St George's Central CE Primary School and Nursery

SCIENCE POLICY

Introduction

This document outlines the schools philosophy with regard to the teaching and learning of Science at St. George's Central CE Primary School and Nursery.

Overview

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

National Curriculum for England, Science, 2014

Our Mission Statement

St. George's Central seeks to provide quality educated rooted in the Christian faith, serving the spiritual, moral and educational needs of the community of which it is part.

Our school motto

Never settle for less than your best.

What is Science?

Science stimulates curiosity and excites pupils to ask questions about the world in which we live. Practical experiences enhance children's knowledge and understanding of the world and make important necessary links in everyday life. Through science children learn to question, reason and discuss topical science-based issues and make informed decisions about why things happen. They explore meaningful ideas in context to develop an understanding of issues affecting their lives and the future of the world. Furthermore it brings relevance, interest and purpose to their learning. Through investigations children develop numerous essential life skills as well as satisfying their curiosity and overcoming misconceptions. It provides strong links with all aspects of learning contributing to a broad and balanced curriculum. Science teaching provides creative, practical, skill based, cross curricular learning that is highly significant to children's experiences.

Aims

- To develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- To 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.
- To equip children with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- To develop an enquiring mind and willingness to ask questions about the natural world.
- To develop knowledge and understanding of science which will serve as a foundation for future enquiry.
- To develop attitudes which promote scientific thinking including, open mindedness, objectivity and the value of team work.
- To enhance and develop scientific enquiry skills including; predicting, testing, devising fair tests, planning investigations, leading controlled experiments, drawing conclusions, evaluating validity of results and making generalisations.

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- To develop recording skills in a variety of formats e.g. writing, illustrations, graphs, tables and charts.
- To stimulate and enhance children's love of learning and encourage children to find enjoyment and satisfaction in their work.
- To ensure cross curricular links are made to develop a sense of purpose and achievement.
- To celebrate and value the contribution that all children make and share their achievements with others.
- To create links to first hand experiences to ensure learning is meaningful and set in context.

Strategies

- In the Foundation Stage children will begin developing their knowledge and understanding of the world. They will explore a variety of scientific aspects and ask many questions about the world around them. Teachers will use the Foundation Stage Profile and Early Learning Goals to plan relevant experiences for the children.
- In KS1 and KS2 science will be taught every week.
- Teachers will fulfil the requirements of the National Curriculum at Key Stage 1 and 2 covering all aspects of the relevant topics, scientific knowledge and conceptual understanding, the nature, processes and methods of science, spoken language and the key phase requirements for working scientifically.
- Teachers will develop pupils scientific vocabulary and ability to articulate scientific concepts clearly and precisely.
- Teachers will use the National Curriculum objectives, requirements and guidance to plan science lessons and draw on the extensive resources available in school.
- Teachers will teach science through a question based approach and draw on the materials from Clive Davies where appropriate.
- The teacher will stimulate children's curiosity about aspects of science to develop an enquiring mind and encourage children to question, reason and discuss.
- Children will be encouraged to plan their own fair test investigations identifying variables, what will stay the same, observations and measurements and forming questions.
- Children will be encouraged to make links from previous enquiry and experiences to make predictions and informed decisions in their learning.
- Children will learn to record their work in a variety of formats e.g. bar, line graphs, tables, illustrations and writing.
- Children will be encouraged to self and peer assess their work. They will also be involved in planning the next stage in their learning, discussing where they think that are at and where they need to go next.
- Teachers will assess pupils progress for each of the topics using formal assessments through Rising Stars Tests, this will be recorded after every topic. Children will be given the judgement, less than expected progress, expected progress or more than expected progress.
- Teachers will also formatively assess children's learning on a weekly basis and use this information to inform planning to provide relevant learning experiences for the children tailored to their individual learning needs.

Community Cohesion

We will endeavour to develop community cohesion i.e. binding the community together by thinking about areas such as rights and responsibilities, mutual respect for one another, equality servility etc whenever appropriate.

Inclusion and equal opportunities

As a school we recognise that we have children of differing abilities in all our classes and we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies;

- Setting tasks of increasing difficulty, where not all children complete all tasks.
- Providing resources from earlier of later key stages to support or enhance learning.
- Providing relevant challenges for more able pupils to advance their learning.
- Having additional adults to support the work of individual children or small groups.
- Presenting children with both open and closed questions targeted at all abilities to allow all children to reach their full potential.
- Providing work with equal appeal to boys and girls.

Outcomes

Science will be fun and enjoyable and stimulate pupils' curiosity and willingness to learn. It will have a strong presence in the ethos of the school through displays and science weeks.

Developed by: Mrs A Malley

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Chair of Curriculum Committee	Headteacher	Science Lead
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