

# Date Valley School

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## Science Policy

### Aims and objectives:

Through the science curriculum and the school ethos, our pupils will:

- Be provided with appropriate and stimulating scientific experiences which encourage pupils to make sense of the world around them
- Develop a curious attitude to scientific enquiry and an awareness of the influence of science in everyday life
- Be prepared for life in an increasingly scientific and technological world
- Take part in activities that meet the requirements of the EYFS and National Curriculum in a way that is appropriate to the needs and interests of all pupils and which challenges them to fulfil their potential
- Develop their scientific knowledge and understanding (children are aware of next steps to develop their skills, knowledge and understanding)
- Develop their investigation skills
- Explore the history of scientific inventions and famous scientists (including through cross curricular links)
- Have opportunities to apply their scientific knowledge and skills to solve problems in a wide variety of contexts including real life examples and be encouraged to discuss and debate their findings
- Record their scientific studies in a variety of ways and consider how these are relevant to their learning
- Develop their explanatory and communicative skills
- Build confidence in working both collaboratively and independently on scientific tasks
- Develop a caring attitude to the environment and living things
- Understand safe ways of working and to take increasing responsibility for managing their own investigations safely
- Use a progressive scientific vocabulary
- Use scientific contexts to develop and consolidate the basic cross curricular skills of Literacy, Numeracy and ICT
- Study a balance of Biology, Chemistry and Physics

## **Teaching and Learning:**

Science is taught on a weekly basis throughout the school year. Where appropriate teachers are encouraged to integrate their science teaching with their topic work, when this is not possible Science is taught as a discrete subject using a variety of teaching and learning methods including whole class, group work, pair work and individual study.

In the Early Years Foundation Stage (EYFS) Science is taught through Understanding of the World. Science is developed by building upon the children's natural curiosity and fascination for their environment and the world around them. Children are encouraged to use all their senses to investigate, explore and to make predictions.

The programme of study at Key Stages 1 and 2 follow the current programmes of study although, these are enriched and developed across the school. Where some units crossover with regard to year groups due to links with other topics, care is taken to ensure all learning objectives are covered, particularly those which act as a foundation for future learning. At Key Stage 2, the programmes of study ensure all areas of study are covered twice within the four years with the second visit reinforcing previous learning before developing scientific knowledge further.

Working Scientifically (previously SC1) is planned within the context of the programmes of study such as "Animals Including Humans", "States of Matter" and "Forces" at both key stages. Through the programmes of study laid out across the school, elements of Biology, Chemistry and Physics are covered in each year group. Investigation and exploration skills are taught throughout the programme of study and practical activities are encouraged in every lesson. Children learn the principles of working scientifically through observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.

Activities are planned carefully for specific ability groups within the class which involves varying levels of support and open ended investigations where appropriate. Gifted, Able and Talented children are identified within an extension group in the class and activities are provided which both support and extend their learning.

## **Role of the Subject Coordinator:**

The role of the co-ordinator includes:

- Attending courses, collecting information and distributing to staff
- Providing a variety of literature and knowledge based support
- Assisting colleagues in the effective implementation of the Science Scheme of Work
- Identifying and addressing any needs and concerns
- Organising resources and the budget
- Monitoring and evaluating the teaching of Science
- Coordinating the Science Policy and Scheme of Work
- Delivering targeted training for both teaching staff and LSAs through INSETs, staff meetings and LSA meetings

- Ensuring the development of Science reflects and enhances the school's philosophy and ethos
- Analyse internal data to measure progress, identify strengths and address perceived weaknesses
- Lead regular moderation sessions for staff and keeping a portfolio of children's work to reflect progression through the school
- Update and monitor the Science section of the school's Gifted, Able and Talented Register

### **Resources:**

Science resources can be found in the Science section of the Resource Room and in the Science/Computing room.

The school grounds provide a valuable resource for scientific enquiry, knowledge and understanding.

Teachers are encouraged to make good use of the outdoor environment including the outdoor classroom, pond area, wild woods, vegetable plots and various habitat areas which encourage a range of organisms.

The local community is also a significant resource, with the town centre, Mitcham Common and woodlands in and around Mitcham all providing exciting learning opportunities for the children to explore.

Visits further afield are planned so that children experience different environments where they can explore and investigate the world around them.

Guest speakers are encouraged to visit the school and all those with a particular expertise within the scientific field are most welcome so that children may receive a broad and varied perspective.

### **Health and Safety:**

All staff are aware of the requirement of the school's Health and Safety Policy.

Risk assessments are carried out for all science activities within the planning process and children are included in the discussion of safety rules for different projects and tasks.

Resources which could pose a danger should be stored in a marked box out of reach of children in the Kitchen cupboard.

### **Assessment:**

Assessment is carried out throughout each unit and a level with sublevel is reported on a termly basis.

Teachers carry out an initial baseline quiz at the start of each unit and then assess formatively throughout the duration of the unit based on working scientifically skills and the associated unit objectives.

The current Science Coordinator is: Sister Erum Jaffri

This policy has been read and approved for Date Valley School, by the School Principal and the Date Valley Trust Policy Committee.

Date: February 2015