



Alexandra Park Primary School

Care, Aspire, Achieve



Science Report 2024-25

Through science at Alexandra Park Primary, we aim for all children to foster a curiosity about the world around them whilst acquiring specific skills and knowledge to help them think and work scientifically. Through our teaching and learning, our children will gain an understanding of scientific processes and start to make connections within science as well as with other areas of the curriculum.

It is important for children to understand how science has changed our lives and how it is vital for our future prosperity and sustainability.

Alongside teaching our children skills and knowledge we are also developing the following types of scientific enquiry: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources.

Fundamental Great British Values

At Alexandra Park Primary School, we understand clearly our responsibility in preparing children for their next stage of education and for the opportunities, responsibilities and experiences of later life, laying the foundations so that they can take their place successfully in modern British society. We promote a respect for and understanding of different faiths, cultures and lifestyles. The spiritual, moral, social and cultural development of each child is central to everything that we do as a school through our shared vision of “Care, Aspire, Achieve”. This is evidenced through our teaching and learning, our inclusive environment and through the many opportunities provided for our children to understand democracy, law, liberty, mutual respect and tolerance.

Planning

At Alexandra Park Primary School, “Care, Aspire, Achieve” is at the forefront of our curriculum design. From Year 1 to Year 6, we use a structured system of science planning produced by White Roses which provides a clear progression of knowledge, skills and vocabulary. The curriculum is planned to ensure children are acquiring the appropriate scientific knowledge alongside developing the scientific skills to apply the knowledge effectively. In addition to this, our dedicated teachers will also adapt and format the IWB material from White Rose and supplement the planning with practical investigations, aspire challenges and oracy-based activities.

As well as the National Curriculum objectives, there are also two units of work for every year groups specifically linked to sustainability, allowing children to apply their scientific understanding to real-world contexts. At Alexandra Park, we believe it is crucial to equip children with the knowledge and skills they need to make positive contributions to our ever-changing world.

Scientific enquiry skills children will develop: observing over time, research, grouping, sorting and classifying, comparative and fair testing and pattern seeking.

Assessment

At Alexandra Park Primary School, assessment is ongoing to check understanding and ensure that progress is being made. We use a variety of assessment and feedback techniques in class as well as an end of unit assessment, which is used to inform all aspects of teaching and learning.

- During lessons, children receive instant feedback in class either written or verbal.
- Children will have the opportunity to reflect and correct their work after whole class feedback.
- They will have written feedback in their books, which they will be given time to respond to.
- During each unit of work, children will be given a low-stakes mid-unit quiz to allow teachers to monitor children’s progress and adjust their teaching accordingly.



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- At the end of the unit, consolidation of Learning Activities (COLAs) and end of unit assessments help assess learning. The information gained from these assessments helps us to then plan and organise any areas of the curriculum we believe the children need more consolidation on or any individual children we need to focus on during our class teaching.

Collecting Evidence

Work scrutinies and pupil voice have shown that science is a subject that is highly valued by staff and pupils. The children are positive about their learning in science and are responding well to the variety of teaching and learning approaches they are being exposed to. All year groups have a varied diet of learning enabling them to build on conceptual knowledge through practical investigations focused on a specific question. This equips them with the skills to develop their own ideas for further investigation which they are then able to undertake. Most science work is evidenced in books however learning can also be evidenced and collected through discussions with children, photographs and videos of children's practical work.

Enrichment Opportunities

- A 'Living Eggs' experience is made available to all year groups, in which a set of hen's eggs are delivered in an incubator to school and children are able to observe over time the hatching and early development of the chicks for 2 weeks. Science lessons during that time are linked to retrieving prior knowledge and building on new learning goals related to living things.
- All year groups plant, observe and develop several scientific investigations around seeds and bulbs to provide concrete, local examples of growing and caring for plant life, reinforcing the understanding of the fundamental interdependency of animals including humans and plants, in the sustainability of our planet.
- In KS2, children participate on online webchats with working scientists through the "I'm a Scientist Get Me Out of Here!" programme, sponsored and supported by Wellcome and the Institute of Physics (IOP). This programme was set up to enable children to 'chat' to real-world scientists at the beginnings of their careers to help dispel the common preconception that science is not for them. Feedback from our pupils who have participated so far has been overwhelmingly positive in demystifying what working in science might be like.
- An enrichment opportunity is planned for every year group :
- Year 1 - Animal handling workshop
- Year 2 - Living eggs
- Year 3 - Rocks and fossils workshop
- Year 4 - Dental nurse
- Year 5 - Planetarium and Caterpillars and butterflies
- Year 6 - Animal handling workshop



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Review of previous targets

- Evidence in books and learning walks show children working scientifically and these elements being made explicit. Some children extended their thinking to consider how they could lead their own line of enquiry based on their observations and conclusions.
- Adaptive teaching in classrooms is providing opportunities for all children to achieve. Small steps, scaffolding, explicit modelling and effective feedback supports children well. There is evidence of children having a range of methods for demonstrating their learning e.g. through oracy-based tasks in COLAs.
- Building topic boxes to expose and encourage children to read a wider range of texts linked to science topics remains an ongoing target this academic year.

Targets for 2024-2025

- To embed White Rose planning across all year groups to ensure there is a clear progression of knowledge and skills from Year 1 to Year 6. The use of monitoring and coaching will support the consistent delivery of the curriculum.
- To review the White Rose planning through speaking to teachers and pupil voice.
- To develop the use of Aspire Challenges to encourage children to move their own learning forward.
- To develop oracy skills within science lessons including the use of specific scientific vocabulary.
- For all SEND children to receive quality first teaching with use scaffolds, support, manipulatives and repeated practice to allow them to access their learning
- The use of topic boxes to widen children's reading literature and support the teaching of new and previous learnt concepts.



SEND

Science: support for children with SEND and

Possible indicators

- Fine and/or gross motor difficulties**
- Difficulty in the classroom environment**
- Vision or auditory difficulties**
- Sensory processing difficulties**

Pre-teach key vocabulary and concepts.
 Recording in different ways e.g. IPAD.
 Follow individual behaviour plans
 Use of TA to support individuals.
 Following SEND plans
 Consider any adaptations to the physical environment. Discussion with class teacher and SENDCO weekly about individual children.

Individualised

Pre-teach key vocabulary and key concepts.
 Calm learning environment. Clear/simple instructions, repeated, simplified, gestures, pictures, objects of reference.
 Processing time given & key words emphasised. Language provides simple commentary, gestures, signs, and images support understanding. Language is at appropriate developmental level.
 Structured, consistent routines. Word banks and picture cards. Worked examples. Scaffolding and different ways of recording. Use of flexible grouping. Planned movement breaks.

Targeted

Share information visually as well as through discussion. Use Diagrams and models where appropriate to consolidate scientific concepts. Allow sufficient talk time to encourage thinking and idea. TP, Heads in, think pair share, lolly sticks. sharing. Use talk for writing to support writing of explanations and scaffolding. Key vocabulary introduced at the start of every lesson. Used with the lesson. Children encouraged to use in written and verbal discussions. Highlight key words in written work. Key vocabulary referred back to the end of the lesson. should be clearly displayed and used repetitively throughout lessons. Practical examples and models used where appropriate. Concrete resources/multisensory approach. Additional time. Repeated learning Opportunities given to record in different ways e.g., video, photographs, role play, word processing, voice recording, scribe, knowledge organisers, Formative assessment used and content adjusted where appropriate. Dyslexia friendly teaching – PowerPoints on non-white, range of clear fonts, un-overloaded resources, Size 12/ 14 font/reading rulers, text on non-white, appealing visual worksheets/resources. Verbal praise. Feedback recognises progress and effort, as well as achievement. Regular opportunities to review and recap prior learning. Instructions broken down and presented in different ways. Use AFL to find out what children already know and teach in small steps from that point. Share learning objective and link it to one of the science concepts.

Universal