Science Policy

Signed by Chair of RAP Committee during COVID-19	
Signed Acting Headteacher	
Date	May 2020
Review Date	June 2021

Introduction:
This policy expresses the school's purpose for the teaching and learning of Science. The policy sets out the planning of the curriculum, assessment and monitoring of Science across school. It was developed in May 2020 by the Science subject leader and STEM (Science, Technology, Engineering and Maths) team through discussion with other teachers and the leadership team.

Aims of the Science Policy:
Our school Science policy follows the Primary National Curriculum 2014. It aims to ensure that all of our pupils;

- Develop scientific knowledge and understanding through the individual disciplines of Biology, Physics and Chemistry.
- Develop an understanding of the nature, processes and methods of Science through different types of Science enquiries, that help them to answer scientific questions about the world around them.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- Are well-prepared to live in an increasingly scientific and technological world.

Purpose
A high quality Science education allows pupils to understand the world they live in and the importance of scientific discoveries. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.

The purpose of our Science teaching is to develop;

- A positive attitude towards Science and a growing curiosity about the world around them.
- An appreciation of the contribution Science has made to our daily lives.
- Pupils' enjoyment and interest in Science.
- Confidence and competence in scientific knowledge, concepts and skills.
- An understanding of science through investigation and enquiry.
- An ability to communicate scientifically, using key vocabulary accurately to explain scientific concepts clearly.
- An ability to work both independently and with others.

Teaching and Learning
Teachers plan and deliver high-quality and engaging Science lessons using a wide range of teaching and learning styles. Our units of work are based around our school curriculum drivers (SPECIAL – Spirituality, Perseverance, Environment,

Curiosity, Independence, Ambition and Love), wherever appropriate. Our lessons will provide opportunities for pupils to;

- Work scientifically – develop their working scientifically skills through hands-on, practical experiences.
- Develop researching skills through the use of primary and secondary sources.
- Plan and carry out investigations and experiments.
- Develop their understanding of different types of scientific enquiry (classifying, observing, fair testing, researching).
- Develop questioning and answering skills.
- Use ICT/Computing technology where possible.
- Learn about Science using the outdoor environment.

Planning

School Curriculum

Science in the Early Years Foundation Stage is planned using the Early Years Framework under the key learning areas Understanding the World, Expressive Art and Design and Physical Development. Science in Key Stages 1 and 2 is planned using the National Curriculum 2014. We carry out our curriculum planning in Science in two phases (long term plans and medium term plans). The long term plan maps the scientific topics studied each term during each Key Stage. The Science Subject Leader, STEM team and Senior Leadership Team organise this in conjunction with teaching colleagues in each year group and where possible, have created cross-curricular links. Our medium term plans give details of each unit of work for each half term and the class teacher is responsible for these.

The National Curriculum 2014 Programme of Study describes a sequence of knowledge, concepts and working scientifically skills. Whilst it is important that pupils make progress, at Latchford St James we understand it is essential that our pupils develop a secure understanding of this knowledge, concepts and skills as they progress through school. Our pupils should be able to describe processes and key characteristics of Science and should also be able to use key vocabulary correctly. Our children should also be able to apply their mathematical skills to Science when considering recording, interpreting and presenting data.

Differentiation

Science will be planned to give a range of differentiated activities and opportunities appropriate to their age and ability. Tasks are set to challenge all pupils, including our greater depth children. Tasks may be adjusted appropriately or extra support provided for children with SEND.

Assessment

As of September 2020, teachers are to use the HeadStart Primary assessment tool to assess and record pupil's attainment for each of the units taught. All data is to be recorded half-termly on the school's data tracker and made available to the Science co-ordinator and STEM team. An end of year test from the HeadStart

Primary tool is also to be carried out during Summer Term 2 to give an overall score for Science attainment for that academic year.

Educational Visits

All year groups should have at least one educational visit or visitor to school linked to one of their Science units.

Each year, school has a Science Day where children across school take part in a range of different experiments and watch a Science roadshow to develop their curiosity and interest in Science. The aim of Science Day is to provide all children with opportunities to develop their working scientifically skills and how to work safely and responsibly with their peers.

Monitoring and Evaluation

Science STEM team will monitor the subject termly by;

- Monitoring and evaluating pupils work (in books)
- Lesson observations
- Learning walks
- Planning and assessment monitoring

Safety

Staff must adhere to the school Health and Safety Policy when planning any scientific experiments and investigations. Teachers at Latchford St James will plan safe activities for Science and will, if necessary, complete a risk assessment. Staff are to check equipment regularly and report any damage to equipment to a member of the STEM team. All staff are responsible for checking the equipment they use within their lessons and ensure any defective equipment is removed safely and in line with guidance. Children are also made aware of their own personal safety and the safety of others during Science lessons.

Marking

Marking is to be completed in line with the Latchford St James marking policy (please refer).

Resources

Science resources are stored in the cupboards in the staff room. Staff are able to request new resources by recording any order requests in the book attached to the Science cupboard door, where a member of the STEM team will review this.

Role of Subject Leader and STEM Team

The subject leader and the STEM team will provide professional leadership and management of Science and will ensure that it meets the needs of the school objectives. The subject leader and STEM team will manage resources and budgets for Science. The STEM team will also monitor the teaching and learning of Science across school and will review work and planning.