BADSWORTH
CofE School

CARE – Prepare – Believe
'I can do all things through Him who strengthens me'
Philippians 4:13

Science Policy

2023

All stakeholders work towards our school vision:

Here at Badsworth C of E Junior and Infant School, we ensure everyone flourishes through the way we:

***C**onsider **A**nd **R**espect **E**veryone as Jesus taught*
***Prepare** for a bright future*
***Believe** we can make a difference*

'I can do all things through Him who strengthens me.'
Philippians 4:13

All actions which are taken within school, focus on this vision and it is referred to throughout their time at Badsworth School.

Intent

At Badsworth CE J&I Primary school, we recognise the importance of science in every aspect of daily life and encourage children to be inquisitive throughout their time at school and beyond. Through our carefully planned Science curriculum, we foster a healthy curiosity in children about our universe and promote respect for the living and non-living things. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes and these themes underpin all of our curriculum and teaching.

All children are given the opportunity to develop and use a wide range of skills including observation, planning, predicting, questioning, debating and investigating.

We aim to enable children to become independent learners who have the opportunity to explore topics through hands-on practical experiences and discussion using correct scientific terminology that is taught progressively through the Key Stages. Concepts taught throughout the children's learning journey are reinforced in various year groups ensuring that prior learning is consolidated and built upon.

Aims:

The National Curriculum for Science aims to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines
- 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
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

As well as these, Badsworth CE J&I Primary school aims to:

- Enable pupils to make decisions about the uses and values of scientific work and achievements
- Enable pupils to develop an understanding and respect for the natural world
- Enable pupils to question, hypothesise, test and discover for themselves about our world
- Develop the skills required to investigate the world around them

Leadership and Management Roles

The Science co-ordinator is responsible for ensuring that the aims of the Science Policy are met. In addition to this, the science co-ordinators should:

- Be enthusiastic about Science and demonstrate good practice
- Encourage and support staff in the implementation of the curriculum and school approaches to Science teaching
- Co-ordinate assessment procedures and record keeping to ensure progression and development throughout the school
- Monitor the teaching and learning of Science throughout the school
- Bid for funding to maintain resources
- Organise and review all science-based resources, ensuring they are readily available and maintained
- Support staff by encouraging the sharing of ideas and organising in-service training as appropriate

Equal Opportunities and Inclusion

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following:

- To encourage and build upon our children's natural curiosity, stimulating them to ask questions and motivate them to investigate
- To develop their knowledge and understanding of science, making the concepts we study relevant to their everyday life and giving them opportunities to explore and observe at first hand where possible
- To teach the children scientific skills and strategies and to develop positive attitudes which encourage them to share response
- To prepare our children for life in an increasingly scientific and technological world.

All children have equal access to the full Science programme of study that satisfies the National Curriculum 2014 requirements. It is important for all children to experience a range of scientific activities in ways that are appropriate to their needs and abilities. Special provision is made in exceptional cases.

Science in EYFS

Play underpins the delivery of all the EYFS. In playing, children behave in different ways: sometimes within their play, they may describe and discuss what they are doing and sometimes they may be more reflective and quieter as they play. Within a secure and challenging environment with effective support, children can explore, develop and experiment as they play to help them make sense of the world. The EYFS strand 'Understanding the

World' leads directly to scientific elements of the curriculum and leads to more formalised Science learning in KS1 and then KS2.

Teaching and Learning

The science curriculum is mapped to ensure alignment with the national curriculum content and programme of study. Key knowledge relates directly and builds towards the achievement of end of phase (KS1, Lower KS2 and upper KS2) 'end points', informed by the National Curriculum statements. Key skills are also mapped so that these are developed systematically and align directly to the specified working scientifically statements as outlined in the NC for each phase.

In each lesson, children are guided towards the learning intention through the use of a learning objective which is shared at the beginning of each lesson and reviewed by the children at the end. A working wall will be used to support and celebrate learning throughout each unit of work that is in line with our purchased science scheme of work, "Pzaz". The working wall will include key vocabulary for each science topic, as well as posters outlining the following enquiry skills:

These skills will directly inform teacher planning and assessment, and ensure a common ethos in the teaching and learning of science across school.

Planning and Resources

Teachers use the purchased Science scheme "Pzaz" to inform lesson content, specialist vocabulary and key knowledge and to ensure an appropriate emphasis on skills through practical experiences and approaches. This scheme of work also provides us with useful assessment tools and detailed knowledge organisers for the children to refer to at the beginning of each Science topic.

Where appropriate, teachers are also encouraged to further develop their planning through using these Science resources and websites:

- PLAN Knowledge matrices and example work.
- PSTT – Primary Science Teaching Trust

- WOW Science
- STEM
- Hamilton Trust

Key knowledge and skills, in line with the National Curriculum are mapped on the whole school 'Science Knowledge and Skills Progression Map' and this shows the key knowledge and skills of each unit and how they build through the school. The school's own context is also considered and opportunities for learning outside the classroom, including the use of specific school resources (such as our forest school area) and relevant educational visits, are included on the map and are planned by teachers. Cross curricular links are also mapped to further support the contextual relevance of the science curriculum.

High-quality science resources to support the teaching of all units and topics from EYFS to Y6, are used consistently and maintained by the subject leader. These are kept in a central store and are labelled and easily accessible to all staff. As well as these, the EYFS classes have a range of resources for easy access to children during exploration. The library contains a rich and varied supply of science topic books to support children's individual research and all classes have access to these during their weekly allocated library slot.

Assessment

As part of the introduction to each new science topic, teachers review what the children know already and identify what they would like to learn. This informs the programme of study so that it takes account of children's starting points as well as their specific interests. The use of the knowledge organisers at the beginning of each topic and throughout the course of the learning also helps to assess prior knowledge and the building of this as time passes.

Lessons are planned to ensure that key knowledge is developed over time, over the course of each science block and in the correct sequence. Key knowledge is reviewed by the children through self-assessment and rigorously checked and consolidated by the teacher at the end of each unit of work.

The way in which Science is recorded will vary across the school depending on age and ability. Teachers should ensure that a range of appropriate methods are used. These may include:

- Written accounts including: instructions, reports and explanations
- Diagrams, drawings and pictures
- Annotated diagrams
- Spreadsheets (data collection)
- Charts, graphs and tables
- Model making

Ongoing assessment also includes:

- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children
- Considering work/materials / investigations produced by children together with discussion about this with them.

In EYFS, we assess the children's Understanding of the World according to the Development Matters statements.

Teachers will also make a formal assessment of the children's work in science at the end of each topic, and this is reported to parents/carers on the child's annual school report as well as during parents' evenings.

Safe Practice

Children are encouraged to consider their own safety and the safety of others at all times and teachers will provide a safe and secure environment for children to learn. Any experiments or trips which are considered a particular risk will need a Risk Assessment Form to be completed and to consult the Science Co-ordinators and relevant SLT members prior.

Review

This Science policy will be reviewed annually by the Science Subject Leader and the Senior Management Team.

Rhiannon Davison, 2023