



## **Science Curriculum Rationale**

At Edgewood Academy, the Science curriculum is carefully bespoke, designed around self-developed National Curriculum Objectives to meet the unique and complex needs of our primary-aged students with SEND. This bespoke approach ensures that the curriculum is not only aligned with the statutory National Curriculum requirements but is also thoughtfully adapted to support therapeutic learning, bridge gaps caused by previous educational disruption, and overcome barriers related to students' special educational needs.

Our Science curriculum is structured to provide a clear, accessible progression of scientific knowledge and skills, prioritising foundational concepts that underpin future learning. It is sequenced to revisit and consolidate key ideas, recognising that many pupils may have experienced inconsistent or unsuitable prior educational settings. The curriculum explicitly integrates therapeutic strategies and 1:1 iPad technology to personalise learning, support emotional regulation, and foster engagement. This integration enables us to address cognitive, social, and emotional development simultaneously, which is essential for our pupils' holistic growth.

The curriculum objectives are carefully chosen to be aspirational yet achievable, encouraging curiosity and exploration while building confidence and resilience. Scientific vocabulary and concepts are taught explicitly and reinforced through visual aids, practical activities, and technology-enhanced learning, ensuring accessibility for all learners, including those with communication and sensory needs. The curriculum also emphasises real-world connections and practical applications to make science meaningful and relevant, supporting pupils' readiness for future educational transitions and life beyond school.

This approach aligns with our therapeutic ethos and commitment to nurture each child's potential in a safe, supportive environment. It also reflects our school improvement priorities by deepening the integration of technology with therapeutic practice, enhancing personalised learning pathways, and ensuring all pupils make meaningful progress academically and emotionally.



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## Whole School Aims

The Science curriculum at Edgewood Academy directly supports our school vision:  
**“SAFE, SUPPORTED, INSPIRED.”**

- **Safe to Grow:** Our curriculum creates a secure and predictable learning environment where pupils feel confident to explore scientific ideas without fear of failure, supported by therapeutic strategies that promote emotional regulation and wellbeing.
- **Inspired to Innovate:** By harnessing the 1:1 iPad learning environment, pupils are empowered to engage creatively with scientific concepts, developing critical thinking, problem-solving, and digital literacy skills essential for the future.
- **Connected to Community:** Science learning is linked to real-life contexts and local environments, fostering curiosity about the world and encouraging pupils to make meaningful connections with their community and beyond.
- **Rooted in Excellence:** High expectations are embedded throughout the curriculum, personalised to each pupil’s needs and abilities, ensuring challenge and progress at a pace that respects individual readiness and potential.

This curriculum supports the core aims of unlocking personal potential, building cultural and social capital, and preparing pupils for future opportunities, in line with the school’s commitment to inclusive, innovative education.

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## Subject Vision

Science at Edgewood Academy is taught to enable pupils to develop a deep understanding of the natural world, nurturing curiosity, inquiry, and confidence in their ability to learn and problem-solve. Our intent is to provide a therapeutic, accessible, and personalised Science curriculum that:

- Addresses gaps in prior knowledge and experience caused by disrupted or unsuitable previous educational settings.



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- Supports emotional and cognitive development through integration with therapeutic approaches and technology.
- Equips pupils with essential scientific vocabulary, concepts, and practical skills necessary for future learning and everyday life.
- Encourages resilience, critical thinking, and a love of learning through carefully scaffolded, engaging lessons.
- Aligns with our school improvement priorities by embedding technology to personalise learning and supporting wellbeing alongside academic progress.

Our Science curriculum is therefore a vital component of our holistic approach, preparing pupils to engage confidently with the world and their next educational steps.

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### **Communication with Stakeholders**

To ensure successful implementation and shared understanding of the Science curriculum rationale, Edgewood Academy will:

- Share the curriculum rationale and key objectives with all staff through dedicated training sessions and collaborative planning meetings, fostering a reflective culture where feedback informs ongoing curriculum refinement.
  - Communicate curriculum intent and progression clearly to parents and carers via accessible newsletters, curriculum workshops, and individual EHCP meetings, highlighting how Science learning supports each child's personal and academic development.
  - Use digital platforms such as the school's iPad learning environment and parent portals to provide real-time updates on pupil progress and examples of Science learning in action.
  - Engage with external partners, including Midlands Psychology and local SEND agencies, to align therapeutic and educational goals and share curriculum insights.
  - Prepare for OFSTED inspection by maintaining clear documentation of curriculum design, personalised adaptations, and evidence of impact on pupil progress and wellbeing.
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### Addressing Inspection Feedback

Although the most recent OFSTED inspection provided no specific feedback or grades, this curriculum rationale proactively addresses key areas aligned with the 2025 OFSTED framework and Stoke-on-Trent's SEND strategy, including:

- **Quality of Education:** By designing a bespoke Science curriculum that meets National Curriculum requirements while being personalised and therapeutic, we ensure a high-quality, accessible education that supports academic progress and emotional wellbeing.
- **Inclusion:** The curriculum explicitly addresses the needs of pupils with complex SEND, including those with disrupted educational histories, ensuring that all pupils can access, engage with, and succeed in Science.
- **Leadership and Management:** The rationale reflects strong curriculum leadership that integrates therapeutic expertise and technology, supporting staff development and high expectations for pupil outcomes.
- **Personal Development and Wellbeing:** The integration of therapeutic approaches with Science learning supports pupils' emotional regulation and resilience, key priorities for Edgewood Academy.
- **Preparation for Future Learning:** The curriculum equips pupils with foundational scientific knowledge and skills, digital literacy, and critical thinking, preparing them for reintegration into mainstream settings or future educational pathways.

This forward-looking rationale demonstrates our commitment to continuous improvement and readiness for forthcoming inspections under the new framework.

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This detailed Science curriculum rationale reflects Edgewood Academy's unique context and vision, ensuring that every pupil is supported, challenged, and inspired to achieve their full potential.