

St Cyprian's Greek Orthodox Primary Academy



Science Policy

Revised: July 2014

Reviewed and ratified by Full Academy Trust:

Date: 10/7/14

Signed: *A Tallis*

Name: A Tallis

Position: Chair of Education

Mission Statement

The aim of St. Cyprian's Greek Orthodox Primary Academy is to provide its children with primary education of the highest quality in a supportive learning environment through the National Curriculum in the core subjects, enriched by the progressive teaching of the Greek language and Christian Orthodox religion.

The children will be equipped with the knowledge, skills and spirituality to enable them to achieve their full potential and prepare them for transition to secondary education and to contribute positively to the challenges of a diverse multicultural society.

Our Rationale For Teaching Science

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills, which we believe promotes communication in a specific and precise language involving mathematical and logical thinking.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following:

- Preparing our children for life in an increasingly scientific and technological world
- Fostering concern about, and active care for, our environment
- Helping our children acquire a growing understanding of scientific ideas
- Helping develop and extend our children's scientific concept of their world
- Developing our children's understanding of the international and collaborative nature of science

Attitudes

- Encouraging the development of positive attitudes to science
- Building on children's natural curiosity and developing a scientific approach to problems and to appreciate that in our teaching aims we do not always know the answers and results when carrying out scientific enquiry
- Encouraging open-mindedness, self-assessment, perseverance and responsibility
- Building our children's social skills to work cooperatively with others
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further

Skills

- Giving our children an understanding of scientific processes
- Helping our children acquire practical scientific skills
- Developing the skills of investigation- including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating
- Developing the use of scientific language, recording and techniques
- Developing the use of ICT in investigating and recording
- Enabling our children to become effective communicators of scientific ideas, facts and data
- Encouraging our children to develop ways of finding out for themselves and to allow them to investigate problem solving

Our Teaching Aims

- Teaching science in ways that are purposeful, well managed and enjoyable
- Giving clear and accurate teacher explanations and offering skilful questioning
- Making links between science and other subjects
- Encourage children to treat the living and non-living environment with respect and sensitivity

This has led to the development of our 5 key principles, which all children and staff will know. These are:

We know that good science teaching occurs when...

- I am able to link science to my own life experiences.
- I can talk, ask questions, share and explain my ideas.
- I am engaged, excited and involved.
- I can challenge the teacher to think.
- I understand the different jobs of a scientist.

Science is a core subject in the National Curriculum.

It is split into three topic bands:

Biology

Chemistry

Physics

Topics covered from year 1 to year 6 in the New 2014 Curriculum are as follows

	Biology	Chemistry	Physics
Year 1	<ul style="list-style-type: none"> • Animals, including humans • Plants 	<ul style="list-style-type: none"> • Everyday Materials 	<ul style="list-style-type: none"> • Seasonal Changes
Year 2	<ul style="list-style-type: none"> • Animals, including humans • Plants • Living things and their habitats 	<ul style="list-style-type: none"> • Everyday Materials 	
Year 3	<ul style="list-style-type: none"> • Animals, including humans • Plants • Living things and their habitats 	<ul style="list-style-type: none"> • Rocks 	<ul style="list-style-type: none"> • Forces and Magnets • Light
Year 4	<ul style="list-style-type: none"> • Animals, including humans • Living things and their habitats 	<ul style="list-style-type: none"> • Everyday Materials 	<ul style="list-style-type: none"> • Electricity • Sounds
Year 5	<ul style="list-style-type: none"> • Animals, including humans • Living things and their habitats 	<ul style="list-style-type: none"> • Everyday Materials 	<ul style="list-style-type: none"> • Forces and Magnets • Earth and Space
Year 6	<ul style="list-style-type: none"> • Animals, including humans • Living things and their habitats • Evolution and inheritance 		<ul style="list-style-type: none"> • Light • Electricity

Our role is to teach scientific enquiry through the contexts of the three main content areas. This is called working scientifically in the New Curriculum.

Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of the National Curriculum for science.

Children in the foundation stage are taught the science elements through the Knowledge and Understanding of the World section of Early Years.

In Key Stage 1 (KS1) and Key Stage 2 (KS2) the Scholastic long- and medium-term planning for the 2014 curriculum is used. This ensures that progression between year groups and guarantees topics are revisited and extended. Teachers are expected to devise weekly plans using this documentation and ensure that children's needs, abilities and interests are met, and that the use of any support staff and resources are used and available. QCA units may fit within new topic areas of the 2014 curriculum and will not be disposed of completely. They may still be used to support the planning of new units.

In KS1 Science is taught for one hour each week.

In KS2 Science is taught for two hours a week.

Cross curricular links are also made with other subjects in the curriculum, where possible.

Assessment and Recording in Science

We use assessment to inform and develop our planning and teaching, and also to track individual pupil progress

- Topics commonly begin with an informal assessment of what children already know, for example through elicitation and questioning
- We mark each piece of work positively, making it clear either verbally or on paper, where the work is good and how it could be further improved through questioning, talking and listening to children
- After the completion of every science topic teachers will complete an assessment for each child, using the document 'St Cyprians Science Assessment Booklet'. Teacher's will highlight which objectives children have met and from this, a level can be given to each child, which will be recorded on an assessment sheet and given to the Science co-ordinator and the Headteacher. This will enable progress to be clearly tracked throughout the year and as children move through the school. It will also help to identify any strong or weak areas in Science as each unit will be followed with an assessment. The teacher will take into account observations of children, responses to questioning, work produced and any other appropriate means when completing the assessment sheets and determining a level.
- Written reports are given yearly to parents, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of science.

Equal Opportunities in Science

- We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability by differentiation in our science planning

- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences
- In our teaching, science is closely linked with literacy and mathematics
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties
- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

Role of Science Co-ordinator

- To ensure consistent implementation of the Science curriculum through monitoring of planning and teaching
- To review the topics for Science focus
- Keep up to date with new developments and inform staff
- Audit resources regularly and take overall responsibility for equipment and resources
- Keep portfolio for Science that will include photographs of pupils at work, curriculum walk reports, examples of pupil's work, schemes joined, calendar of events, book looks, lesson observations, working wall examples
- Keep the whole school science display up to date in the KS1 corridor.
- Develop assessment to ensure progression and continuity

Review

This science policy will be reviewed by the science curriculum leader and the senior management team.

Date for next review - September 2016.

