



Whittingham C of E Primary School Policy for Science Spring Term 2022.

This policy was written and ratified during Spring Term 2022 and will be reviewed 2024 in line with our policy cycle review.

Our School Vision and Values

The children know these as the 3R's and underpin all that we do and account for much of the choice of our curriculum plans across the school:

'Hand in hand together we will become resilient, respectful and responsible citizens of our community and the wider world.'

School Aims:

- To provide an open, secure and welcoming Christian environment for each pupil. This is expressed through daily worship which acknowledges the presence of God in our lives.
- To further develop and value the partnership that exists between school and the local churches, in particular, through sharing weekly worship and to encourage an appreciation of the Christian faith and a familiarity with the local Christian heritage.
- To care for each pupils' safety, happiness and well-being.
- To value our pupils as individuals, developing their ability to take responsibility for themselves and their actions, promoting confidence and self-esteem, and respect for others and their environment.
- To equip our pupils with the knowledge to make informed choices about having a safe and healthy lifestyle.
- To offer opportunities for our pupils to become involved in the daily life of the school and to prepare them to play an active role as citizens locally and in the wider world.
- To provide a learning environment, which is challenging and stimulating yet ordered and disciplined.
- To provide a broad and balanced curriculum, setting realistic targets for each pupil.
- To extend and reinforce our pupils learning, making expectations clear, and raising achievement levels.

Aims of the Science curriculum at Whittingham C of E Primary School

Intent

The study of science is an essential part of the school curriculum, enabling children to develop an understanding of science to acquire scientific skills and foster positive attitudes towards science. We recognise the importance of developing children's scientific knowledge

and skills through first hand practical activity (experiments) which are enjoyable and meaningful. Science must start from the views which children hold and give them opportunities to change their views and ultimately their understanding. Through the teaching of science children should develop skills to explore and understand the world in which they live. Our intention is:

- ◆ to develop scientific knowledge;
- ◆ to develop the scientific skills of investigating, observing, measuring, communicating, prediction, recording and interpreting;
- ◆ to encourage collaboration, co-operation and the sharing of ideas;
- ◆ to provide children with the opportunities to communicate their ideas and work;
- ◆ to extend the children's natural curiosity and wonder about the world;
- ◆ to encourage the development of positive attitudes to science;
- ◆ to develop the use of scientific language, recording and techniques.

We are continually aiming to raise the standards of achievement of all pupils at Whittingham.

The national curriculum for **Science**:

The National Curriculum describes what must be taught in Key Stages One and Two. Each teacher at Whittingham Church of England Primary School follows this detailed guidance thus ensuring continuity and progression in the teaching and learning of science.

In the Foundation Stage (Nursery and Reception) the curriculum is guided by the Early Years Framework which lead directly into the National Curriculum.

Implementation

Planning

Planning is undertaken at three levels:

Long term planning is based on the two yearly teaching programmes set out in the National Curriculum.

Short term planning is carried out termly by each class teacher from the long term planning overview.

Cross Curricular Links

In order to create a cohesive and meaningful learning programme for our children, we try to identify links during the planning stage and give children the opportunity to use their subject knowledge and skills in real contexts.

Lessons follow a range of structures according to the abilities and needs of the children, subject matter being taught and context of the lesson. It is made clear to the children at the start of the lesson exactly what it is they will learn as the objectives are shared with them.

The teaching at Whittingham provides opportunities for:

- ◆ group work;
- ◆ paired work, including mixed ability and similar ability pairs;
- ◆ whole class teaching;
- ◆ individual work.

The pupils engage in:

- ◆ the development of mental skill and strategy;
- ◆ written recording;
- ◆ practical work;

- ♦ investigational work;
- ♦ problem solving;
- ♦ scientific-focussed discussion;
- ♦ consolidation of basic skills and routines.

At Whittingham Church of England Primary School we recognise the importance of establishing a secure foundation in science and of teaching and using vocabulary appropriate to the task. We endeavour to set work that is challenging, motivating and which encourages the pupils to talk about what they have been doing.

Each child from Year 1 to Year 6 has a science book where all work is recorded across this subject area. New scientific vocabulary is displayed in the classroom and recorded in their books, including the definition for the older children. This can be added to during each lesson or when new vocabulary is taught, it can be used to remind children of the terminology used in each lesson.

Organisation

Science in the nursery and reception classes (Knowledge and Understanding) is planned and delivered as a cross-curricular topic in line with the early years framework. In KS1 and KS2, science is mainly planned and taught in accordance with the National Curriculum, making links to topic themes where appropriate. Part of each National Curriculum unit is taught on a termly basis, progressing each term. This ensures our children have a secure understanding of each unit by the end of each academic year.

We recognise that differentiation involves adjusting teaching to meet the learning needs of individual children. Differentiation should be taken into account when planning work it is not possible to match every task to the ability of every child but there are certain strategies that can be adopted to ensure that most children are working at the right level.

Differentiation Techniques

- ♦ differentiation by outcome;
- ♦ differentiation by task;
- ♦ differentiation by teacher input.

Strategies to assist differentiation

- ♦ groupings by ability, setting targets at different levels;
- ♦ graded tasks;
- ♦ open ended investigations;
- ♦ mixed ability group, peer support;
- ♦ varied methods of recording;
- ♦ adapting mathematical demands on investigations;
- ♦ incorporating stretch and challenge into activities;
- ♦ promotion of independence enabling smaller guided groups;
- ♦ adaptation of resources;
- ♦ use of visual aid, prompts, language mats etc.

Display

We recognise the important role display has in informing, stimulating, motivating and celebrating the work of our pupils. Displays have an important role in helping to introduce new concepts or consolidate previously visited ones. They should include scientific

vocabulary for each unit, be informative and interactive. Vocabulary will also be sent out to parents on the half termly topic letters.

Impact

At Whittingham we are continually assessing our pupils and recording their progress.

Assessment outcomes are used to inform the next cycle of planning thus ensuring a match of work to the needs of the pupils and ensuring progress.

Assessment for Learning is a key part of every lesson. Teachers assess understanding through observation, talking with children, questioning and feedback of work. The learning objectives for each lesson will be made clear to pupils and revisited during plenary sessions. Assessment outcomes are analysed by subject leaders and provide the focus for development within the subject for the coming year.

Reporting

At the end of KS1 and KS2 each pupil's level of attainment and effort is recorded on their annual report. EYFS includes a summary of their child's progress in science over the year. A copy of the child's annual report is given to the parent or carer.

Resources

Resources for each topic are stored across school and we have a resource list with locations so things can be found and used across the whole school. Science information books are located in a section of the library. Materials are regularly reviewed for condition and relevance and then up-dated as appropriate. The subject leader orders materials and resources within the budget allocation as determined by the development plan and after consultation with colleagues.

Equal Opportunities

As a staff we endeavour to maintain an awareness of, and to provide for, equal opportunities for all pupils in science. We aim to take into account cultural background, gender and any special need, both in our teaching attitudes and in the published materials we use with our pupils.

Children with Specific Needs (English as an Additional Language or Special Educational Needs)

Wherever possible we aim to fully include all pupils within all lessons so that they benefit from listening and participating with others in demonstration, discussion and explanation. Where necessary, teachers will, in consultation with the senco, draw up an individual plan for the child. Where appropriate, children may work on an individualised programme with support or specialist staff. Children may also receive targeted support within the classroom. Specific planning to meet the needs of such children is identified in the teachers' short term planning. This may take the form of simplified or modified tasks or the use of support staff.

Stretch and Challenge

All children will be taught within the appropriate peer group. Children will be taught key skills and will be assessed at greater depth in their application of the skills across all areas of the curriculum.

Homework

Science does not form a specific part of the school's homework policy, however teachers may wish to encourage children to further their own research along with completion of project-based homework.

Role of the Coordinator

The curriculum coordinator works alongside the SLT to monitor standards of teaching and learning at our school. A structured cycle of planning and work scrutiny, observations, and pupil, parent and staff questionnaires will provide information to judge the effectiveness of the subject as well as future development points. The coordinator is responsible for ensuring the curriculum coordinator folder on the shared google drive is kept up to date, that staff are supported and given opportunities for curriculum development as well as resources being well organised, relevant and up to date. They will also ensure that the Curriculum Area for their subject on the school website is relevant and up to date.

The coordinator for Science is:

Toni Marsden