



Science Curriculum Implementation



Statement of intent

Within Science, we at Barkisland ensure that all children access the learning of skills appropriate to their age. We endeavour to ensure that skills are progressive and developmental. Effective links are made where appropriate to support previous or future learning. Pupils will have opportunities to consolidate and refine their skills throughout the curriculum to ensure they are equipped to be effective world citizens of the 21st century. In addition to this, enrichment opportunities such as Science Week are woven into the school year. These are tailored to our pupils and their needs and aspirations. At Barkisland, our aim is to nurture our children throughout their time at our school. During their learning journey through the Science curriculum, children are supported and given the skills to succeed in their learning, make progress and develop their interpersonal skills. When accessing the wide range of activities presented as part of lessons, children tackle the tasks at hand with the confidence and belief that they will succeed. By breaking the topics for each year group down into smaller steps, children access a progressive curriculum which is both inspiring and challenging. This allows them to build on their knowledge and resilience, not only lesson by lesson but also year on year, to give them the deepened understanding required to not only succeed, but be creative and critical thinkers.

Schemes of work

At Barkisland, we use the Grammarsaurus scheme, which aligns with the English National Curriculum 2014. The scientific knowledge and conceptual understanding has been mapped to ensure a secure sequence of learning which provides ample opportunity to make progress in science by knowing and remembering more science content. In addition, this scheme allows the nurturing of our children's learning and provide opportunities for children of all abilities and backgrounds to succeed.

Curriculum content

Here is the Science Long Term Plan:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS Cycle 1	Marvellous Me	People who help us	Julia Donaldson – The Gruffalo / Gruffalo's Child	Food, Glorious Food (Supertato Link)	On the Farm	Holidays!
	Traditional Tales – The Three Little Pigs	Christmas	Pets	Easter	Minibeasts	Transition
EYFS Cycle 2	My World	Colours everywhere	Polar Regions	At the zoo	Growing and Changing (plants)	Summer at the seaside
	Little Red Riding Hood	Christmas	Pirates	Easter	Super heroes	Transition
EYFS Cycle 3	Good to be me	Space	Seasons (Stickman)	Transport	Growing and changing (lifecycles)	Under the sea
	Jack and the beanstalk	Christmas	Dinosaurs	Easter	Let's go on an adventure (Bear hunt)	Transition
Year 1	Everyday materials		Seasonal Changes	Plants	Animals including Humans	
Year 2	Materials and their uses		Animals including humans	Plants	Animals including Habitats	
Year 3	Animals including humans	Light	Rocks	Plants	Forces and Magnets	
Year 4	Animals including humans	Electricity	Sound	Animals including Habitats	States of Matter	
Year 5	Earth in Space	Forces	Properties and changing materials		Habitats	Animals including humans
Year 6	Animals including humans	Electricity	Living things and their habitats		Evolution and Inheritance	Light

All 'Working Scientifically' targets for KS1, LKS2 and UKS2 and included to support children's knowledge of working scientifically. When carrying out investigations and practical tasks, teachers make links to specific Scientific Enquiry types and working scientifically skills. This deepens children's understanding of the processes and helps them to identify why they are carrying out their practical tasks.

Record of pupils' work

Children complete work in their Science books. This can be written work or photographic evidence of practical sessions. Teachers also store photographic evidence of Science work onto the T-Drive into the Science folder and regularly create X posts to share children's learning with the wider school community. Classrooms have a Science display to showcase their work and each topic's key vocabulary, and, throughout the year, corridor displays may take on Scientific themes.

Assessment

Science is assessed using the Barkisland target cards. Each year group has a target card covering the topics mentioned above. In addition to this, there is a 'Working Scientifically' target card which assesses children against these skills across KS1, LKS2 and UKS2. End of unit quizzes may be used where the teacher feels it is appropriate.

At opportune moments during each topic, children will also be challenged to complete reasoning tasks. These are different from tasks which may be set during a lesson, and require the children to use their learning from the lesson and apply it in different ways to answer the question. These may include odd one out questions, concept cartoons, convince me tasks or explaining what is going on in a scientific image.

Enrichment

Barkisland school often celebrates Science Week. During this, children explore a range of scientific topics, including some with links to the curriculum and others with global links. Topics studied previously during this week include Global Warming; food miles; scientists and inventors from the past and present; plastic pollution and reducing plastic waste; and STEM Science. This is tailored specifically to our children, many of whom are interested in global themes and topics and would love to pursue science in their careers.

In addition to this, Barkisland school runs a STEM Science club once a year. This gives the children in Key Stage 2 with a keen passion for Science, Technology, Engineering and Mathematics the opportunity to participate in activities which would not be covered in the National Curriculum, but which develop their skills and understanding further, and in activities which build on what is taught in lessons but delve deeper to strengthen their knowledge.

Further examples of enrichment throughout the school include: school trips, for example Key Stage 1's trip to a local beach to coincide with their Science topics; themed days; creative projects such as Year 4's digestive system model; and food sciences, where children get several opportunities across the school year to spend the afternoon with our school cook to cook and bake. During these sessions, links are made with the Science curriculum, for example reversible and irreversible changes.

Home school links

Staff may set homework linked to Science topics studied as part of their curriculum throughout the year, especially in our Talking Homework. In addition, when we do themed weeks and extra-curricular tasks, parents may be invited in to participate. If parents have a background in the Sciences, they are often approached to be part of an activity to share their knowledge and to help inspire the next generation of scientists.