Science Policy 2022/2023

Aims: Increasing children's knowledge and understanding of the world, whist developing the skills associated with scientific enquiry.

Teaching Approaches: We follow the National Curriculum for teaching science through the Developing Experts scheme of work where we develop key knowledge alongside 'working scientifically' skills (Understanding & Explanations, Classification, Data, Tables & Graphs, Designing Experiments, Analysis & Evaluation).

Lessons address five principles that are reviewed annually with pupils and teachers to fit with school development priorities. Our current principles are:
1. Building Knowledge & Key Skills (with a high focus on vocabulary)
2. Making Links to the Real World (careers, community, global issues)
3. Developing Curious Minds
4. Critical Thinking (child & adult-led investigations, encouraging children to question everything)
5. Collaboration (working together, making effective subject links)

Differentiation and Challenge: Children will be supported through appropriate and flexible challenge within the classroom. Children who are 'rapid graspers' or 'working at greater depth' in science will be challenged through their explanations, through their responses throughout an investigation and through careful questioning from teachers.

Growth Mindset: It is our aim to maintain an ambitious vision, with high expectations and a culture of problem solving, resilience and improvement developed through Growth Mindset.

Science Curriculum: We instil the core National Curriculum aims set against appropriate challenge.

Inclusion and Equal Opportunities: Our curriculum is fully inclusive and all children can succeed in science. Lessons are designed to teach science in a clear and deliberate fashion, emphasising secure content knowledge before moving on to tasks to enable all learners to make progress. We support ranging needs, celebrate cultural diversity and make learning relevant through linking content to the context of our school and children.

Intervention: Teachers use formative assessment throughout lessons and units of work, reacting and intervening based on the needs of the children. Questioning techniques and scaffolding of tasks are used skilfully to ensure children's success. Pre and post teaching is used when necessary.

Speaking and Listening: As with the mastery approach, children are encouraged to become scientifically articulate – speaking in full sentences and using appropriate vocabulary.

Planning in Science: Science is taught through planned half termly unit blocks as a weekly stand alone lesson. Previous knowledge and skills are built upon in every lesson. Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics. Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific

understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.

Health & Safety: School has its own generic risk assessment which can be found in the resources drive. This risk assessment is reviewed annually with South Tyneside's Health & Safety Department. The school also have a log in to CLEAPSS for further advice.

Timetabling of Science: Science lessons take place through regular weekly sessions where each unit block is a planned to be carried out half termly across the year to ensure science is progressive throughout the year groups.

How do we assess science? Science assessment is on-going and formative. It happens in the classroom as part of the normal teaching process and informs lesson pitch, differentiated intervention and future planning. At the end of a unit block the children are assessed by a summative test which is then used to inform a uniformed assessment sheet of foundation subjects (completed at the end of a term)

Homework in Science: Teachers occasionally set science home learning tasks that link to classwork.

Involvement of Home: The subject lead sets optional whole school science tasks throughout the year aimed at developing family science capital.

Extra Curricula Science: After school KS1 & 2 science clubs are provided throughout the year.

Information and Communication Technology (ICT) in Science: Science is linked to computing where applicable. Teachers use ICT to support teaching and pupils use ICT to support learning.

Resources in Science: Science resources are organised and kept centrally. They are maintained and updated annually. Sometimes consumables or other resources are required within lessons and are purchased by class teachers who are reimbursed for their purchases.

CPD in Science: Delivered by Science lead, external advisors, independent reading and virtually.

Work and Presentation: Non-negotiable school presentation and organisation procedures should be adhered to. Science work is presented in various ways.

Marking: Marking is ideally done 'live' during lessons, teachers respond to misconceptions as a whole class or through intervention. Pupils sometimes self-assess/peer mark. Questioning is used to extend learning. Learning objectives are highlighted green when children have been successful.

Evaluation and Monitoring: Teachers ensure good coverage of working scientifically skills, termly pupil voice, governor meetings and work scrutinies. When formal observations take place, they are conducted alongside a member of SLT with a key focus.

School Governor Role in Science: There is a link governor allocated for the oversight of science – (Governor Name). Key documents/action plans are shared when updated and regular meetings are held with the link governor