



Westminster

Primary

School

Nurturing Minds...
Inspiring Excellence

SCIENCE POLICY

Reviewed: March 2021

Aims

At Westminster Primary School, our principle aim is to develop our children's knowledge, skills, and understanding which will enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. As well as this, scientific study helps to stimulate a child's curiosity in finding out why things happen in the way that they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national and global level.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Our aims in teaching science include the following:

- To encourage and build upon our children's natural curiosity, stimulating them to ask questions and motivate them to investigate;
- To develop their knowledge and understanding of science, making the concepts we study relevant to their everyday life and giving them opportunities to explore and observe at first hand where possible;
- To teach the children scientific skills and strategies and to develop positive attitudes which encourage them to share response
- To prepare our children for life in an increasingly scientific and technological world.

Objectives

The teaching of science at Westminster Primary School will enable our children:

- to ask and answer scientific questions;
- to plan and carry out scientific investigations, with the correct use of equipment
- to know and understand the life processes of living things (including reproduction);
- to know about materials, electricity, light, sound, and natural forces;
- to know about the nature of the solar system, including the earth;
- to know how to plan a fair test, achieve reliable results, evaluate evidence, and to present conclusions both clearly and accurately.
- to provide our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.

Organisation

Teachers are responsible for the teaching of Science. It is taught in units through a combination of whole class teaching, group and individual work. The units are based on the Science Curriculum (2014) with scope for teacher's own initiatives and ideas.

Teachers will encourage our children to have skills of observation, discussion, debate and research. In order to ensure the children receive a balanced science curriculum it is essential that elements from each of the Attainment Targets be taught each year, with particular emphasis on Working Scientifically. A minimum of 2 'working scientifically', known previously as science enquiry, lessons should be taught per unit however some units lead naturally to much more and teachers are expected to use this as the foundation of their teaching objectives. Teachers should be aware that

‘working scientifically’, it is now integrated with developing children’s ideas, and should not be taught on its own. It also puts a strong emphasis on children asking their own questions and making decisions.

Working scientifically emphasises minds-on as well as hands-on activity, so some science enquiries might be based on finding out using secondary sources of information and not involve any practical work.

Working scientifically is more than just fair testing. The framework in the new National Curriculum comprises five possible approaches. These are:

- **Observing changes over time** - What happens to my bean seeds after I plant them?
- **Looking for naturally-occurring patterns and relationships** - Do beans curl clockwise or anti-clockwise as they grow?
- **Identifying and classifying things** - There were 12 different types of beans in the market in France! What were they?
- **Researching using secondary sources** - Gardeners say that growing beans is good for the soil. I wonder why they say that?
- **Comparative and fair testing** - Does it make any difference if I put fertiliser on the beans when they are growing?

Teachers will need to be aware of the different ways of teaching working scientifically to answer different types of questions.

Throughout our Science teaching we hope that our children will develop a sense of awe and wonder about the world around them.

Teaching Methods

At Westminster, we believe the best way for children to learn Science is to involve them in first-hand experience. We try to help them make sense of this experience through discussion and by relating it to everyday life.

This approach is supplemented and enhanced through the use of worksheets and visual aids programmes. At all times we try to ensure that the children carry out their process skills in a scientific manner and through a thoughtfully designed programme of science activities develop their:-

- Curiosity
- Responsibility
- Self-criticism
- Co-operation
- Independence
- Originality

At Westminster, we encourage staff to record work creatively using photographs, role-play and art. Therefore, it is not necessarily always formally recorded but when it is it may be done in a variety of ways including pictures, tables, graphs, diagrams, and written work. Demonstrating, monitoring and recording is also developed through ICT.

Science Curriculum Planning

Westminster Primary School uses the new national programmes of study for science and the school's Science Medium Term Plans as the basis of its curriculum planning. This programme of study is enhanced by the use of 'Switched on Science' scheme. We make use of the local environment in our fieldwork, to support and develop children's natural curiosity of the world around them.

At Westminster Primary we carry out our curriculum planning in Science as four teaching blocks. Science is mainly taught as a discrete subject.

The long-term plan maps the scientific topics studied in each term across the whole school over the year. Our medium-term plans, written by the science lead, gives specific learning objectives and success criteria for each lesson, for each unit of work for each term. These plans provide the basis of the lesson but teachers are expected to adapt, plan and resource the lesson accordingly.

The science subject leader monitors progression and sequence of learning through book scrutinises and observations.

The Early Years Curriculum

We teach science in the Early Years as an integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. Also, children begin to explore the world around them, with specific Science work covered through the Early Learning Goal 'Understanding of the World' through lots of class and group discussion. Children are encouraged to ask questions about the world. The teachers then provide children with practical opportunities, where appropriated through play, to explore where possible.

Science and inclusion

At Westminster Primary school we teach science to all children, whatever their ability and individual needs.

Science forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our science teaching, we provide learning opportunities that enable all pupils to make good progress.

We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

Assessment

Teachers will assess children's work in science by making informal judgements during lessons. Written or verbal feedback is given to the child to help guide his/her progress.

Older children are encouraged to make judgements about how they can improve their own work.

At the end of each unit of work, the class teacher is required to assess the child's understanding of that topic through the use of a mind-map.

Teachers make a formal assessment of the children's work in science at the end of each year and this is reported to parents/carers on the child's annual school report.

The science subject leader keeps samples of children's work in a portfolio, and uses these to demonstrate the expected level of achievement in science for each age group in the school.

Resources

Resources for Science are stored centrally in the Science Cupboard on the third floor of the Junior building.

The Subject Leader monitors the resources and orders additional items as needed/requested.

Safety in Science Activities

We accept responsibility to plan safe activities for science. The children are made aware of the reasons for safe practise.

Monitoring and Review

It is the responsibility of the science subject leader to:

- monitor the standards of children's work and the quality of teaching in science;
- support colleagues in their teaching, by keeping them informed about current developments in science and providing a strategic lead and direction for science in this school;
- give the head teacher/governors an annual summary report in which s/he evaluates the strengths and weaknesses in science and indicates areas for further improvement;
- use specially allocated regular management time to review evidence of the children's work, and to observe science lessons across the school.

Completed by: S. Yasin

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