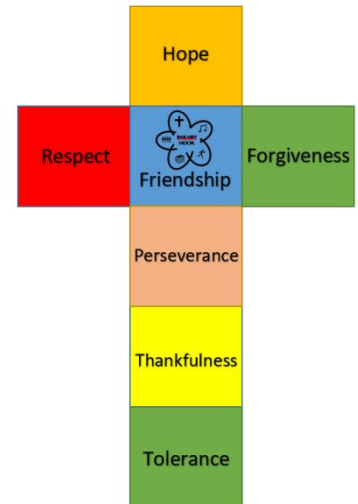


Our School Vision is to work as a community within the school's Christian ethos. We promote world faiths alongside our Christian Values to work towards creating an Outstanding school where all can flourish. Through the provision of a broad and balanced curriculum we encourage every child to develop lively, creative and enquiring minds enabling them to become confident individuals who reach their full potential and succeed in Modern Britain.

Our school works in partnership with the church and the wider community to give a caring and nurturing environment. Together we enable and equip each child to 'live life to the full' (The Gospel of John – Chapter 10, verse 10).

We will realise our Vision by:

- demonstrating, as a Church school, our Christian values in action
- delivering consistently high standards of teaching
- providing a happy, healthy and secure environment where all are respected, valued and encouraged to contribute
- providing excellent leadership and governance
- encouraging a love of learning by participating in experiences full of opportunity and creativity
- pursuing excellence in every aspect of school life, supporting one another and celebrating the achievements of all
- nurturing a partnership of pupils, teachers, parents, governors and the local community
- ensuring targets are challenging and achievable



Our Values

Our Values are at the heart of our school vision and are illustrated in the Cross and shared with children on a regular basis, in Collective Worship and reinforced through our teaching and every day school life.

We established these in collaboration within our school community.

Our values can be said to be 'Human Values' and inclusive for all. As a Church of England school, however, we have rooted these Values in our Christian beliefs and in stories from the Bible making it particularly memorable for children.

Principles Of Science

The Principles of Science were agreed in our school by children, staff and parents. The principles set out what Science in our school is truly about, and what we believe to be important about science in our school.

- *Children are discovering through investigation.*
- *Children are asking investigative and exploratory questions.*
- *Children have the necessary scientific equipment and resources to help them find out more in the classroom and beyond.*
- *Children are inspired to find out more about the world of Science around them.*

- *Science is always present within the classroom environment, and the wider classroom.*
- *Children are made aware of scientific careers for adulthood and aspirations and ambitions are achievable.*

Early Years Foundation Stage

We teach science in the Early Years Foundation Stage, as an integral part of the work covered during the year. Children must be supported in developing the knowledge, skills and understanding that help them to make sense of the world around them. Their learning must be supported through offering opportunities for them to use a range of tools safely; encounter creatures, people, plants and objects in their natural environments and in real-life situations; undertake practical 'experiments'; and work with a range of materials. Teachers follow the revised Statutory Framework for the Early Years Foundation Stage 2014. This outlines the knowledge, skills, understanding and attitudes children will need in order to achieve the Early Learning Goals. These goals are intended to be achieved by most children by the end of the Foundation Stage 2.

The contribution of science to teaching in other curriculum areas

English

Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Understanding of the significance of key scientists, is developed through texts that the children study in English. The children develop oral skills in science lessons through discussions (for example, on the environment) and through recounting their observations of scientific experiments. They develop their writing skills through writing reports and projects and by recording information.

Mathematics

Science contributes to the teaching of mathematics in a number of ways. The children use weights and measures, develop their data analysis skills and learn to use and apply number skills. Through working on investigations, they learn to estimate and predict. They develop the skills of accurate observation and recording of events. They use numbers in many of their answers and conclusions.

Computing

Children use computing skills in science lessons where appropriate. They use it to support their work in science by learning how to find, select, and analyse information on the Internet and using equipment such as data-loggers. Children use i-pads and laptops to record, present and interpret data and to review, modify and evaluate their work and improve its presentation.

Personal, social and health education (PSHE) and citizenship

Science makes a significant contribution to the teaching of personal, social and health education. The subject matter lends itself to raising matters of citizenship and social welfare and healthy eating and exercise. These last two areas also contribute towards the work we do as part of being a Healthy School. Children also study the way people recycle material and how environments are changed for better or worse.

Spiritual, moral, social and cultural development

Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that affect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of pollution and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the Earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people.

PLANNING

Each class will write medium term plans for their age group, this will follow the programmes of study in the National Curriculum Framework Document 2014 and link to the school's long term plan.

Daily planning is completed, annotated and kept in the teacher's planning folder.

None of the above describes differentiation in any detail. It is expected that for each unit of work, the class teacher adapts, simplifies and extends the objectives and tasks for the specific needs of their class.

ASSESSMENT

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

Teaching a unit of work will need careful initial and ongoing planning, informed by an assessment of children's learning. A cycle that supports this process for mathematics is set out below:

assess – plan – teach – practise – apply - review

Formative Assessment (Teacher Assessment/Assessment for Learning) is carried out informally during the course of teaching by looking at the National Curriculum criteria. It enables the teacher to identify a child's understanding and progress in particular aspects, to

inform their immediate teaching and to plan for their coming lessons. This can take the form of:

- Small group discussions in the context of a practical task
- Short tests given in oral or written form at the end of each unit of work
- Specific assignments for individual children
- Individual discussions with children to evaluate progress and to set new targets
- Marking (see below)
- Asking questions, observation of children providing oral feedback.

Ongoing Assessments are planned into the work as discrete assessment opportunities. They may take the form of short tests and serve to inform the teacher of the extent to which learning objectives have been met. The assessment must be carried out in the pupils' Science Assessment Books. All teachers will then use these results, along with their individual knowledge of each child, to provide an accurate teacher assessment of how the child is performing towards end of key stage (KS1, LKS2, UKS2) expectations (working towards, meeting or exceeding).

- **Summative Assessment** is carried out annually. At the end of KS1 and KS2 pupils will be given a 'performance descriptor' against the expected standard
- We will assess pupils progress towards the end of year expectations for each year group using the terms; **Working Towards, expected standard and working at greater depth** within their year group.
- End of year performance descriptors will be used for each child to track their development towards working at the expected standard or working at greater depth the end of year targets at the end of each unit and more formally at the end of each half term through an assessment task. The results will be tracked which will be used alongside Teacher Assessment to track each child's progress.
- **Self Assessment** where possible, children should be involved in assessing their own work. This might include: Traffic Lights – How do they feel they progressed against the success criteria? (red/yellow/green)
- **Learning Objectives and Success Criteria** should be clearly differentiated in each less and children should know what they are working towards and how they will achieve it, along with next steps.
- During the plenary, children may be asked to discuss how they found the lesson and where they excelled or what they found difficult.

MARKING

Effective marking of pupils work identifies what they have done well and any misconceptions. It sets short term targets for what they need to do next and for improvement. Teacher judgements can be accurately made from an overview of a piece of work. Time is allowed for some marking to be done with the pupil, so that discussion and explanation can take place. Marking should be both diagnostic and summative and will follow the school's marking and feedback policy.

Feedback is given to the children as soon as possible.

- This aims to encourage and to give guidance for future work.
- The display of children's science work gives them pride in their achievements.
- Some marking will be immediate, depending on the activity and the age of the children.
- Pink and green must be used (see marking and feedback policy)

RECORD KEEPING

Records are kept of the extent to which each child in the class has achieved the key performance indicators for their year group. Teachers will use the terms **Working Towards, Expected Standard and Working At Greater Depth** to track progress within their year group. Teachers will use the Performance Descriptors to accurately teacher assess and will show pupils' progress throughout the year by inputting their results half termly on to the class tracking grid and submit to the Headteacher/Subject Leader to be added to the whole school tracking grids.

REPORTING TO PARENTS

Reporting is carried out through the regular parent / teacher consultation meetings and pupil progress written reports each term. Parents are given teacher assessment results at the end of each term and additionally from Years 2 – 6 the results of optional national curriculum assessments. They should be provided with information on children's areas of strength and weakness and on their rate of progress in science.

MONITORING AND EVALUATION

The purpose of monitoring and evaluation activities is to raise the overall quality of teaching and levels of pupil attainment. The science subject leader and the leadership team will monitor the quality of teaching and learning as part of the school's self-evaluation policy. Monitoring will include:

- Scrutiny of planning
- Quality of teaching through lesson observation and feedback
- Moderation of standards in children's work
- Discussions with pupils about their work
- Evaluation of children's attainment against targets

The role of the Science Subject Leader

- Take the lead in policy review and development
- Support colleagues in the development of medium term plans and in assessment and record keeping activities.
- Keep up-to-date on local and national initiatives and disseminate information
- Take responsibility for the purchase and organisation of scientific resources

- Analyse pupils' test results to inform future policy, set school targets for science in conjunction with the senior leadership team, and to assist staff in setting individual pupil and group targets.
- Take the lead in writing the science section of the School Improvement Plan.
- Encourage the professional development of staff.

Resources

We have sufficient resources for all science teaching units in the school. We keep these in a central store where there is a range of equipment. The library contains a good supply of science topic books to support children's individual research. Project loan boxes may also include books to support a science topic.

Monitoring and review

It is the responsibility of the Science Subject Co-ordinator to monitor the standards of children's work and the quality of teaching in Science. The Science Subject Co-ordinator is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. An action plan is written and reviewed annually.

October 2018