

Rakegate Primary School



Science Policy

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This policy document was adopted by the staff of Rakegate Primary School. Prior to this, this policy was discussed at SLT and staff meetings and by the school governors. This policy outlines the guiding principles by which this school will implement Science in the National Curriculum (2014) in England - - in the context of Wolverhampton LEA / governing body's curriculum policy statement and its staffing, health & safety and equal-opportunities policies. It is reviewed periodically.

Our intent

Science teaching at Rakegate Primary aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and implications of Science, today and for the future.

At Rakegate Primary, scientific enquiry skills are embedded in each topic the children study and these topics are revisited and developed throughout their time at school. Topics, such as Plants, are taught in Key Stage One and studied again in further detail throughout Key Stage Two. This model allows children to build upon their prior knowledge and increases their enthusiasm for the topics whilst embedding this procedural knowledge into the long-term memory.

All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Specialist vocabulary for topics is taught and built upon, and effective questioning to communicate ideas is encouraged. Concepts taught are reinforced, by focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

How science is implemented

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school.

Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage.

At Rakegate we have monitoring process, which informs the school improvement plan, this is reviewed regularly. Books and planning are monitored and teachers provided with feedback to ensure high standards of teaching and learning are taking place. Subject leaders take part in training sessions and feedback to staff ensuring that improvements are acted upon. Where possible, Science is linked to

class topics. Science is taught consistently, once a week for up to two hours, but is discretely taught in many different contexts throughout all areas of the curriculum. This ensures progression between year groups and guarantees topics are covered. Teachers plan to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available. We ensure that all children are provided with rich learning experiences that aim to:

- ✓ Prepare our children for life in an increasingly scientific and technological world today and in the future.
- ✓ Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- ✓ Help develop and extend our children's scientific concept of their world.
- ✓ Build on our children's natural curiosity and developing a scientific approach to problems.
- ✓ Encouraging open-mindedness, self-assessment, perseverance and developing the skills of investigation including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- ✓ Develop the use of scientific language, recording and techniques.
- ✓ Develop the use of computing in investigating and recording.
- ✓ Make links between science and other subjects

The impact

Children enjoy and are enthusiastic about learning science at Rakegate. Book trawls, pupil voice interviews and the monitoring of lesson plans show there is a clear progression of children's work and teachers' expectations in our school. The children's work also shows a range of topics and evidence of the curriculum coverage for all science topics. Good marking and the use of read and respond has improved next step questioning to push learning on and consolidate learning. Recording attainment using SIMS at the end of each term has provided a clear picture of the levels in which children are working at, any children working below the expectations are identified and interventions put into place. Teachers' judgements are moderated internally and externally at Science cluster meetings. Our SLT and governors are kept up to date with developments in the way science is run in our school with subject reports, action plans and review meetings.

Equal opportunities in science

- ✓ Science is taught within the guidelines of the school's equal-opportunities policy.
- ✓ We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- ✓ Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- ✓ We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- ✓ We draw examples from other cultures, recognising that simple technology may be superior to complex solutions.
- ✓ We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- ✓ In our teaching, science is closely linked with literacy and mathematics.
- ✓ We recognise the particular importance of first-hand experience for motivating children with learning difficulties.
- ✓ We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.
- ✓ We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

Assessment and Attainment

We use assessment to inform and develop our teaching.

- ✓ Topics commonly begin with an assessment of what children already know, concept map.
- ✓ We assess for learning (AfL). Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- ✓ Teachers record where each child is working, WTS, EXS and GDS at the end of each topic - this information is fed back to the Science coordinator.
- ✓ We mark each piece of work positively, making it clear verbally, or on paper, where the work is good, and how it could be further improved through next steps and read and response questions. Good work is shared and celebrated through a variety of ways.
- ✓ Children's work is moderated each term using the moderation material provided. This will form the basis of the teachers' judgement and ensure coverage in lessons.

- ✓ Teachers are formally required to record the attainment of each child, termly using Sims. This will be used for the final teacher assessment at the end of KS1 and KS2
- ✓ The schools teaching staff and science coordinator's monitors progress through the school by sampling children's work at regular intervals. Children who are not succeeding, and children who demonstrate high ability in science, are identified and supported.
- ✓ Reports to parents are made verbally each term, and written once a year, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of science

This science policy will be reviewed by the science curriculum leader and the senior leadership team every three years.

Approved:

Signed: Chair of Governors

Signed: Headteacher

Date: