FOXFIELD SCHOOL



Science Policy

And Curriculum Documents



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**Science Policy**

**Introduction**

Foxfield School is a secondary school based on the Wirral. It caters for pupils with a range of Complex learning difficulties (CLD), from severe learning difficulties (SLD), profound and multiple learning difficulties (PMLD) and pupils on the autistic spectrum (ASD). In addition, a number of our pupils have associated needs such as Sensory and Physical impairment, challenging behaviours and English as an additional language.

As a school we recognise that the diversity of the pupils and their learning styles require teaching approaches which reflect their needs through specialised, modified and structured teaching methods.

#### The aims of the school

Our school aims are:

* To enable our young people to achieve their full potential in all areas of their development.
* To provide a happy, caring, stimulating, supportive, respectful and safe environment.
* To work with everyone involved so that each young person in our school can become increasingly independent and integrate more successfully into the community.
* To provide a broad and balanced curriculum relevant to the needs of every young person.

**The Importance of Science**

A high quality science education provides the foundations for understanding the world around us. Science has changed our lives and is vital to the world’s future. The national curriculum for science aims to ensure that all pupils;

* Develop science knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
* Develop understanding of the nature, processes and methods of science that help them to answer questions about the world around them
* Are equipped with the scientific knowledge required to understand the uses and implications of science

*Learning Science gives all pupils the opportunity to think and learn, and develop an interest in and curiosity about the world around them through exploratory and investigative experiences and activities. In particular, science offers pupils with learning difficulties opportunities to:*

* *Develop an awareness of, an interest in, themselves and their immediate surroundings and environment*
* *Join in practical activities that link ideas*
* *use their senses to explore and investigate*
* *develop an understanding of cause and effect*

*QCA: Science planning, teaching and assessing the curriculum for pupils with learning difficulties 2011*

**Science at Foxfield**

The principal focus of Science at Foxfield is to enable pupils to explore, experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They will be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying, carrying out simple comparative tests and gaining information using secondary sources. They will use simple scientific language to talk about what they have found out and communicate their ideas.

The aims of Science in our school are:

* to develop an awareness and interest in the natural, material and physical world
* to explore, experience and examine the material, physical and living world
* to enable pupils to investigate their own ideas safely
* to encourage skills of observation and problem solving
* to use equipment to measure and compare
* to record results observed and measured
* to identify and explain patterns
* to predict the likely outcome of an investigation
* to be able to criticise an investigation and identify a fair test

**Curriculum**

The Science curriculum at Foxfield follows The National Curriculum in England Science Program of study. Adaptations are made where necessary and the curriculum is differentiated in order that all pupils in Key Stage 3 and 4 are able to access the curriculum in accordance with their level of attainment and individual needs. The Science curriculum is split into four main areas;

1 Scientific enquiry

2 Life processes and living things (Biology)

3 Materials and their properties (Chemistry)

4 Physical processes (Physics)

Life processes and living things, Materials and their properties and Physical processes are taught through half termly topics on the long term plan whilst Scientific enquiry is embedded throughout the whole curriculum. At both KS3 and KS4 pupils receive one, one hour lesson per week. Lessons are delivered in the Science room.

**Planning**

There are three levels of planning at Foxfield;

Long Term plan (LTP)- The long term plan maps science modules studied over a three year rolling programme at KS3 and a two year rolling programme at Key Stage 4. The subject coordinator is responsible for producing and updating the long term plan.

Medium term Planning (MTP)- Each topic on the long term plan has a corresponding medium term plan and is aimed to be taught over a half term period. Each plan is differentiated to include the full ability range and gives teachers learning objectives and outcomes as well as ideas for activities, outdoor learning, investigations and resources. The MTP is written by the subject coordinator and given out at the end of each half term. Teachers must read over the medium term plan, familiarise themselves with the content and the use of any equipment before the start of the topic.

Short Term Planning (STP)- It is the responsibility of individual class teachers to use MTP’s to produce their daily STP. Short term planning is completed using the schools daily planning proforma and should be displayed at the front of class each day. The STP should show the intended outcomes, lesson progression, differentiation and role of TA’s for that particular lesson.

**Assessment**

At Foxfield pupils learning is assessed both formatively and summatively using a range of strategies.

Pupils are assessed against the relevant scheme of work aims and objectives each lesson. During the lesson pupils are assessed by way of staff observation, questioning and marking of any written tasks. This formative assessment enables correction of any misconceptions and informs future planning.

Pupils are assessed formally using P Levels and NC attainment targets (PIVATS) in february and July and this is recorded on the schools online recording system.

**Resources**

Foxfield has a fully stocked Science room with a secure store room. Resources for each module and kept in labelled boxes. Resources are also listed on the relevant modules Medium Term Plan. Health and Safety information is included on MTP’s and can be found here;

[**http://science.cleapss.org.uk/resource/Student-Safety-Sheets-ALL.pdf**](http://science.cleapss.org.uk/resource/Student-Safety-Sheets-ALL.pdf)

**Curriculum Links**

ICT- Information and Communication Technology is used throughout the teaching and learning of Science at Foxfield. It is seen not only to be the work carried out in science on computers but also lessons involving digital technology e.g. data loggers, digital cameras, microscopes etc. Links to ICT for each module are highlighted in the medium term planning

English- science helps to develop pupils literacy and communication skills in a variety of ways. Pupils are encouraged to interact with both peers and staff in large and small group settings. They are encouraged to communicate their findings both orally and in writing/ drawing.

Mathematics- many of the science modules provide opportunities for pupils to develop their mathematical skills through working with numerical data relating to real situations e.g. obtaining and presenting evidence, reading scales, taking measurements, drawing graphs.

PSHE- Science and PSHE overlap in a few units of work which cover aspects of the human body, health and exercise. Where possible liaise with the PSHE co-ordinator to ensure Science units of work are developing pupils understanding of what is taught in PSHE lessons and is not of a repetitive nature.

**Health and Safety**

Science lessons are delivered in the science room which has direct access to running water and a first aid kit in accordance with the schools health and safety policy. Healthy and safety information relevant to each topic can be found on the medium term planning. Where necessary e.g. when using hazardous substances, risk assessments are given out to staff. Teachers must however ensure that risk assessments are carried out in relation to individual classes or pupils. The consumption of food and drink are not permitted in the science room. Electrical equipment is subjected to regular PAT testing in accordance with the school health and safety policy.

**Equal Opportunities**

We operate within the whole school equal opportunities policy. We challenge prejudice as it arises and have a consistent approach to dealing with racist or sexist incidents. All pupils should have equal access to a suitable Science curriculum in order to develop their skill.

Medium term planning details a range of outcomes to accommodate the least and most able pupils. A differentiated curriculum is provided for various ability levels which can be adapted to suit individual classes.

We check software, documents, CD roms, applications and downloadable games to ensure that gender and ethnicity are reflected in a balanced way without stereotyping. Staff are careful in their use of language. This is for several reasons. For example, to avoid reinforcing stereotypical views of society. Staff are also careful with their language to ensure that pupils understand what is being taught. As a school we aim to encourage all pupils irrespective of their gender, race, ethnicity, religion, socio-economic background and level of disability.

**Other Relevant Policies**

* Health and safety
* Assessment
* Planning
* Equal Opportunities

**The role of the coordinator**

The role and responsibility of the science coordinator is to

* be accountable for standards of teaching and learning within science across the school
* plan how the science curriculum will be delivered across the school
* manage resources and the science budget
* write and maintain the science curriculum document
* review and amend policy and curriculum documentation in light of changes in legislation, guidance and national strategies
* moderate standards of achievement both within school and in relation to regional and national comparisons when available
* liaise with the schools Assessment, recording and Reporting Coordinator when appropriate
* maintain comprehensive and current details of the science curriculum on the school system
* lead other staff that deliver science
* liaise with outside agencies

**Science Curriculum**

**Long Term Plan**

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Each topic will be linked to one or more of the following areas of Working Scientifically;

* Predictions and evaluation
* Making observations
* Planning an investigation
* Presenting evidence
* Recording evidence
* History of Science

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| --- | --- | --- |
|  | **Key Stage 3** | **Key Stage 4** |
| **2018- 2019** | Year 3 | Year 1 |
| **2019- 2020** | Year 1 | Year 2 |
| **2020- 2021** | Year 2 | Year 1 |
| **2021- 2022** | Year 3 | Year 2 |
| **2022- 2023** | Year 1 | Year 1 |

**Example MTP**

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