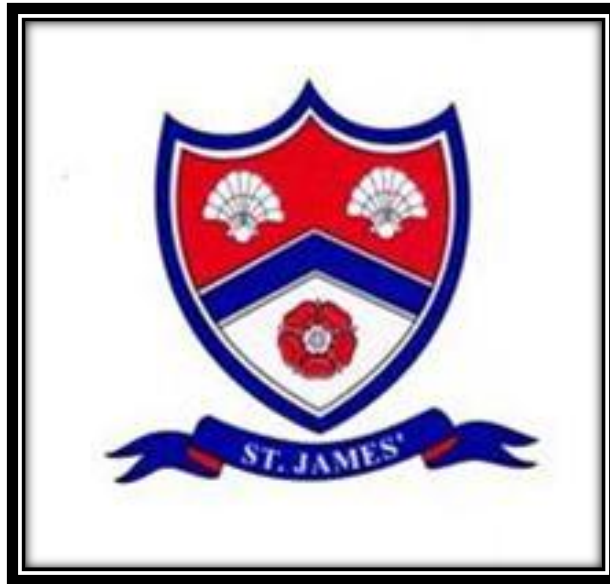




St James CE Primary School, Haslingden

SCIENCE POLICY	
Written By	S. Arshad
Date	September 2026
Review Date	September 2028

Growing in God's Love, Learning as we go.

Sowing seeds of kindness

(Matthew 13 Parable of the Sower)

ENDURANCE FORGIVENESS PEACE
FRIENDSHIP TRUST KOINONIA
THANKFULNESS

Mission statement

In Science, we aim to encourage all children to explore and investigate, confidently, to gain a deeper understanding of the world around them. This includes providing exciting, practical experiences which will encourage curiosity and questioning. They will be stimulated and challenged in order to secure and extend their scientific knowledge and skills.

It is our intention to develop a real passion and love for Science in the hope that our children will move onto High School and later life with a love for Scientific enquiry and a real awareness of the world around them. Science teaching at St James' will also fully support the school ethos as we aim to inspire awe and wonder of God's created world within all the children in our care.

1. Aims and objectives

At St James' we believe that the best Science teaching fosters and develops pupils' natural enquiry skills whilst also helping them to reach their full potential. Children need to acquire the necessary scientific knowledge and enjoy the experience of purposeful scientific enquiry in order to answer questions.

We aim to prepare our pupils for life in an increasingly scientific and technological world so that they can understand how vital science is in today's society.

We aim to do this by –

- All staff delivering interesting and engaging lessons.
- Teaching cross-curricular links especially in Literacy, Maths and ICT.
- Developing and extending knowledge and understanding.
- Developing pupils' ability to work scientifically by inviting them to plan, carry out and evaluate investigations.
- Developing scientific vocabulary and using this appropriately in a variety of contexts.
- Ensuring all pupils are challenged to make good or better progress at their appropriate level.
- Encouraging a positive attitude to Science from both pupils and staff.

The following learning outcomes are derived from the aims above and will form the basis of our decisions when planning a scheme of work:

- to develop a knowledge and understanding of science and its processes ·
- to develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures ·
- to encourage pupils to relate their scientific studies to applications and effects within the real world
- to build on pupils' curiosity and sense of awe of the natural world ·
- to develop in pupils a general sense of enquiry which encourages them to question and make suggestions ·
- to encourage pupils to predict the likely outcome of their investigations and practical activities.
- to use a planned range of investigations and practical activities
- to give pupils a greater understanding of scientific facts and concepts ·
- to provide pupils with a range of specific investigations and practical work which gives them a worth-while experience to develop their understanding of science ·

- to develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of a "fair test"
- to develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts
- to use scientific and mathematical language - including technical vocabulary and conventions - and draw diagrams and charts to communicate scientific ideas ·
- to give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science
- to develop pupils' skills and their ability to make accurate and appropriate measurements,
- to give pupils opportunities to use a range of simple scientific measuring instruments (such as thermometers and forcemeters) and develop their skills to read them.
- to give pupils the opportunities to use ICT to record their work and store results
- to encourage children to be independent learners where appropriate.

2. Science curriculum planning

Science is a core subject in the National Curriculum. Our school uses the national programmes of study for Science as the basis for its curriculum planning.

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology (Life Processes and Living Things), chemistry (Materials and their Properties) and physics (Physical Processes). These disciplines will be made clear to children to ensure smooth transition to KS3.
- develop 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 (Working Scientifically).
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

To assist in this, pupils will receive copies of knowledge organisers for each unit of study that they encounter: these will detail the core knowledge we expect all pupils to learn and be regularly revisited in lessons.

The topics covered in each year group are:



SEASONAL CHANGES

Year 1



ELECTRICITY

Year 4

Year 6



LIGHT

Year 3

Year 6



PLANTS

Year 1

Year 2

Year 3



ROCKS

Year 3



ANIMALS, INCLUDING HUMANS

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6



FORCES AND MAGNETS

Year 3

Year 5



MATERIALS AND THEIR PROPERTIES

Year 1

Year 2

Year 5



STATES OF MATTER

Year 4

Year 5



EARTH AND SPACE

Year 5



LIVING THINGS AND THEIR HABITATS

Year 2

Year 4

Year 5

Year 6



EVOLUTION AND INHERITANCE

Year 6



SOUND

Year 4

Key features of Science teaching at St James' include

- Lessons having clear learning objectives and success criteria which are shared with the children.
- First hand experiences, where appropriate.
- Appropriate pace of learning and high expectations for all children.
- Pupils' prior knowledge taken into account using AfL.
- High standards of presentation expected using different formats such as writing, diagrams, graphs and tables.
- Using a wide range of resources – remembering that there are different types of learners e.g. kinaesthetic and auditory.
- ICT is used, where appropriate, to enhance learning.
- Children recognising the importance and relevance of Science in today's society.
- Allowing children to be independent learners but also developing skills for working collaboratively through approaches such as Kagan.
- Using the outdoor environment, where possible.

3. Assessment for learning

Teachers assess children's work in Science by making informal judgements as they observe them during lessons. Also, on completion of a piece of work, the teacher assesses the work and gives oral or written feedback as necessary to inform future progress. Pupils are also encouraged to make judgements about how they can improve both their own work and the work of their peers. Objectives for each unit are placed onto assessment sheets and teachers record whether children are working below, in line or above these objectives. Children exceeding or not meeting the expected level will be provided with extra support or extension activities during the following unit.

At the end of each term, the teacher makes a summary judgement of both the scientific knowledge and ability to work scientifically of all children and will give them one of the following assessment levels for each year group.

- Secure (Greater Depth) - pupils are working above an appropriate ability level for year group.
- Secure – pupils are working at an appropriate ability for their year group.
- Developing – pupils are working just below an appropriate ability for their age group.
- Entering - pupils are starting to use some of the skill appropriate for their age group.

These results are uploaded to the Lancashire online assessment system (tracker) and reviewed by the coordinator on a termly basis.

4. The Early Years Foundation Stage

In Nursery and Reception, Science is taught discretely during Outdoor Provision and is included regularly as part of Indoor Provision. It is also covered in the 'Understanding the World' area of the EYFS Curriculum, this involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. 'Working Scientifically' is embedded throughout the areas of learning. It is introduced indirectly through activities that encourage children to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. During their first year at school the children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify difference and similarities. They

will also learn to use their senses, feeling dough or listening to sounds in the environment, such as sirens or farm animals. They will make observations of animals and plants and explain why some things occur and talk about changes. The children will be encouraged to ask questions about why things happen and how things work. They might do activities such as increasing the incline of a slope to observe how fast a vehicle travels, or opening a mechanical toy to see how it works. The children will also be asked questions about what they think will happen to help them communicate, plan, investigate, record and evaluate findings.

5. Health and safety

- All staff involved in Science lessons should be conversant with the school's Science risk assessment document which is based around the CLEAPSS safety guidance. Easy to find, activity based, advice can be found on <http://primary.cleapss.org.uk/Resources/Doing-Things-Safely/Safety-Notes/>
- Individual class teachers must plan safe activities for Science and complete a risk assessment for activities if necessary.
- All staff must be aware of health and safety procedures when using food/equipment in the classroom. Safety hazards must be pointed out to the children.
- Pupils must be aware of the need for personal safety and the safety of others in lessons.

6. Equal opportunities

At St. James, we teach Science to all children, whatever their ability and individual needs. Science forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Science teaching, we provide learning opportunities that enable all pupils to make good progress. We recognise, however, that there are children of different abilities in all classes, so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

We achieve this in a variety of ways by:

- Setting open-ended tasks which could have a variety of responses;
- Setting tasks of increasing difficulty (not all children complete all tasks);
- Grouping children by ability in the room and setting different tasks to each ability group;
- Providing resources depending on the ability of the child;
- Using classroom assistants to support the work of individuals or groups of children.

We strive to meet the needs of those pupils with special educational needs, those with disabilities, Gifted and Talented pupils, and those learning English as an additional language. We take all reasonable steps to achieve these goals. We recognise the importance of ensuring that children with identified Special Educational Needs and/or Disabilities have access to an ambitious Science curriculum. Within the curriculum area of Science, SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENCO where applicable.

Equal Opportunities Curriculum planning will ensure that all pupils have an equal opportunity to take part in the full scheme of work and its associated practical activities regardless of gender or cultural background. Gender stereotypes will be challenged when they arise and the context in which Science is taught will be monitored to ensure the interests of both boys and girls are maintained. Contexts used in teaching will also be sensitive to different ethnic and religious backgrounds and both gender and cultural differences will be reflected positively in the teaching materials used.

7. Curriculum Lead

The Science lead will ensure that the monitoring and development of the subject is maintained at a high standard by:

- monitor planning across school (Autumn, Spring and Summer);
- undertake discussions with pupils;
- conduct learning walks and book looks to observe the coverage of Science (some aspects of Science may be recorded in other ways such as videos on Seesaw);
- analyse the data collected from each class to ensure good, if not better, progress is being made at child, year group and whole school level;
- provide guidance to colleagues;
- assist with maintaining and replenishing resources that are required within the budget;
- assist staff to implement assessment throughout school;
- ensure that the Schemes of Work allow for progression across school;
- keep up to date with changes or new initiatives that would support the development of Science at St. James' School;
- prepare reports on the above to inform the school's Governors;
- formulate an Action plan each year to ensure the provision of Science at St. James remains current, relevant and of the highest possible quality;
- review this policy every 2 years.

8 Spiritual, Moral, Social and Cultural Links to Science

The spiritual development of pupils is shown by their:

- sense of enjoyment and fascination in learning about themselves, others and the world around them
- use of imagination and creativity in their learning
- willingness to reflect on their experiences.

The social development of pupils is shown by their:

- willingness to participate in a variety of communities and social settings, including by volunteering, cooperating well with others and being able to resolve conflicts effectively
- Pupils learn about themselves and the variation amongst individuals. They learn about health and hygiene.
- Science provides opportunities to develop informed attitudes to many topical issues. By doing so, children can begin to develop mature, responsible opinions and values. In science, opportunities should be taken to discuss aspects of environmental awareness with the aim of developing responsible attitudes to waste disposal, resource depletion, wildlife conservation etc. Pupils also have the opportunity to investigate living things and a respect for all organisms should be taught.

The cultural development of pupils is shown by their:

- understanding and appreciation of the wide range of cultural influences that have shaped their own heritage and that of others
- willingness to participate in and respond positively to artistic, sporting and cultural opportunities
- interest in exploring, improving understanding of and showing respect for different faiths and cultural diversity, and the extent to which they understand, accept, respect and celebrate

diversity, as shown by their tolerance and attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities.

9. Resources

Science resources are kept in the cupboard outside Year 5. The resources are clearly labelled. Staff are to notify the Science lead if any resources are broken or missing and also when supplies are running low. The Science lead should be notified of any necessary resources not found in the Science resource cupboard. Resources may be signed out and kept in individual classrooms if they are to be used during a half term's Science unit but should be returned to the store at the end of the half term in a neat and orderly fashion.

10. Wider opportunities and Cross-Curricular Links

Science will be taught discretely, however, cross curricular links especially with use of the local and wider environment are encouraged. Through various workshops, visits to museums, outside speakers and interactions with experts, children gain the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn the possibilities for careers in science as a result of our community links and connection with national agencies such as the STEM association. We ensure that children have access to positive role models within the field of science from the immediate and wider local community. From this exposure to a range of different scientists from various backgrounds, all children feel they are scientists and capable of achieving.