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Science Guidance

Turn your ear to wisdom and apply your heart to understanding (Proverbs 2:2)

Broadwater is a Christian School. We will enable children to become wise, confident, successful learners with the motivation, skills and responsibility to make a positive difference in God's world. Our vision is underpinned by the values we live by.

The Holy Spirit produces this kind of fruit in our lives: love, joy, peace, patience, kindness, goodness, faithfulness, gentleness, and self-control. There is no law against these things! Galatians 5:22

It is this fruit that, in partnership with parents, we will instil in the children of our school.

Science Guidance

Introduction:

This guidance reflects the school's values and philosophy in relation to the teaching and learning of Science. It sets out a framework in which the teaching and non-teaching staff can operate and gives guidance on planning, teaching and assessment.

The guidance should be read in conjunction with the 'Overview of National Curriculum Year Group Coverage in Broadwater' (T:\Resource Library\Science\Overview of NC Year Group Coverage in Broadwater) which sets out in detail what pupils will be taught in different year groups.

INTENT

Rationale:

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. Science links practical experience with ideas and it engages learners at many levels. Through science, pupils understand how major scientific ideas contribute to technological change - impacting on industry, business, medicine and quality of life. Pupils recognise the cultural significance of science and trace its worldwide development. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world.

Aims of Science:

Scientific studies should:

- Maintain and/or stimulate pupil curiosity, interest and enjoyment in science to encourage future study.
- Enable pupils to be familiar with a body of scientific knowledge, principles and vocabulary.
- Enable pupils to see science in the context of a wider body of knowledge and skills.
- Enable pupils to understand and use scientific methods safely by incorporating risk assessment as normal practice.
- Give children the experience to acquire practical skills e.g. using a thermometer.
- Provide experience of the scientific process skills of 'Working Scientifically', helping children to develop and apply these progressively in meaningful contexts.
- Help children acquire a progressive understanding of scientific knowledge.
- Prepare children for life in an increasingly scientific and technological world so that they can make informed decisions and choices in future life.

IMPLEMENTATION

Curriculum Planning and Organisation

The Science long term plan has been organised into different units, which have been designed to cover the knowledge, skills and understanding of Science, whilst at the same time, using links to other areas of the curriculum where appropriate. This plan is continuously evaluated to meet the needs of the children in our school. Different units are shared across KSI, Lower KS2 or Upper KS2 in order to best fit a year group's topics. For example, Electricity is in the Year 4 programme of study but it is taught in Year 3 as it fits in with their topic 'Marvellous Machines'. These topics have been carefully tailored to the children's level of understanding and knowledge whilst engaging them deeply through cross-curricular links.

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Timing and Time Allocation

Teachers are expected to teach Science for between I to I and a half hour each week, depending on the degree of integration with other subjects. On particular occasions, it will be desirable to block a unit of science (Science week) or necessary to deliver a Science day e.g. visits. One unit of science from the long-term plan will be taught each half term.

IMPACT

Assessment, record keeping and reporting

- Assessment of the pupil's scientific work is made through oral and written responses.
- The children in Years I-6 will be assessed each term related to a unit of work that they are covering and this is recorded in accordance with the School's Assessment, Record Keeping and Reporting Policy document.
- A Band judgement is given at the end of the year which is recorded on Target Tracker.
- The children in Year R will be assessed using Statutory Framework for the Early Years Foundation Stage. At the end of the year they will assess against the Early Years Learning Goals.

Resources

The general science resources are kept in the Studio. Other science resources that are specific to units of work are kept in the classroom cupboards or above cloakrooms.

Other Policies and guidance linking with Science

Science is a subject with links to all areas of the curriculum. There are close links with Maths and Computing through data handling, and with English through investigative writing. There are also links with the Offsite Visits Policy, RSHE policy and Design Technology guidance.

Health and Safety

The following should be referred to and if applicable, included on planning:

- The school's 'Health and Safety' guidelines.
- The Risk Assessment Procedures
- The Science Risk Assessment
- The School Health & Safety Officer
- The Off Sites Visit policy

Responsibility for Science

The class teacher is responsible for the detailed planning, assessing and teaching of the subject using the Long-Term Plan as the framework for the work undertaken in class by the children. The Science Leader(s) is responsible for the overall organisation and implementation of science throughout the school.