



SCIENCE POLICY



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*"Small school, big hearts.
Wise, responsible, kind like the Good Samaritan."*

Our Mission Statement

We are a caring, village school which promotes Christian values, where each child receives a high standard of education that is broad, challenging, exciting and encourages creative thinking. We encourage every learner to be the best they can be, to reflect and plan the next steps in their learning journey, demonstrating a respect towards others and contributing to the communities of which they are a part.

Our Vision

Our vision is to nurture unique individuals who are outstanding learners, demonstrating wisdom, responsibility and kindness within their communities. Using the Good Samaritan as our role model, we know that loving others as we are loved is upmost for happy, healthy lives.

Values

Wise - we think wisely and are committed to learning. We relish and retain knowledge and value high standards. We have high expectations, high aspirations and enjoy challenge. Like the wise man who built his house upon the rocks (Matthew 7), we think creatively and use learning to make good decisions. We have firm foundations for our lives.

Responsible – we are responsible for ourselves – our well-being, our behaviour and our learning. We strive to be the best people we can be and the best person for others. We have a responsibility to others inside and out of school and at times need to be patient, tolerant and courageous in demonstrating this. As Noah had to step up when God asked him to, so must we. We are a school family whose strength is in our ability to work together. We know that perseverance and hard work will bring reward and that resilience is about coping with challenges positively.

Kind - we are kind. Through support, nurture and understanding we all flourish. Each one of us is unique – on the outside and inside. We value diversity and respect difference. There are hundreds and thousands, millions of us but God knows everyone and God knows me!

Curriculum Intent

Our curriculum is designed around our Christian values. Each term, we focus on 3 values across the school and develop a working understanding of them through our choice of texts and foundation subject learning, embedding reading and maths at the core. Our approach is to deliver knowledge rich, sequential learning which excites and inspires, provides opportunity for recap and challenge, raises questions for debate, develops learners' confidence and enables independent learning to flourish. High standards, collaboration and valuing individuals' well-being is at the heart of this process. We believe that how we teach is as important as what we teach and that enrichment experiences are an entitlement. We want our curriculum to enable our children to be wise, responsible and kind in line with our school core values.

Definition

Science is a way of working that allows children, through practical first hand experiences and secondary sources, to develop their knowledge and understanding of the world in which they live. These experiences should enable children to observe, question, investigate, make sense of and communicate and evaluate their findings.

Aims

To encourage children to:

- develop a questioning and reflective mind by providing a range of exciting and enjoyable activities.
- develop a systematic and logical way of working.
- apply their skills and knowledge to investigative work.
- come to a deepening understanding of scientific concepts.
- work safely and carefully.

Curriculum intent

In Science we aim to give all children a strong understanding of the world around them. They are able to discover how the world works and our place, impact, roles and responsibilities within our environment. Our children are encouraged to ask questions and apply their growing scientific knowledge to investigate and learn more. The children are able to develop a systematic and logical way of working and are able to reflect on investigations and apply their growing knowledge. Science allows children to be inquisitive in a safe environment. It will help develop knowledge rich, confident, articulate and investigative learners.

Teaching and Learning

All children have access to the Early Years Foundation Stage Curriculum and Science National Curriculum. At Buckland we use a long term Science curriculum plan delivered over a two year period to ensure that all units are covered. Our plans show the breadth of study as well as how 'Working Scientifically' is embedded within each unit of work. Plans also include the key knowledge for each topic that all children should know. Scientific vocabulary is to be taught with each unit of work to enable children to articulate scientific concepts clearly and precisely. The teaching of Science at Buckland may be as a whole class, in small groups or individual work.

Curriculum enrichment

We ensure that children have access to a wide range of educational experiences outside of school through trips and links with Abingdon School science outreach work. We celebrate national science week in March and invite visitors, speakers, companies leading workshops in order to inspire learning.

Working Scientifically

Working Scientifically must always be taught through and clearly related to the programme of study. Pupils at Buckland learn to use a variety of approaches to answer relevant scientific questions by collecting, analysing and presenting their findings.

Children will use different types of enquiry throughout each year:

- Observe over time
- Classifying and grouping
- Pattern seeking
- Comparative and fair test
- Research and secondary sources

Through this approach we aim to develop the following skills:

Observing over time, raising questions, predicting, hypothesising, planning, controlling factors (fair testing), measuring and collecting information, recording and interpreting data by constructing tables and graphs, explaining, communicating and evaluating findings, researching information.

Attitudes

Through Science we endeavour to foster the following qualities:-

Excitement, curiosity, perseverance, open-mindedness, self-discipline, sensitivity to others, independence, adaptability, co-operation, and care for living things.

Equal opportunities

All children at Buckland are given equal opportunities in all areas of Science. We monitor the attainment and engagement of all groups of children to ensure there are no patterns of attainment causing concern.

Progression

We recognise that our curriculum planning must allow for children to gain a progressively deeper level of knowledge, understanding and skill competency as they move throughout the school. Our Science plans are progressive and enable teachers to adjust plans to meet the particular needs of individuals or groups of children.

A science skills map helps teachers to plan for progression in AT1 and is used to support medium term planning.

A science key knowledge map helps to ensure that children are revisiting topics and building on previous knowledge.

Information Communication Technology



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We see ICT as an important tool in Science. Children research, communicate, collect and interrogate data in a variety of ways. This is detailed in teachers' medium term planning.

Records and Assessment

Assessment of children's development is made through a combination of end of unit assessments, ongoing teacher assessment, formal tasks and year tests where appropriate. A record is kept of children's achievements in Science including 'Working Scientifically' through teacher's own notes and our school record system. Progress and achievement in Science is reported to parents through end of year reports and during autumn and spring parent meetings.

Safety

It is important that children are taught the rules of safety when undertaking experiments and investigations. Materials and equipment need to be handled sensibly and we try to ensure that children do this. It is the teacher's responsibility to make sure that all helpers (TAs, parents etc.) are aware of safety implications connected with any Science activity they are undertaking.

Monitoring

The Science curriculum is monitored by the science co-ordinator through staff meetings, observation of teaching, monitoring of medium term plans, children's work, pupil voice and analysis of data.

Resources

The science resources are kept mostly in the Science Shed for the use of all classes. Teachers also have access to a list of Primary Science resources as part of the Cambrian Learning Trust.