



# Picknalls First School

## Science Curriculum Statement 2024-2025



### Intent

At Picknalls First School our whole curriculum is driven by a commitment to fostering creativity, critical thinking, and a love for lifelong learning. We aim to provide a well-rounded education that nurtures each child's unique talents and prepares them for future challenges. We will teach children at Picknalls to have or be:

**Skillful** - At Picknalls First School we want all children to be skilful, turning new and imaginative ideas into reality through self-expression and a curiosity for learning. Children are encouraged to think creatively in all that they do and explore new ways of solving problems and answering questions.

**Teamwork** - At Picknalls First School we want all children to value and respect all members of the community. Children at Picknalls will be taught the skills for life to empower them to be good citizens and to contribute to the community.

**Aspiration** - At Picknalls First School we want all children to aspire towards greatness. To be productive, aim high and succeed. Expanding their knowledge of the world by nurturing their interests as well as encouraging fearlessness of things that are new or unknown by creating exciting, inspiring opportunities.

**Resilient** - At Picknalls First School we want all children to have the mental and physical resilience to be successful and happy and be confident in tackling all obstacles that come their way.

**Through these curriculum drivers we will encourage ALL children at Picknalls to become the stars of the future and shine bright in our community!**

Science for Picknalls is a subject that all children can access regardless of their areas of strengths, weaknesses or ability in other subject areas. Science can be the wonderful, exciting subject that is the best part of the week for some of our children. Science is based on effective questioning, observation, identifying patterns and problem solving and this can really support children in their learning across all subjects too. From an early age we encourage the awe and wonder of Science and the fundamental skills needed to be an aspiring scientist. Pupils are encouraged to investigate enthusiastically and challenge the rules. Science in our curriculum is thought-provoking, stimulating and fun. It will involve plenty of 'hands on' work, finding out from first-hand experience and testing hypotheses, in line with 'working scientifically' from the National Curriculum document.

### Implementation

#### *1. Curriculum Design*

- A trust wide well-sequenced, knowledge-rich curriculum that builds systematically on prior learning and lays foundations for future learning.
- Opportunities for practical exploration, investigation, and experimentation to develop scientific skills and knowledge.
- Integration of cross-curricular links when robust enough to deepen understanding and relevance of Science in everyday life.

#### *2. Teaching and Learning*

- High-quality teaching that inspires and engages pupils, fostering a passion for Science.
- Differentiated questioning to meet the needs of all learners, including those with SEND and EAL.
- Use of a variety of teaching strategies, resources, and technology to support learning and assessment.

#### *3. Assessment*

- Regular formative assessment to gauge pupils' understanding and inform next steps in learning.
- Assessment criteria that align with curriculum expectations and provide clear feedback to pupils (Focus Education "I can" statements).
- Use of summative assessment to track progress and attainment over time.

#### *4. Enrichment and Extra-Curricular Activities*

- Provision of opportunities for enrichment through visits to museums, science workshops, and interactions with STEM professionals. (Annual STEM week, Y1 trip to ThinkTank, Severn Trent Water assemblies)

- Engagement with parents and the local community to enhance learning experiences beyond the classroom. (Go Garden)

## **Impact**

### ***1. Pupil Achievement***

- Improved attainment in Science, demonstrated through regular formative assessment
- Development of key scientific skills, such as observation, prediction, experimentation, and evaluation.
- Enhanced scientific vocabulary and conceptual understanding among pupils.

### ***2. Engagement and Attitudes***

- Increased enthusiasm for Science, as reflected in pupils' eagerness to participate and explore scientific concepts.
- Growth in pupils' confidence to question, investigate, and think critically about the world around them.
- Positive attitudes towards STEM subjects and potential future career aspirations in Science-related fields.

### ***3. Inclusivity and Progression***

- Narrowing the attainment gap between different pupil groups, ensuring all learners have equal access to high-quality Science education.
- Smooth transition to Key Stage 2 and to middle schools, with pupils well-prepared for the rigours of the upper primary curriculum in Science.
- Promotion of a culture of respect, collaboration, and resilience in the face of scientific challenges.

## **Cultural Capital in Science**

Activities such as those listed below enable our children to access cultural capital in Science:

- Annual STEM Week provides the whole school with visitors from Seven Trent, Sublime Science/ Fizz Pop Science, Rolls Royce.
- Fundraising for WWF during Gorilla Week to help protect mountain gorillas (deforestation)
- The Burrow (Picknalls Woodland Classroom) our school as a habitat for wildlife
- Annual Duck Eggs delivery for whole school (seeing them hatch in an incubator to teaching them how to swim)
- School Trips – R BeWilderWood (Wildlife) Y1 ThinkTank (observation, exploring, testing) Y2 Conkers (exploring, pattern seeking) Y3 Wolseley Wildlife Trust (Animals, habitat, environment) Y4 Standon Bowers (collaboration, problem solving)
- Vegetable Plot and Greenhouse – growing our own vegetables
- Go Garden – Looking after UK wildlife
- ECO Committee - sustainability
- Bramshall Park – Local environment for wildlife, plants and trees.
- Scientists to be studied in each year group: EYFS -Chris Packham (Animal conservationist)  
Y1- Chester Greenwood (inventor of earmuffs)  
Y2- Florence Nightingale (female nurse and founder of modern nursing)  
Y3- Mary Anning (British female scientist)  
Y4- Thomas Edison (American male inventor of the light bulb)

## **Science Action Plan 2024 2025**

- 🔗 Ensure all staff receive important feedback and general upskilling from termly Science updates
- 🔗 Monitor the implementation of Science using the new trust wide planning given to staff by completing book looks and lesson drop ins.

Written by Steph Fenton, Science Leader