



Percy Main Primary School

Science Policy



Science is a continuous process of learning by which we develop an understanding of the biological, chemical and physical aspects of the world in which we live. It is an ever changing and increasing body of knowledge obtained through the generation and testing of ideas.

Aims

- To provide specific skills, knowledge and understanding and attitudes.
- To know the world in which they live and their place in it.
- To develop scientific methods of investigation.
- To stimulate and excite pupils' curiosity about changes and events in the world
- To use the correct scientific vocabulary.
- To acquire appropriate and positive attitudes e.g. curiosity, perseverance, self- discipline, inventiveness, co-operation and enjoyment
- To have an awareness of safety in use of materials and equipment.

The Importance of Science in the Curriculum

At Percy Main the whole curriculum (all statutory and non-statutory subjects) is taught using a creative curriculum approach strengthened through our commitment to LOfC. Science stimulates and excites and satisfies pupil's curiosity about phenomena and events in the world around them. Since science links direct practical experience with ideas, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to critical and creative thought. Through science, pupils understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving the quality of life. 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.

In reception, the children follow the Early Years Foundation Stage (EYFS) curriculum.

At Key Stage 1 pupils observe, investigate, explore and ask questions about living things, materials and physical processes both in the classroom and in our developing school grounds. They begin to work together to collect evidence to help them answer questions and to link this to simple scientific ideas. They begin to evaluate evidence and consider whether tests or comparisons are fair. They use reference materials to find out more about scientific ideas. They share ideas and communicate them using scientific language, drawings, charts and tables with the help of ICT if it is appropriate. Our school grounds and field trips are used to further enhance experiences.

At Key Stage 2 pupils learn about a wider range of living things, materials and physical processes. They make links between ideas and explain things using simple models and theories. They apply their knowledge and understanding of scientific ideas to familiar phenomena, everyday things as well as their personal health. They think about the effects of scientific and technological developments on the

environment and in other contexts. They carry out more systematic investigations, working on their own and with others.

They use a range of reference sources in their work. They talk about their work and its significance, using a wide range of scientific language, conventional diagrams, charts, graphs and ICT to communicate their ideas. Our school grounds and field trips are used to further enhance experiences.

We aim to provide a curriculum which:

- is broad so that all children experience a wide range of specific concepts
- is balanced between knowledge and skills and the process of investigation
- is relevant in that the activities and ideas presented draw on the children's everyday experiences as preparation for adult life
- makes the most of our school grounds and LOtC opportunities
- is differentiated so that children of all ability levels are challenged

Teaching and Learning

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

Pupils will have the opportunity to participate in a variety of activities both inside the classroom and through the use of our developing school grounds and our commitment to LOtC to develop scientific knowledge and understanding and apply these skills in a meaningful context.

Pupils have frequent opportunities to develop their skills in, and take responsibility for, planning investigative work, selecting relevant resources, making decisions about sources of information, carrying out activities safely and deciding on the best form of communicating their findings.

Assessment, monitoring and reporting

Teachers' assessment takes place at the end of each unit of work. Assessing pupil progress (APP) grids are used to track pupils' progress, which is used at the end of each school year to help complete the annual report to parents.

Opportunities are offered to parents throughout the school year to discuss children's progress with the class teachers. A written report on all curriculum areas is given to parents at the end of the summer term.

Differentiation

Differentiation should be organised by:

- adapting tasks to match the ability of the pupils;

- outcome, where all pupils undertake a common task and differentiation comes about in the quality of response or outcome;
- planned teacher support to individual pupils.

Health and Safety

Teachers should make children aware of any health and safety issues relating to the activities they will be working on. Please refer to www.hse.gov.uk.

Resources

Pupils will be provided with a range of resources for the various activities. The resources are stored in the cupboard in the staff room. The Science Subject Manager will review resources annually. Outdoor Learning Coordinator has a bank of outdoor learning resources that can be used to inspire, motivate and engage children in learning experiences in outdoor learning environments. As a school we recognise that outcomes are best achieved and are successful when the venue/environment are matched to the activity and the resources.

Equal Opportunities.

Our school curriculum aims to provide for the particular needs and aspirations of every pupil regardless of gender, religion or culture.

Pupils with diverse learning needs are provided for through:

- Teachers planning for the pupils full participation.
- Setting high expectations.
- Providing opportunities for all pupils to achieve.
- Creating effective learning environments.
- Providing equality of opportunity through teaching approaches.
- Setting learning targets.
- Liaison with SENCO and the development and delivery of appropriate IEPs.
- Liaison with outside agencies, e.g. psychological services.
- Allowing pupils access to specialist equipment and approaches where necessary.
- Liaison with the adviser for gifted and talented pupils.
- More able pupils are planned for appropriately.
- Support from our equal opportunities policy.
- Continuous consultation with and involvement of parents

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September 2014

(Review Date: September 2015)