



Science – Two Year Cycle

	Teddy (Reception and Year 1)	Panda (Years 2 and 3)	Koala (Years 4, 5 and 6)
Autumn Term Year 1	<ul style="list-style-type: none"> Animals including humans (Y1) Seasonal Changes (Y1) 	<ul style="list-style-type: none"> Forces and Magnets (Y3) Sound (Y4) 	<ul style="list-style-type: none"> Sound (Y4) – reinforce from lower KS2 Properties and Changes of Materials (Y5) - reinforce aspects of Y4 States of Matter
Spring Term Year 1	<ul style="list-style-type: none"> Everyday Materials (Y1) 	<ul style="list-style-type: none"> Plants (Y3) – reinforce learning on plants from KS1 Animals, including humans (Y3) – reinforce learning on animals from KS1 	<ul style="list-style-type: none"> Forces (Y5) – reinforce learning from Y3 unit Light (Y6) - reinforce learning from Y3 unit
Summer Term Year 1	<ul style="list-style-type: none"> Plants (Y1) 	<ul style="list-style-type: none"> Light (Y3) Rocks (Y3) 	<ul style="list-style-type: none"> Living things and their habitat (Y5) - reinforce learning from Y4 unit Animals, including humans – for both topics, reinforce and extend learning from lower KS2
Autumn Term Year 2	<ul style="list-style-type: none"> Living Things and their Habitats (Y2) Animals, including humans (Y2) –reinforce learning on animals from Year 1 	<ul style="list-style-type: none"> States of Matter (Y4) – reinforce learning on materials from KS1 Animals, including humans (Y4) - reinforce learning on animals from Y3 and KS1 	<ul style="list-style-type: none"> Earth and space (Y5) Electricity (Y6) – build on knowledge from Y4 unit

Spring Term Year 2	<ul style="list-style-type: none"> • Everyday Materials (Y2) – reinforce learning on materials from Year 1 	<ul style="list-style-type: none"> • Electricity (Y4) • Forces and magnets – short revisit to Y3 topic covered in Year 1 of cycle 	<ul style="list-style-type: none"> • Living things and their habitats (Y6) – build on knowledge from Y4 unit • Light (Y6) – review learning from previous year
Summer Term Year 2	<ul style="list-style-type: none"> • Plants (Y2) – reinforce learning on plants from Year 1 	<ul style="list-style-type: none"> • Living things and their habitats (Y4) – reinforce learning on living things from Y3 and KS1 • Rocks and/or light – short revisit to Y3 topics covered in Year 1 of cycle 	<ul style="list-style-type: none"> • Animals, including humans (Y6) – building knowledge from prior learning • Evolution and inheritance (Y6)

Curriculum Intent

All topics identified above are taken from the Science National Curriculum document. Please refer to the statutory requirements for each topic covered. Please also see science, curriculum mapping document and skills progress for working scientifically.

Our science curriculum aims to engage children in developing a love of science. They achieve this by being exposed to a range of topic areas and having the opportunity to see science first hand through scientific enquiry, school visits and using the local environment to support learning, not least taking in to account our rural setting. This approach supports our disadvantaged and SEN pupils through exposure to a range of experiences. The taught curriculum also has an emphasis on building knowledge which will allow pupils to develop cultural capital. The mixed age structure means there are opportunities for reinforcing knowledge and for pupils of different ages to learn from each other.

In all topics covered, scientific enquiry should play a key part and there should be developmental progress seen using the statutory requirements identified in the National Curriculum for Science. Teachers should be mindful of the age of the pupils and ensure the skills being taught are appropriate (pupils from different phases may be able to complete the same investigation but the expectations on their scientific enquiry skills may be different – see skills development document for age appropriate outcomes).

The mixed age classes will always present a challenge. KS1 topics are covered in Teddy class but take account of the Reception pupils. They should access the topics but their learning outcomes should be based on the ELGs. Panda class will cover lower KS2 topic areas while Koala will cover upper KS2. At all points, there needs to be some level of flexibility to allow for full coverage and knowledge development.

There are opportunities across the curriculum to revisit and reinforce knowledge. Most topics are repeated, albeit with a different focus each time. However, it does give opportunities to check prior knowledge and adapt future planning to ensure previously taught concepts are secure. Without this secure knowledge, pupils may struggle as they move through more complex topic areas.

Teddy Class – The focus of science should be enabling the children to experience and observe science around them. They will be encouraged to be curious and ask questions. They should be supported to develop their own understanding of scientific ideas and start using the appropriate scientific language. Reception children should work towards the appropriate Early Learning Goals when undertaking these topics. Year 2 topics will reinforce the learning which took place in Year 1 of the cycle. For those joining the school in Year 2 of the cycle, the learning and knowledge will need to be adapted accordingly to meet their needs and prior experiences.

Panda Class – In Panda class there will be a strong emphasis on reinforcing the scientific knowledge gained in the KS1 units. The teaching will now extend this learning further and start introducing more specialist topics such as forces and magnets, sound and rocks. There should be greater opportunities to deep dive in to these subject areas and secure high levels of enthusiasm for science and scientific enquiry (which should be an integral part of the learning process). There should be increasing opportunities to build knowledge through scientific enquiry and children should learn to skills of recording their work along with being able to make predictions and draw conclusions. Year 2 of the Panda class cycle allows some topics to be revisited. While topics are suggested, this may be dependent on the needs of the class. It may also be possible to undertake some introductory work on Koala topics.

Koala Class- Most subject areas covered in Koala have been previously taught in some form. Teaching in Koala should build on their prior knowledge and take the children further in their scientific knowledge in preparation for secondary school. The accumulation of scientific knowledge over time should support the children in working at an increasingly high standard. There should be a strong emphasis on experimental and investigative work and the children should develop their knowledge of how to make reasoned predictions, record and present their work (including the use of accurately drawn tables and charts) as well as drawing conclusions. Planning of units for Year 6 pupils who have been in Koala class for three years should be carefully considered. The children will have previously covered these units when they were in Year 4. The previous knowledge should be reinforced but with a clear emphasis on the Year 6 expectations. If necessary, topics that have had less coverage such as Earth and Space and Evolution (which is also covered through RE) should be revisited and approached from a different angle or perspective. It may be appropriate for children to produce a longer term project on topics such as Earth

and Space to build on their accumulated knowledge. Pupils should leave Year 6 with a deep knowledge and love of science which supports them in being curious and inquisitive learners. They will have accumulated a good level of scientific cultural capital.