

Cookridge Holy Trinity Church of England (Aided) Primary School



INVESTOR IN PEOPLE

Policy Statement

Science

1. THE PURPOSE OF PRIMARY SCIENCE

Science involves the observation and investigation of the world around us. Pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Science teaching must promote in children a curious, questioning attitude that leads to investigation in order to explain what is occurring, predict how things will behave and analyse causes.

2. AIMS OF SCIENCE TEACHING

- To deliver the Science Programmes of Study of the 2014 National Curriculum.
- To develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- To develop 'Working Scientifically' skills through relevant practical tasks.
- To equip children with the scientific knowledge required to understand the uses and implications of science.

The staff have worked together to produce four key principles for teaching science in our school which will be referred to in our planning, classroom teaching and displays:

Science is going well when there is practical exploration.

Science is going well when there is engagement and enthusiasm.

Science is going well when there is questioning from children.

Science is going well when there is progression and structure

3. PLANNING AND TEACHING OF SCIENCE AT HOLY TRINITY USING THE NATIONAL CURRICULUM

a) Teaching Methods

In Years 1- 6 we deliver our science curriculum in accordance with the National Curriculum (2014). Science is a practical subject which requires children to predict, observe and evaluate. Consequently a wide range of teaching and learning styles will be used, including the Curriculum 2014 'five types of enquiry', with an emphasis on investigative, rather than illustrative practical activities. Pupils will be taught to use a wide range of appropriate

recording methods, which will include the use of Modern Technologies at both Key Stage 1 and Key Stage 2.

In the EYFS children are taught the science elements of the foundation stage document through the Early-Learning Curriculum: Knowledge and Understanding of the World. There is an increasing use of big questions with more open ended ones used in planning and lessons, with an encouragement for exploration and independence amongst children.

b) Planning

The long term plan sets out the school curriculum for science, showing which topics are taught in which year groups. Science topics are then planned in each year group using the 'key concepts' sheets as a starting point. Planning activities and differentiation will be made as appropriate to the pupils being taught, based upon their prior knowledge, understanding and skills. Opportunities for mathematical and ICT links with practical work will be incorporated into teaching and should be explored at the planning stage.

KS1 and Foundation stage teachers should be teaching science for a minimum of one hour each week.

KS2 teachers should be teaching science for a minimum of one and a half hours per week.

c) Continuity and Progression

As a child progresses through school a range of ever widening and challenging experiences will be presented to develop their scientific knowledge and conceptual understanding. The key concepts for each topic/theme are taken from the National Curriculum and are taught alongside methods of working scientifically. Progression is established throughout school and where some science topics are repeated in some year groups, new concepts will be introduced to deepen their understanding.

d) Our approach

The essential elements describing how science is taught in our school are described below:

- New topics are introduced by reviewing children's existing knowledge and understanding.
- Science is taught through practical exploration.
- Pupils are taught to understand and use the five practical methods of scientific enquiry.
- Pupils will be taught to use a wide range of appropriate recording methods, which will include the use of Modern Technologies at both Key Stage 1 and Key Stage 2.
- Displays of science work will be used to emphasise and raise the profile of science in the school. Where possible, interactive displays will be planned for other pupils to explore.
- In the classroom pupils will normally be organised into small groups and encouraged to work co-operatively for science work. The group size will be determined by the age, task and ability of the pupils.
- We make cross-curricular links between science and other subjects wherever possible.
- We develop science informally through guest speakers and when going on school visits.
- We share work the children have done on the school website.

- 'Science Big Books' are produced twice a year to showcase a science topic that has been taught. These are sent home with children to share with their parent/carers the work they have done in school.
- Homework is used to support science topics. Science projects are issued to children as part of the half termly learning log assignment. This relates to the school's overall homework policy.

5. EQUAL OPPORTUNITIES including Differentiation and Inclusion.

Equal opportunities in science will be given to all pupils. (See equal opportunities policy). We aim to meet the needs of the children in our care by: setting suitable learning challenges; responding to pupil's diverse learning needs and overcoming potential barriers to learning and assessment for individuals and groups of pupils.

6. ASSESSMENT AND RECORDING

Assessment for Learning (AfL) is used all the time during any science lesson to assess out pupils' learning and inform planning both at class level and whole school level. We annotate our planning, use post-its, make notes in workbooks and take pictures to record what the pupils can do. Marking, following the policy, aims to close the gaps and provides next steps for the pupils.

In EYFS the Development Matters assessment system is used to assess progress each term and this is recorded through an online learning journal (Tapestry).

In Years 1 – 6 assessment will take place at the end of each topic using the online assessment tool – Depth of Learning. Judgements will be made in a variety of ways including observing pupils at work, questioning, talking and listening to them and by assessing work produced by them. The assessment tasks or opportunities should be an integral part of the medium term plans.

Children will be assessed on each of the key concepts covered in each topic. Children will be recorded as working at either: basic, advancing or deep. 'Working scientifically' will be assessed separately and as this is taught in each year group, they will be assessed in their own milestone. As such, it would be expected that children working in the first year of a Milestone (years 1, 3 and 5) would have a more basic understanding which will then deepen as they progress to the second year.

Years 1 and 2 – Milestone 1

Years 3 and 4 – Milestone 2

Years 5 and 6 – Milestone 3

Pupil voice discussions with pupils of varying abilities from all year groups will take place with the Science Curriculum Leader once a year as a way of monitoring teaching/learning across the school. Reports to parents are made verbally during parent's evening, and written in their end of year report, describing each child's attitude to science, his/her progress in 'working scientifically' and knowledge and understanding of the science content covered.

7. RESOURCES

Resources are kept centrally within school in the stock cupboard in the small hall, with some specific resources linked to topics kept in the appropriate year groups. Teachers are responsible for returning resources once used and to inform the Science Leader of any equipment breakages or shortage of consumable equipment.

8. THE ROLE OF THE SCIENCE CURRICULUM LEADER

The school Science Curriculum Leader, supported by other members of the Science team, has responsibility for progression and management of teaching the Science Curriculum.

He/she has the responsibility for:

- i) maintenance of Science equipment
- ii) purchase of new equipment
- iii) supporting colleagues in planning/assessment/target setting
- iv) supporting colleagues as a resource of Science knowledge
- v) monitoring planning/teaching

9. SAFETY

It is the teacher's responsibility to plan safe activities for children within the Science Curriculum. If in any doubt, staff should refer to the North Yorkshire adopted guidelines for safety booklet - ASE 'Be Safe' 4th Edition, or consult with the Science Curriculum Leader. Any necessary risk assessments should always be undertaken. Science teaching should always conform to LEA guidelines. Free health and safety advice is available from the CLEAPSS hotline 01895 251496.

Sept 2017