Science Policy

INTRODUCTION

At Bridgewater our policies are regularly reviewed. This reflects current practice within school and all related government guidance and statutory requirements.

INTENT

Science teaching at Bridgewater aims to give all children a strong understanding about the world they live in and the part science plays in helping us understand life in general. This should include outdoor learning, visits and visitors to bring it to life and show how exciting a subject it is. We link science to the world of work and challenge stereotypes when they arise. We aim to ensure that such experiences will be relevant to the world of the child but must at the same time satisfy their curiosity and offer a worthwhile challenge.

At Bridgewater, the children will acquire and develop the key knowledge that has been identified within each unit which is built upon across each year group. Concepts and scientific skills are applied wherever relevant to enhance the wider curriculum and further develop the children's knowledge. All children are encouraged to develop and use their skills to observe, question and investigate the world around them. Key vocabulary for topics is taught and built upon, and effective questioning to communicate ideas is encouraged.

EQUAL OPPORTUNITY

We are committed to providing a teaching environment conducive to learning. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability.

LEARNING IN SCIENCE

Science work is planned using the National Curriculum for Science 2014. The programmes of study for science are set out year-by-year for key stages 1 and 2. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

In Early Years the development of scientific thought is an important area of experience. Learning should be active, bearing in mind the requirements of the EYFS Curriculum Guidance.

Key features of science include:

- Lessons have clear learning intentions and success criteria
- A dual objective approach ensures that science knowledge is taught alongside science skills.
- Account is taken of pupils' prior learning
- Prior learning should be revisited to ensure knowledge is retained
- Pupils are regularly given opportunities to plan, predict, investigate and evaluate different types of practical activities.
- Good use is made of a wide range of resources
- ICT is used to enhance learning and teaching experiences
- Pupils are encouraged to talk like a scientist and use appropriate scientific vocabulary
- Appropriate pace of learning is in place and high expectations maintained
- Pupils are aware of the importance of scientific work to everyday life and make relevant links
- High standards of presentation are expected
- Pupils are praised effectively to encourage and motivate them and are well supported according to their needs
- Pupils are encouraged to share responsibility for their own learning

We recognise that there are a variety of ways in which teaching may be effective and that each has its value. A good balance of methods includes:

- direct teaching
- discussion
- teacher demonstration
- research
- individual and group work
- clearly focused exploration
- first hand experience of teacher led and child initiated investigation

Since all children have an equal entitlement to the whole curriculum, differentiation will allow access to science at a level appropriate to all pupils' needs including those with Special Educational Needs, where English is the second language and for the high attaining pupils. Teachers will track forwards/back to identify appropriate learning objectives and success criteria.

RESOURCES

Learning resources are kept in the science cupboard. This is managed and monitored by the science coordinator. All equipment is labelled and stored in its own place. It is the responsibility of all the staff to return all equipment to the Science cupboard. The Co-ordinator maintains oversight and purchases new material sources at regular intervals. An audit of all equipment has been done.

ASSESSMENT

The assessment of Science is an integral part of teaching. It allows teachers to identify what the children already know, what has been learnt and to monitor children's progress

Assessment will take place at three levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

Short-term assessments will be an informal part of every lesson to check the children's understanding and give the teacher information to adjust future lessons. Children are continuously assessed by:

- 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.

Marking is used to acknowledge achievements and to show the pupils what they need to do in order to improve. Scientific spellings are modelled and corrected.

Medium-term assessments take place at the end of every unit of work. The teacher will assess the children based on the end of key stage expectations laid down in the Primary Framework.

Long Term assessments will take place towards the end of the year. Teachers will draw upon their end of unit assessments and supplementary notes about their class against the end of year/key stage expectations laid down in the Primary Framework to produce a summative record.

MONITORING

The teaching of science is monitored by the Science Coordinator on a regular basis, each class being visited once a year. Follow-up discussion and evaluation of children's work aims to ensure that there is continuity and progression throughout the school. The coordinator is the first port of call for advice and can bring in outside agencies for guidance when necessary.

SAFETY IN SCIENCE

We accept that we must all plan safe activities for science. We must make our children aware of the need for personal safety and the safety of others during their investigations. We encourage them to reflect on safety issues themselves to help reinforce teacher direction. Class Teachers, Teaching Assistants and the Subject Leader will check equipment regularly and report any damage, taking defective equipment out of action.

Health and safety advice is given in the “Be Safe!” Guide. This provides model risk assessments for activities in primary science. A copy of which is available from the science coordinator for staff to refer to. If an activity is not covered by ‘Be Safe’ then we will contact CLEAPSS https://science.cleapss.org.uk/helpline/ for further advice.

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