some Y6 children (Badger class 24/25) have not previously learnt about electricity in science.</p>
	Sum	<p>Light and reflection (A)</p> <p>Proving that light travels in a straight line, children use this information to explain observations of reflection and shadows. They explore how our eyes allow us to see and how mirrors can be used in a variety of ways. Pupils investigate factors affecting the size of shadows and the laws of reflection. Children apply what they have learned about light by exploring real-life uses of mirrors.</p> <p>Children who were in Badger class in 23/24, two years ago, studied a short topic on light and reflection including shadows. Other children learnt about this in Fox class (Y5/6) last year. Therefore, for many children this topic will revisit and build on prior learning; and the emphasis of this unit can be on scientific enquiry.</p>	<p>How reflective are space blankets? (A)</p> <p>Exploring the reflectiveness of space blankets through experiments, the children analyse data, draw conclusions and apply their understanding of reflection to make predictions, plan and carry out an enquiry. They consider how inventions can be used in new contexts, such as space technologies being used for marathon runners. Extending the enquiry, children explore further properties of space blankets, like reflection of light, transparency, conductivity and hardness. Developing persuasive speech, the class share their findings like a scientist by advertising the uses and properties of space blankets.</p> <p>This unit brings together the learning from across the school year, helping children to make connections between related concepts.</p>	<p>Evolution and inheritance (B)</p> <p>All children will be learning about evolution for the first time. However, links can be made to prior learning about <i>Life Cycles and Reproduction</i> Year 5/6 cycle A (25/26) for Y6 pupils.</p>	<p>Human timeline (B)</p> <p>Links can be made to prior learning about <i>Life Cycles and Reproduction</i> Year 5/6 cycle A (25/26) for Y6 pupils; and to learning in RSE/PSHE about body changes.</p>