



Science curriculum

Statement

Every Child is a Scientist: At Barnet Hill Academy, we believe that when children are given the opportunity to foster a love of challenge, adventure and creativity in and beyond the classroom - developing skills that will equip them for all walks of life - they will become life-long learners with resilience, passion and a thirst for knowledge.

Intent: At Barnet Hill Academy, Science is about developing an understanding of and making sense of our environment, primarily through first-hand experience, exploration, interaction with scientific phenomena and developing scientific language. At Barnet Hill Academy we have created an enquiry and investigative based Science curriculum that will develop a thirst for learning and knowledge in our children. They are immersed in scientific vocabulary, which aids children's knowledge and understanding not only of the topic they are studying, but of the world around them.

Implementation: In ensuring high standards of teaching and learning in Science, we implement a curriculum that is progressive throughout the whole school. Planning for Science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Barnet Hill Academy involves adapting and extending the curriculum to match all pupils' needs. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. We provide varied and differentiated ways for pupils to record the outcomes of their work including the use of PowerPoint, concept mapping, annotated diagrams, improvised drama and the application of a wide range of writing genres. Tasks are selected and designed to provide appropriate challenge to all learners, in line with the school's commitment to inclusion. Each unit is taught in a block and cross-curricular links made where appropriate. Working Scientifically skills are embedded into all lessons to ensure that skills are systematically developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. We build upon the knowledge and skill development of the previous year, using our skills progression grids.

Impact: The successful approach at Barnet Hill Academy results in a fun, engaging, high-quality Science education, that provides children with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that children learn through varied and first-hand experiences of the world around them. Frequent, continuous and progressive learning outside the classroom is embedded throughout the Science curriculum. At the end of each unit of work, we make a summative judgement about the achievement of each pupil and input these into the Barnet Hill Foundation Subjects Ladder. At this point teachers decide upon a 'best fit' judgement as to whether the pupil has achieved and embedded the expected learning goals, exceeded expectations or is still working towards the goals. These decisions are based on the professional knowledge and judgement that teachers possess about the progress of each pupil, developed over the previous three terms, which allows an informed and holistic judgement of attainment to be made. Achievement against the learning goals for science at the end of the year is used as the basis of reporting progress to parents and carers

	Autumn	Spring	Summer
Y1	Human Body Seasonal Changes Materials	Planting Animals Caring for the planet Seasonal Changes	Plants Growing and cooking Seasonal Changes
Y2	Animal Needs for survival Humans Materials Plastic	Plants (Light and Dark) Living things and their habitats Light and dark	Plants bulbs and seeds Growing up wildlife
Y3	Skeletons Movement Nutrition and diet Food waste Rocks	Fossils Soils Light	Plants Forces Magnets
Y4	Group and Classify living things States of matter	Sound Electricity Energy	Data Collection Habitats Digestive system Food chains
Y5	Forces Space Global Warming	Properties of materials Animal Including humans Life cycles	Reproduction Reversible and irreversible changes Plastic Pollution
Y6	Living things and habitats Electricity Renewable energy	Light The circulatory system Diet drugs and life style	Variation Adaptation Fossils Themed projects