



Science Subject Policy

September 2022

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1. Vision and values

Our school vision is based on the writings of Paul to the Ephesians. This highlights three principles which form our decision making. We seek for all people in our school community to:

- Feel grounded and rooted in love
- To grow in breadth and depth of understanding
- To be filled with the fullness of life

Our school has adopted seven values and seven attributes which form the basis of the work we do, particularly in relation to our curriculum. It is these values and attributes that all of our subjects focus on instilling in our pupils.

Values: courage, compassion, thankfulness, forgiveness, wisdom, justice, truthfulness

Attributes: knowledge, perseverance, collaboration, curiosity, comprehension, reasoning, creativity

2. Subject statement

Science at Abberley Primary School will deeply develop the pupil's comprehension of the world, through authentic exploration and practical investigation. It also seeks to provide a context through which children can question, be grateful and be in awe of our world and its science.

Aims – In line with the National Curriculum for England, all pupils will be given opportunities to:

develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
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develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
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be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
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In addition to these aims, our curriculum seeks for pupils to go further and think deeply about the content and vocabulary. We aim for pupils to retain knowledge so that it can be built upon in the future and to draw on their prior knowledge.

3. Approach to teaching and learning

At every possible opportunity we seek for the pupils to learn through practical and authentic investigations. These encourage deep and meaningful questions and genuine attempts to reach a conclusion explained with developing scientific understanding.

At the core of our curriculum is working scientifically and within each lesson the focused disciplinary and substantive knowledge is clear and pupils engage with this.

4. Timetable allocation

EYFS	There are plenty of opportunities to engage with science through the continuous provision on offer and through outdoor learning. This ensures that pupils develop their understanding of the world.
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Year 1	1 hour inside and 1 hour as part of outdoor learning each week.
Year 2	1 hour inside and 1 hour as part of outdoor learning each week.
Year 3	1.5 hours each week
Year 4	1.5 hours each week
Year 5	1.5 hours each week
Year 6	1.5 hours each week

5. Curriculum overview and progression

The planning overview and subject progression can be found on the school website in the science curriculum section:

<https://www.abberley.worcs.sch.uk/page/?title=Science&pid=72>

6. Assessment/inclusion and challenge

It is essential that the teaching of science is based on the needs of each individual in terms of their development. Pupils should be catered for to ensure that the learning opportunities are accessible to them and pupils should be challenged to think increasingly deeply and apply a greater depth of explanation, knowledge and vocabularic understanding as they progress through the school's science curriculum.

At the end of each term pupils take part in progress tests to determine the extent to which they have retain the disciplinary and substantive knowledge outlined in the National Curriculum for England. Our curriculum goes beyond this and in exercise books, teachers and leaders will see application of precise vocabulary when labelling and explaining scientific concepts. During learning walks and book reviews, a key focus will be on whether pupils are being given the appropriate opportunity and demonstrated age related understanding and progression.

Pupil's learning is monitored through marking and feedback. As detailed in the marking policy, teachers determine the degree to which the expected outcomes of a lesson have been met by the children. During book reviews this is analysed by the subject coordinator to check that pupils are progressing and developing deeper knowledge over time and that they are retaining previously taught concepts and vocabulary.

Lessons may focus on the degree to which key vocabulary can be used and understood. Pupils investigative work should also be commented on in books following an investigation linked to skills and collaborative efforts observed.

7. Cross curricular and IT links

IT should feature regularly in science, whether through recording of results or collating data into charts, graphs or tables.

As much of the world and our bodies are studied, science links with every other curriculum subject. For example, links between sound (pitch and volume) directly link with music. Healthy eating which is covered at several curriculum points is an important element of PSHE. The measuring of results and presentation and analysis of data draws on skills and

concepts taught as part of the mathematics curriculum and the use of language, vocabulary and reading skills taught in English are central to developing the deep and transferrable scientific skills and knowledge to progress, retain and develop as a scientist.

8. Roles and expectations of staff

- SLT
To ensure that the curriculum is followed and that teachers are suitably trained and equipped to teach the skills and knowledge safely. To allow time for teachers and the subject coordinator to fulfil their role.
- Subject coordinator
To monitor and evaluate the curriculum, ensuring pupils are given opportunities to meet the age relating expectations and to provide support and feedback to staff relating to the quality of teaching and learning in line with the school monitoring schedule.
- Class teachers
To plan and teach the science curriculum effectively, preparing genuine investigations through which children are engaged and develop a deep scientific understanding and range of age related skills. To monitor the pupils learning provide feedback and ensure pupils meet age related expectations where possible.
- Teaching Assistants
To support the development of skills and knowledge as direct by class teachers. To help prepare resources and set up practical materials for investigations as required.

9. Staff development and expertise

All staff who teach science are qualified teachers. Skills audits will form part of the annual subject development planning.

Through our cluster of schools, subject leaders attend network meetings to discuss research and developments within science primary teaching.

Staff meetings are held each term to review the development plan and the conduct training linked to our focus book by Amanda McCrory and Kenna Worthington 'Mastering Primary Science'. At each staff meeting a key focus area is covered led by the subject coordinator.

10. Monitoring of standards

Analysing assessment data is central during termly pupil progress meetings. During these sessions we will discuss individual's needs and how we are enabling them to access and be challenged by our science curriculum.

Termly staff meetings will focus on the development of standards across the science curriculum and ascertain the professional development requirements.

Book reviews will be conducted at least twice each year to monitor the opportunities and development of pupils across all abilities and ensure that there is clear curriculum progression in terms of skills and contextual understanding and knowledge.

11. Subject Development

Annual subject development will be conducted by the subject coordinator at which point this policy will also be reviewed.

Resources will be audited in May of each year to ensure that there is adequate resources to teach the curriculum the following year. Throughout the year the development planning will be reviewed to monitor progress against key targets and help inform planning for the following year.

Subject coordinator: Joanne Gregory

Subject governor: Jenny Buckley