

# WEST PARK CE PRIMARY SCHOOL



## SCIENCE POLICY

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# **West Park Primary School Science Policy**

## **Aims of Science Policy**

Our science policy follows the National Curriculum and aims to ensure that all pupils:

- ❖ develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- ❖ 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
- ❖ are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

## **Curriculum Planning and Organisation**

### **The Early Years Foundation Stage**

The Early Years Foundation Stage Curriculum is followed by Reception children. This is based around the Early Learning Goals.

Pupils in Reception develop their knowledge and understanding of the world through practical activities and direct teaching from which the pupils undertake planned tasks. This forms the foundation for later work in science, as well as other subjects such as geography and ICT.

### **Key Stage 1 and 2**

The National Curriculum provides a broad framework for the curriculum. The Programmes of Study for Science are set out year-by-year for Key Stages 1 and 2. We are however, only required to teach the relevant Programme of study by the end of the key stage. Within each key stage, schools have the flexibility to introduce content earlier or later than set out in the Programme of Study and may introduce content during an earlier key stage if appropriate. At West Park, we base our planning on the Programmes of Study for our relevant year groups.

### **Characteristics of the Curriculum**

Breadth, balance, relevance, differentiation, progression and continuity are characteristics of our curriculum.

The schemes of work for each year group have been developed to ensure that there is full coverage of the National Curriculum and provides the right balance between working scientifically and learning scientific facts.

A cross-curricular approach to the teaching of science provides a creative way of linking subjects through a common theme to give pupils a meaningful, practical and holistic context to learning that is very motivating. This approach enables pupils to use similar skills in different subjects with the same context or problem. They are helped to see that events do not happen in isolation, thus showing the relevance of science ideas and skills in a wider context. Pupils' learning is less disjointed and relevant.

Every opportunity is taken to help children apply their literacy and numeracy skills within a science context. Links with ICT and the arts are strongly promoted to provide pupils with a creative and exciting curriculum.

Learning challenges are often presented to the children and are built around the principle of greater learner involvement in their work, requiring deep thinking, and encourages pupils to work using a question as their starting point.

## Teaching and Learning

All lessons have clear learning objectives which are shared and reviewed with the pupils.

A variety of strategies, including questioning, discussion, concept mapping and marking, are used to assess progress. The information is used to identify what is taught next.

Activities inspire the pupils to experiment and investigate the world around them and to help them raise their own questions such as, "Why . . .?", "How . . .?" and "What happens if . . .?"

Activities develop the skills of enquiry, observation, locating sources of information, selecting appropriate equipment and using it safely, measuring and checking results, making comparisons and communicating results and findings. Lessons make effective links with other curriculum areas and subjects, especially literacy, numeracy and ICT.

Activities are challenging, motivating and extend pupils' learning.

## The Learning Environment

Key Stage 2 classes are encouraged to use the laboratory for practical activities using a booking-in system.

The grounds of our school are used for environmental studies.

Classrooms regularly feature displays of science work. The laboratory promotes science across the school with displays of children's work from different year groups.

## Resources

General Key Stage 2 resources are stored in the laboratory. **Some year group specific resources are stored with the relevant year group.**

Staff are regularly consulted by the Science Co-ordinator as to what resources are required by each year team. A request is made through the SLT for the additional funding necessary.

## Expectations

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant Programme of Study.

## Assessment for Learning, Recording and Reporting

**Teachers assess whether pupils have met age related expectations based on the children's understanding and application of the content of the National Curriculum. From Year 1 and upwards, teachers use topic front covers to record children's attainment. At the end of the Summer Term, teachers use Target Tracker to record their end of year assessment and this information is passed onto the next teacher.** Progress and attainment is reported to parents through parents' evenings and end of year reports.

## Marking for Improvement

Written work is marked regularly. Tickled pink comments celebrate pupils' achievements and green for growth comments identify areas for improvement and next steps. Marking for improvement comments in a child's book are relevant to the learning objective to help pupils focus on future targets. Time is given to improve on work and teachers support children by scaffolding improvements as necessary. When appropriate, pupils may be asked to self-assess or peer assess their own or other's work.

## **Safe Practice**

Pupils are taught to use scientific equipment safely when using it during practical activities. Class teachers, teaching assistants and the Science Co-ordinator will check equipment regularly and report any damage, taking defective equipment out of action. Potential risks should be identified in lesson plans. Guidance for health and safety can be found in the booklet "Be Safe! Some aspects of Safety in Science and Technology for Key Stages 1 and 2" published by the Association of Science Education. Additional information about the hazards of specific chemicals can be found in the Cleapps laboratory handbook. Both documents are located in the science laboratory. The Cleapps School Service provides a free advisory helpline and can be used to clarify any issues concerning safety. Issues relating to health and safety are taught as an element of planning for activities and investigations.

## **Extra-Curricular Opportunities**

Medium-term planning identifies the fieldwork, visits to places of scientific interest and visitors to the school in order to support the learning objectives for units of work where relevant.

## **Spiritual Development**

Spiritual development is encouraged through reminding pupils of the wonder of science and the effect of scientific discoveries on the modern world. Topical scientific issues are also discussed as appropriate.

## **Personal, Social and Health Education**

Health education is taught in each year group through the topic, "Animals, including humans." (Year 1: senses. Year 2: Importance for humans of exercise; eating right amounts of food; hygiene. Year 3: nutrition. Year 4: digestive system; teeth. Year 5: Life cycles; reproduction. Year 6: circulatory system; impact of exercise, drugs and lifestyle on the body).

## **Leadership and Management**

The Science Co-ordinator's role includes:

- ❖ developing a plan of action
- ❖ monitoring standards and practice
- ❖ ensuring curriculum coverage, continuity and progression and challenge for all abilities
- ❖ providing guidance on appropriate teaching and learning methods and materials
- ❖ auditing resource needs, ordering stock and managing the budget

A Line Manager oversees and guides the work of the Science Co-ordinator with regards to the general development of science through West Park School.

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