



Crowle Primary Academy

Science Policy



Subject aims and objectives

At Crowle Primary Academy we believe that children have a natural curiosity about their world and the enthusiasm to want to make sense of it. We aim to capitalise on this, using first-hand experiences so that our children come face to face with phenomena and learn directly about the ways things are, and why they behave as they do. Following on from this, children use secondary sources to reinforce and broaden their knowledge.

Our children are involved in a wide range of activities that are practical, relevant, co-operative and satisfying. We aim to give children an understanding of the scientific concepts – not just facts, and an understanding of scientific processes. This includes the development of a range of skills which include asking questions, discussing, predicting, planning an investigation, fair testing, methods of recording, how to interpret findings and evaluating them. In addition we aim to foster resilience, collaboration, independence and reflective thinking.

The aims of science are:

- To encourage and develop children's curiosity and fascination with their world.
- To develop a balance of scientific skills using an investigative, illustrative and focused task approach.
- To develop the attitudes of curiosity, open-mindedness, perseverance, tolerance, collaboration, responsibility, critical awareness and originality.
- To encourage awareness of science and scientific advances outside the classroom.
- To provide science education which will be challenging to all pupils and ensure equality of opportunity.
- To ensure that all children, regardless of their race or gender, will have equal opportunities to participate in all activities. Positive attempts will be made to develop and use a wide range of resources and activities that reflect the interests and cultural background of all pupils.
- To support and develop children's language development and enable pupils to become effective communicators.

Curriculum and Academy Organisation

The Science Skills Progression maps outline the skills, knowledge and understanding expectation for each year group and we follow the Focus Learning Challenge Curriculum for our science topics over the year. Links are also made to Pearson Science Bug resources. The organisation of the Science Curriculum provides;

- Full coverage of the National Curriculum plus other elements we as an academy feel should be taught.
- Opportunities for children to revisit scientific ideas.
- Activities which focus on scientific investigations.
- The emphasis in our teaching of science is on first hand experience, thus much of the study of science is through practical and investigative work.
- Teaching of careful observation.
- Opportunities for children to communicate their findings to others using a variety of methods (e.g. written, verbal reports, graphs, charts and diagrams, ICT).

The use of ICT is developed through;

- Taking measurements (e.g. data handling logging)
- Making observations
- Data handling (e.g. databases and graphs)
- Communicating information (e.g. word processing)

The predominant way of working in science is collaborative group work; although individual work and teacher led activities are also used. Social, mixed ability and ability groupings may be used.

At Crowle Primary Academy we use a long term Science curriculum plan delivered over a two year period to ensure that all units are covered. Where possible, a cross-curricular approach is used to teach science through our termly



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themes however, where it is not possible to link science effectively to a theme, in these instances, science is taught as a discreet subject.

In the Foundation Stage we relate the scientific aspects of the children's work and play to the objectives set out in the Early Learning Goals (ELGs). Science makes a significant contribution to a child's development in Understanding The World.

Teachers are responsible for producing and keeping short term plans listing key questions and specific learning objectives for each lesson and detailing how the lessons are to be taught. To reduce workload, each team may produce one set of short term plans but will show differentiation for the different year groups. We have a range of support documents to aid planning, including Focus Education Learning Challenge Curriculum and Pearson Science Bug. The teacher keeps these plans and will discuss them on an informal basis with the subject leader.

Assessment

Teachers assess children's work in science to establish levels of ability and inform future planning. They do this by observing the children working during lessons, their completed work and assessing units of work. During each lesson, teachers focus on specific assessment criteria. At the end of each term, teachers make a judgment for each child using the assessment criteria and these are then recorded on our science tracking document and on the whole school assessment system. Teachers will assess whether children are working below ARE (age related expectations), ARE or working at greater depth for their age group. Teachers use an annual report to inform parents about children's progress in Science and two evenings each year to allow parents to consult with teachers.

Resources and accommodation

A range of scientific equipment is available in the science storage area. Appropriate books are located in the library, classrooms and science storage area. Resources are reviewed and updated as necessary within the limitations of the science budget.

Monitoring

The monitoring of the standards of children's work and of the quality of teaching in science is the responsibility of the subject leader. S/he will use evidence from assessments, children's work, displays and discussion with both children and class teachers. The subject leader also reports to the Headteacher and Governors on the strengths and weaknesses in the subject and indicates areas for further development.

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