



# Birchington CE Primary School

## Science Policy

### Learning and Growing; Safe in God's Love

#### Our Christian Vision:

To strive to ensure everyone in our happy, inclusive school flourishes and feels valued and safe. Our peaceful learning environment and aspirational curriculum enables everyone to grow from their unique starting point, giving them a hopeful future. Following Jesus' example, we forgive, respect, love and care for everyone.

Our Christian Vision and School Values of peace, hope, forgiveness, love and respect impacts the approach our school takes to all pupils, staff and visitors to our school.

#### Rationale

The children at Birchington CE Primary school explore the world created for us by God, through the Science Curriculum. They will learn about how the physical and natural world works, what its components are, and how the world got to be the way it is now. At Birchington CE Primary School we provide the children with a science curriculum that is exciting, engaging and challenging and encourages the children to learn by asking questions arising from their natural curiosity and knowledge of the world around them. They seek to find answers through experimentation, investigation and enquiry and in doing so we are helping to develop the scientists of the future.

Science is a systematic investigation of the physical, chemical and biological aspects of the world which relies on first hand experiences and on other sources of information. The scientific process and pupils' problem solving activities will be used to deepen their understanding of the concepts involved. The main aspects of Science to be studied will be determined by the Programmes of Study of the National Curriculum.

Our curriculum is arranged in a logical order and key topics and concepts are built upon as the children move through the school. Through our curriculum, pupils learn the extensive and connected knowledge of substantive concepts (the facts of Science) and disciplinary concepts (the skills they need to enquire, investigate and evaluate). As teaching builds upon prior knowledge the pupils are able to make meaningful connections between new content, prior learning and knowledge from other areas of the curriculum.

#### Intent

At Birchington CE Primary our intent is to provide a sequenced and progressive Science curriculum which provides the opportunity for all pupils, no matter their starting point, to learn through varied and systematic investigations which will equip them with the ability to ask and answer scientific questions using the correct vocabulary. Throughout the school year they will develop their skills in working scientifically and they will be able to use their scientific knowledge to plan and carry out a fair test with increasing independence. The children will learn through hands-on experiences and then be able to apply the knowledge they have gained to real life situations and experiences. We will show the children how science is imbedded in everyday life through a variety of visitors coming into the school and school trips. We aim to help to inspire children to become the next generation of scientists.

#### EYFS

The key Early Learning Goals which link to science can be found under Understanding The World: The Natural World and our EYFS and Year 1 curricula link closely to ensure that pupils are able to continue and develop upon the progress they have made. In EYFS we use key vocabulary, concepts, and phenomena that they want children to build upon as they move through their education.

#### Ensuring the Needs of All Pupils

All staff support SEND children and stretch Gifted and Talented children throughout science lessons as outlined in the planning documents across the school and in line with the Mainstream Core Standards. This includes pre-teaching and post-teaching, vocabulary support, small group work and 1:1 in class support. All staff support pupils and make sure that the provision is suitable to support SEND needs so that progress is made in science and they are provided with the same challenge as the rest of the pupils in their class. This allows pupils to make progress towards expected standards no matter their starting point. Pupils are supported by a variety of teaching styles whether they be visual, auditory, kinesthetic or other and lessons are planned with an enrichment activity to ensure that pupils who have a secure understanding of Science are challenged and can master the subject.

#### Aims

- To develop scientific knowledge and conceptual understanding

- To develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life
- To provide the children with out of class experiences
- To build on pupils' curiosity and sense of awe of the natural world
- To use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science
- To introduce pupils to the language and vocabulary of Science
- To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements
- To continue to develop the use of Science working walls and investigative floorbooks
- To understand the uses and implication of Science today and for the future
- To allow opportunities for investigative skills

### **Objectives**

- To develop skills, knowledge and understanding through focused exploration and investigation in familiar contexts
- To encourage creativity, imagination and a way of thinking that can lead to new ideas and solutions
- To develop an awareness of the relevance of Science to personal health and the local environment, with an understanding that living things need to be treated with care and sensitivity
- To develop communication and presentation skills
- To develop the ability to record results in an appropriate manner including the use of diagrams, graphs, table and charts
- To introduce children to the language and vocabulary of Science
- To provide opportunities for reflection leading to conclusions, predictions and further planning
- To foster open mindedness, perseverance, inventiveness and co-operation
- To provide broad and relevant activities that will appeal to boys and girls of all backgrounds
- To use their observations and ideas to suggest answers to questions
- To refer to key scientists and their impact on the world
- To assess the progress and attainment of all pupils against their year group curriculum objectives

### **Activities**

Lesson planning will provide opportunities for,

- interaction with other curriculum areas
- building on previous skills, knowledge and ideas
- practical investigations recorded in a systematic way
- an understanding of what constitutes a fair test
- activities to develop good observational and measurement skills
- the application of scientific ideas to real life problems, everyday experience and the immediate environment
- the promotion of all aspects of health and safety
- children to develop at a pace suitable for their abilities and level of understanding
- developing, exploring and linking scientific concepts
- learning appropriate scientific vocabulary
- presentation of results and conclusions to others
- to experience more out of class lessons

### **Monitoring and Assessment**

This will take place according to the school's Monitoring and Assessment Policy.

All classes will keep an Investigative Science book which will be read to review examples of investigations throughout the year.

Assessments will be completed at the end of each unit of work and at the end of each academic year. Copies will be submitted to the Science Hub as well as the next class teacher.

### **Health and Safety**

This will be guided by the Health and Safety Policy and Risk assessments.

**This policy has had an EIA and has not identified any adverse impact at this point.**