ST CUTHBERT WITH ST MATTHIAS CE SCHOOL
SCIENCE POLICY
SEPTEMBER 2021

We take inspiration from our vision,

'As a school community we are inspired by the parable of the Good Samaritan from the Bible (Luke 10:25-37), where we are encouraged to love one another courageously and with compassion. Through friendship, kindness and thoughtfulness, we will nurture each other to learn and flourish as individuals.'

Loving one another. Learning for our future.

OUR INTENT:

At St Cuthbert with St Matthias CE School, we are committed to offering pupils a broad and balanced experience of science with opportunities to develop scientific questioning and enquiry through activities that arise in all curriculum areas, undertaken individually or in groups, being appropriate to boys, girls and to those from different cultures and home backgrounds.

Pupils are taught disciplines of biology, chemistry and physics and the essential aspects of the knowledge, methods, processes and uses of science. Pupils are taught to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are taught to explain what is occurring, predict how things will behave, and analyse causes. Pupils are taught to develop perceptive questioning and think critically.

(Due to the impact caused by COVID-19 some of the broader elements of teaching science may not have occurred, such as trips and visits, over the past 18 months.)

To provide opportunities for the children to:

- explore the world around them and raise their own questions
- experience different types of scientific enquiries and begin to recognise ways in which they might answer scientific questions
- use practical skills to aid their understanding of the world

To develop skills through teaching which:

- enable children to observe closely, use simple equipment and perform simple tests
- enable children to identify and classify, and use their observations and ideas to suggest answers to questions
- enable children to gather and record data to help in answering questions
- develop children's confidence in using primary and secondary resources
- enable children to take responsibility for their own learning
- provide continuity and progression

To develop children's knowledge of science so that they:

- build a sequenced knowledge of concepts over time
- recognise the power and limitations of science and consider associated personal, social, economic and environmental implications
- can make decisions based on scientific evidence
- are confident in developing appropriate questioning

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IMPLEMENTATION:

PLANNING including CROSS-CURRICULAR LINKS

We believe that quality planning is essential in all areas of learning. Planning should be clear, succinct and ensure that all pupils are catered for regardless of their needs. Planning should also clearly show continuity and progression through learning stages.

Long term plans (curriculum maps, subject overviews for year groups) provide details of skills and both disciplinary and substantive knowledge covered across the year. Medium Term plans (termly planning documents) identify aspects to be taught each term and form the basis for title pages and lesson learning objectives.

The planning structure for each year group is organised so that progression through the subject is identified. Vocabulary for each topic taught within each year group is identified on title pages.

We also use a cross curricular approach through subjects, linking topics where this provides valuable learning.

LEARNING AND TEACHING STRATEGIES

We follow the 2014 National Curriculum for Science. To deliver the Science curriculum the children mainly work in classes. Teachers will expose children to a range of experiential learning opportunities using objects, equipment and resources provided by the school. Appropriate topic-based trips and visitors will be arranged as needed. The aim is to have either one trip or visitor per topic. Pupils may receive a half term project on a specific topic and this will enable them to undertake independent research and individually and creatively present their research to an audience –their class. Teachers assess via a star and a wish feedback format.

Whole school co-ordination and support is essential to the development of scientific ability. However it remains the responsibility of each class teacher to:

- Develop pupils' understanding of scientific research and how this has helped to establish scientific concepts over time
- Develop specific scientific skills and a sound disciplinary and substantive knowledge base
- Ensure children have access to a range of equipment and resources; and they are used safely and appropriately
- Ensure that pupils engage in practical experiences and that this is done safely and appropriately
- Ensure that cross curricular links are made wherever possible and valuable
- Differentiate activities appropriately
- Review and monitor progress regularly

In the Early Years Foundation Stage, the activities are organised to promote social skills and the development of scientific language and understanding. Teaching will be based on the objectives in the Framework for Reception, working towards the Early Learning Goals. This will prepare children for starting the National Curriculum in Year 1.

ASSESSMENT

We recognise various methods of assessing a child's learning, and use formative and summative assessment to make assessment judgements.

Pupils are then identified as working at a low (WT)/secure (EXP)/high level (GDS).

MARKING

AFL has impacted significantly on the School's Marking Policy to ensure immediate feedback is offered to the pupils. Where applicable, teachers must mark according to the Learning Objective (LO). They can also make effective use of peer marking. Once they have completed a task, pupils self-reflect on how they have done against the objective of the lesson in green pen. Finally, teacher's comments include a star and a wish (next step) which is addressed the following lesson.

MONITORING AND REVIEW

Lesson Observations:

The Science Coordinator, as well as the HT, will complete drop in sessions as part of the monitoring. There will also be an opportunity for formal observations to be completed as part of the Appraisal cycle. The coordinators support colleagues in developing their practice according to the results of the observations and common principles will be addressed in INSET and staff meeting sessions. Learning Walks with the governors, Diocese and RBKC advisers take place on a cyclical basis.

Planning Look:

The HT and Science Coordinator will monitor the planning at the beginning of Term 1, 3 and 5 identifying key strengths and areas for development. These results are shared with respective staff members. ECT's and new teachers to the school receive additional planning support from the subject lead, leadership team or mentors. Staff meetings can allow time for addressing planning next steps and teachers are encouraged to seek any support, guidance or clarification from their phase leaders.

Book Look:

The Science Coordinator, as well as the HT, monitor books on a regular basis (half termly and weekly). Key strengths and areas for development will be identified and results will be shared with respective staff members. ECT's and new teachers to the school have additional support from the leadership team and their mentors. Governors undertake subject lead meetings or learning walks with the subject leads focussing on intent, implementation and impact. At these meetings book samples and learning evidence are viewed.

Data Analysis:

The Science Coordinator reviews whole school data for their subject and together with book or learning evidence and pupil voice, creates an overview analysis commenting on the standards of achievement in Science for each cohort and an overview for the whole school. Training and INSET will be scheduled according to these findings. This data also informs the School Development Plan.

Early Years Foundation Stage: The EYFS follow a thematic curriculum. There are specific topics for each term. Where reference has not been made specifically to Nursery and Reception in this policy, it is important to remember that they work from Foundation Stage Framework as this is the main tool for assessment.

EQUAL OPPORTUNITIES

Our school is an inclusive school. We actively seek to remove the barriers to learning and participation that can hinder or exclude individual pupils, or groups of pupils. Where appropriate, alternative

assessments (E.g. P Levels) are used to assess progress. EAL pupils are also assessed across Stages of English Language Development. Personal Learning Plans are reviewed termly and SMART targets are set to ensure progress is attainable. These form the basis for rapid progress targets which identify small steps of daily progress in a child-friendly manner. Pupils take ownership for their goals on clipboards in this way.

ROLES AND RESPONSIBILITIES

The Science Coordinator and Head teacher will ensure this Policy is implemented consistently throughout the School.

The Governing body in co-operation with the Head Teacher should determine the school's general policy and approach to Science in the school.

In addition:

The Co-ordinator

The co-ordinator is responsible for co-ordinating Science through the school. This includes:

- To be a role model and demonstrate good practice
- To keep the written policy document up to date and keep under review the Scheme of Work for Science in line with the requirements of the National Curriculum.
- Encourage and support colleagues in the implementation of the agreed procedures and monitor the progression of activities and consistency of approach across both Key Stages
- Manage the financial allocation to Science effectively and purchase and organise all resources, ensuring they are readily available and well maintained
- Monitor standards in Science across the school through classroom observation, work scrutiny, teachers' planning, discussion with pupils and data analysis
- Contribute to whole-school curriculum improvement by advising SLT and Governor Teaching and Learning Committee on areas of strength and areas for development and identify clear targets to improve and sustain pupil achievement
- Lead the teaching of Science by example and afford colleagues the opportunity to share in good practice
- Lead professional development in Science in accordance with staff development needs and support and guide by encouraging sharing of ideas and skills
- Be aware of National development in Science through reading relevant materials and attending courses when appropriate
- Link with subject leads in alternative settings to work collaboratively and benchmark standards
- Further parental involvement and knowledge by facilitating support and advice through parents meetings and in disseminating relevant information
- Submit regular feedback on standards in Science to SLT and in turn the governors.
- Work to achieve equality of opportunity throughout the school

Class Teachers

The class teacher remains responsible for the teaching of Science, but liaises closely with the Science Co-ordinator. The class teacher needs:

- To ensure progression in the acquisition of Science skills with due regard to the 2014 curriculum

- To develop and update skills, knowledge and understanding of Science and to take advantage of training opportunities where necessary
- To plan effectively for Science (with phase group partners where appropriate)
- To plan effectively for all learners, including the planning for visits to offsite settings
- To keep appropriate on-going records
- To inform parents of pupils' progress, achievements and attainment
- To keep up to date with new or revised information from the Science lead or SLT
- To employ a variety of teaching styles using various methods and different techniques to enable all children to maximise their learning

Parents

We encourage parents to be involved by:

- Providing them with a curriculum map so that they can support the learning of the topic at home
- Inviting them into school regularly to share in the children's learning of the topic
- Sending home an annual report outlining their child's progress and targets for the start of the following academic year
- Giving informal feedback of their child's progress in the playground at the end of the day
- Providing parents with weekly updates about Science learning via our weekly newsletter and via our website

IMPACT: Please visit our website galleries and weekly newsletters.

Signed: G Putterill

September 2021

Name of School: St Cuthbert with St Matthias CE Primary School

Policy review Date: September 2021

Date of next Review: September 2023

Who reviewed this policy? Ratified by the T&L committee