



**Castle Hill School**  
Innovating, Communicating, Empowering

# Science Policy

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<b>Committee</b>	<b>KUW</b>
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# **Science**

## **Philosophy**

National legislation, the [Equality Act 2010](#) and the [Special Educational Needs and Disability Regulations 2014](#) re disabilities, race relations and special education needs underpin this policy, which has also taken into consideration national, local and school policies on Special Educational Needs, Equal Opportunities and Health and Safety.

At Castle Hill Science is a means of facilitating the development of ideas that enable pupils to make sense of the things that happen around them why things happen and how things work around them? This is done through first-hand exploration, discovery and investigation. We believe that Science is important to all our pupils not simply because of the ideas we need to know about our world but also because of the many skills and attitudes it helps to foster. Science acts as an important vehicle for physical, cognitive and communicative skills as well as sensory and perceptual.

Science is about the 'real' world.

## **Practice**

A range of teaching styles will be used to accommodate the different learning abilities of individual students. Teaching will be done on an individual basis, in small groups or whole class groups.

Science is delivered through the Understanding of the World curriculum. A whole school topic is identified each term and the curriculum team draws up an Understanding of the World Scheme (Curriculum Guide) relevant to the topic. Assessment is built into the teaching and learning process for all pupils. It is a valuable tool in informing staff of the next steps in learning.

### Early Years

Children in the Early Years follow the Foundation Stage curriculum. Science is taught through the Understanding of the World area of learning.

### Key Stage 1-4

Pupils in Key stage 1-4 will cover Science through the school's Understanding the World Curriculum Guides, with links to a variety of schemes of work including the Equals, Moving On, QUEST, the QCA schemes of work, and the National Curriculum.

### Post 16

Post 16 pupils primarily follow the ASDAN Personal Progress and ASDAN Personal and Social Development accreditation will also follow the school's Understanding the World Curriculum Guides and aspects of the Moving On Curriculum.

**Through the teaching of this subject we aim to:**

- provide every pupil with the scientific experiences to which they are entitled
- plan opportunities for all pupils to think, learn and develop an interest in, and curiosity about, the world around them through exploration and investigation
- communicate and relate science to everyday life and develop these experiences through scientific investigations
- identify opportunities for cross curricular links
- Use the teaching of science to develop sensory awareness and processing skills

Where pupils require a sensory curriculum they will work on our MSI curriculum and will predominantly meet science learning through areas of Communication, Conceptual Development and Sensory Responses.

The units of work provide the contexts within which the pupils are able to explore ideas and concepts and develop intellectual and practical skills. We are committed to offering scientific experiences, which are appropriate, relevant and enjoyable. The schemes of work ensure breadth of study and progression through the key stages whilst allowing for individual learning to be targeted through the EHCP's. The main priority is to engage pupils in purposeful observation of the world around them and to explore / investigate the natural and manmade world. The units can be delivered to pupils via a wide range of sensory experiences enabling all pupils to have full access to the curriculum.

Science lends itself to experiential learning and multi-sensory approaches. Activities are designed to be fun, exciting and intrinsically motivating. The Equals document confirms an interactive approach in its use of terms such as 'explore', 'experience', 'find out' and 'investigate'.

Use of I.C.T. will support teaching and learning e.g. use of the Internet, communication aids, computer microscopes.

Teaching Science will help pupils to develop their broader communication, literacy, numeracy and inter-personal skills.

The Science curriculum will be delivered, where possible, through concrete experiences set within a meaningful context.

Within the experiences offered, pupils' individual needs are identified in MAPP and PIP teacher assessment. This enables focussed and effective differentiation by one or more of the following- support, resource, task and response.

At the start of each unit we record class and individual objectives. At the end of each unit pupil achievement is recorded and evaluated in a variety of ways.

- Teacher assessment with reference to P level or the achievement continuum descriptors.
- Ongoing monitoring of teaching and learning.
- Photographic and video evidence.

- Yearly reports.
- EHCP's.
- Records of Achievement.
- Students' work.

### **Working Scientifically**

In order to ensure students' needs are met it is essential that the key areas of Scientific Enquiry would be meaningful in our students' development through an accessible means for them to engage. To suit the needs of our learners, the 5 types of scientific enquiry listed in the National Curriculum were identified as not suitable. In order to meet students' needs we have introduced these key phrases instead: Explore, Investigate, Experiment and Discover. These offer a functional interpretation of the national guidance for formative evaluation and to support engagement.

### **Health and Safety**

We encourage students to follow procedures as identified in the schemes of work to ensure good health and safety practice. Teachers have the obligation to carry out their own risk assessments depending upon the nature of the activities planned and the needs of individual students. Advice on health and safety best practice is contained in the CLEAPPS health and safety document which can be found alongside this policy in the same folder on the server titled - 'Model Health & Safety Codes of Practice in Science for Local Authorities L222 July 2007'. In addition to this there is a document titled 'The Role of Science Advisory Staff in Health and Safety L249 June 2006' for your information.

### **Unicef and the Rights of the Child**

We also see a strong link between Science and the UN Convention on the Rights of the Child (CRC), recognising that all of our pupils have all of the rights set out in the Articles, included but not limited to the following areas:

- develop communication and interactive skills (Article 13 – Freedom of expression)
- make choices and decisions (Article 12 – Respect for the views of the child)
- develop personal autonomy by having a degree of responsibility and control over their lives (Article 5 – Parental guidance and a child's evolving capacity)
- realise that they can make a difference by their individual or collective actions (Article 15 – Freedom of association)
- develop an awareness and respect for other people and different societies (Article 29 – Goals of education)

- every child has the right to relax, play and take part in cultural and artistic activities (Article 31 - leisure, play and culture)

## **Performance**

Assessment is built into the teaching and learning process for all pupils. It is a valuable tool in informing staff of the next steps in learning.

Assessment at Castle Hill is ongoing. However, formal assessment takes place twice each year during the Autumn and Summer terms at the end of every term ? when data is collected and progress and/or experiences measured. Assessment is based around P levels and, where appropriate, the National Curriculum.

## **Recording and Evaluation**

The progress and achievement of all students can be recognised through:

- Teacher assessment through lesson evaluations
- Ongoing monitoring of pupils' work
- Photographic and video evidence
- Annual reports
- MAPP
- Learning Journals
- EHCP review process

## **Recognising Progress**

For most pupils with learning difficulties, achievements can be predicted and planned for and progress can be demonstrated in terms of increased knowledge, skills and understanding. Not all pupils will follow the same developmental pattern at the same age or rate. Progress may not be made in all areas of the curriculum. For some pupils progress may be difficult to predict or distinctive and may only be demonstrated in a certain environment with a familiar person.

## **Planning for progression**

Effective planning involves the careful and deliberate sequencing of curriculum content and experiences. This builds on previous learning and achievements to promote future learning. Long and medium term curriculum plans, should therefore show progression from age group to age group and within each of the key stages. This progression could be through skills or experiences.

Planning for progression for individuals or groups might focus on:

- Skill development
- Breadth of curricular content
- A range of contexts for learning
- A variety of support equipment
- A range of teaching methods
- Negotiated learning
- Application of skills, knowledge and understanding in new settings
- Strategies for independence

For our pupils, progression is not necessarily only movement up a hierarchical ladder of skills and knowledge. Lateral or horizontal progression is also important.

### **The Role of the Understanding the World Curriculum Team**

Science forms part of the curriculum team for Understanding the World. As a result the Understanding of the World Curriculum Team are responsible for the completion of the following tasks:

- Subject development.
- Learning audit
- Data analysis
- Collation of photographic evidence of learning and planning evidence
- Learning Walks (These replace P level data analysis for those subject areas that no longer use P-levels\*. The learning walk should be carried out with as many members of the Curriculum team as possible - it might be beneficial to invite those members of support staff who don't attend teachers' meetings. Follow-up interviews should take place if possible to discuss findings from the learning walk and possible strategies that may be needed. If possible, interviews to be carried out with one teacher per phase)
- Formulation of Curriculum Guides, to be completed for each coming term.
- Displays
- Resource purchase/availability, resource audits and resource accessibility
- Policy updates
- Support of Continued Professional Development.

The over-riding task must be to provide support for all who participate in Science and so improve the quality and continuity of Science teaching and learning throughout the school.