



# Glen Hills Primary School

## Science Policy

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These are the aims of the new National Curriculum 2014. The National Curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

**The Symphony group of schools therefore aim to:**

- To plan, deliver and assess objectives as ambitious as those from the National Curriculum 2014 for Science.
- Develop and stimulate learners' curiosity and enjoyment of the world around them.
- To teach children the skills needed to work scientifically using different methods and processes.
- To encourage pupils to question, explore and communicate scientific ideas using scientific vocabulary.
- To show children how scientific ideas have and will contribute to our everyday lives.

**Science in the Wider Curriculum:**

We believe science is central to a creative curriculum. Science should be relevant and meaningful to the children and embedded within the curriculum.

**Assessment:**

Children will be assessed using formative and summative measures. Each topic taught in Glen Hills Primary School has a Trigger and End of Topic assessment which enables progress against key learning to be measured.

### **1. Science Policy**

The study of Science at Glen Hills Primary School is an essential part of the school curriculum. Through the Science curriculum, children's entitlement to participate fully in Science is realised. Through the Science curriculum, children will develop skills to explore and understand the world in which they live.

- The children will be involved in learning experiences which require their participation in both practical and intellectual activities.
- We recognise that all children arrive at school with different levels of language and experience. We will provide appropriate activities and support to enable them to develop scientifically, including vocabulary development.
- At Glen Hills Primary School, we recognise that good Science in the Primary school is firmly based on children's first hand experiences.
- When teaching Science from the Foundation Stage and National Curriculum guidelines, Science in the classroom must start from the views which children hold and give them the opportunities to change their views and ultimately their understanding.

## **2. Purpose and Aims**

- To deliver a Science curriculum which is at least as ambitious as the National Curriculum of Science in ways that are imaginative, purposeful, controlled and disciplined but also enjoyable.
- To help in developing and extending the children's scientific concept of their world.
- To encourage the development of investigation, exploration, collaboration, observation, evaluation and inspiration.
- To carry out planned, safe and practical activities according to health and safety guidelines and to record their work using IT as appropriate.
- To develop the use of scientific language, recording and techniques.
- To enable children to become effective communicators of scientific ideas, facts and data.
- To incorporate Science activities with other areas of the curriculum (including DT, Art, History and Computing).
- To build upon children's scientific skills, knowledge and experiences so that their knowledge and understanding are deepened and enriched as they progress through the school.
- To encourage the development of positive attitudes to Science.
- To teach pupils how and where to find out relevant scientific information through effective use of resources such as good quality books and the internet.
- To teach pupils to understand and develop a spiritual, moral, social and culture awareness about the effects of their actions on their environment.
- To improve awareness of pupils of Science and its uses within the wider world.

## **3. Definition of Science Education and Content of the Curriculum**

Science is a body of knowledge which is built up through experimental testing of ideas.

Science is also a methodology, a practical way of finding reliable answers to questions we may ask about the world around us. Glen Hills Primary School follows the end of Key Stage expectations as set out in the National Curriculum.

#### 4. Early Years Science – Foundation Stage

Of the seven areas of learning, children in the Reception Unit are taught science primarily through **Understanding of the World**. In this area of learning, children are developing the crucial knowledge, skills and understanding that help them make sense of the world. This area of learning forms the foundation for later work (in KS1 & KS2) in Science, History, Geography and RE. Some Science learning is also covered within **Communication and Language**.

Children are given many wide and varied “hands on activities” which encourage them to explore, observe, predict, problem solve and discuss their findings. They are given a rich learning environment with as much adult support as possible and all children are given equal access to all activities on offer.

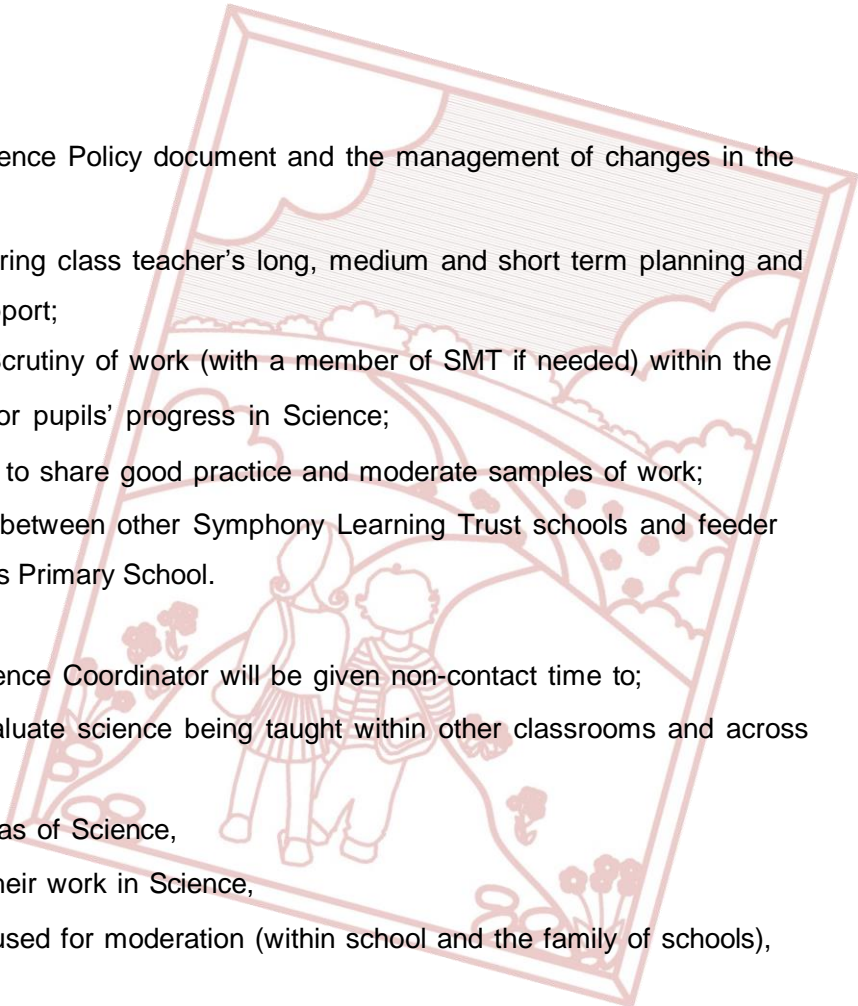
#### 5. Co-ordination

The Science Coordinator;

- is responsible for the Science Policy document and the management of changes in the curriculum and resources;
- will be involved in monitoring class teacher’s long, medium and short term planning and will provide necessary support;
- will carry out a Science Scrutiny of work (with a member of SMT if needed) within the school regularly to monitor pupils’ progress in Science;
- will lead INSET meetings to share good practice and moderate samples of work;
- is responsible for liaison between other Symphony Learning Trust schools and feeder schools linked to Glen Hills Primary School.

Wherever possible the Science Coordinator will be given non-contact time to;

- monitor, observe and evaluate science being taught within other classrooms and across Key Stages,
- support colleagues in areas of Science,
- speak to children about their work in Science,
- update samples of work used for moderation (within school and the family of schools),



- work alongside teachers in the area of Science,
- attend relevant courses,
- report back to the Head, Governors and staff about Science,
- read up on relevant documentation,
- liaise with other schools within the Symphony learning Trust.

## **6. Equal Opportunities**

All pupils at Glen Hills Primary School will have the opportunity to become “scientific” regardless of gender, race, class, physical, intellectual or sensory ability. We ensure that expectations do not limit pupils' achievements and the assessments do not involve any cultural, social, linguistic or gender bias.

## **7. Children with SEND**

Specific equipment/materials/resources and additional adult support for pupils with SEND will be provided to ensure that all pupils have full access to Science. More and very able pupils will be motivated and stimulated in Science through challenge, extension work and open ended tasks.

Work in Science will be scaffolded when needed to meet the variety of needs of all pupils within each class.

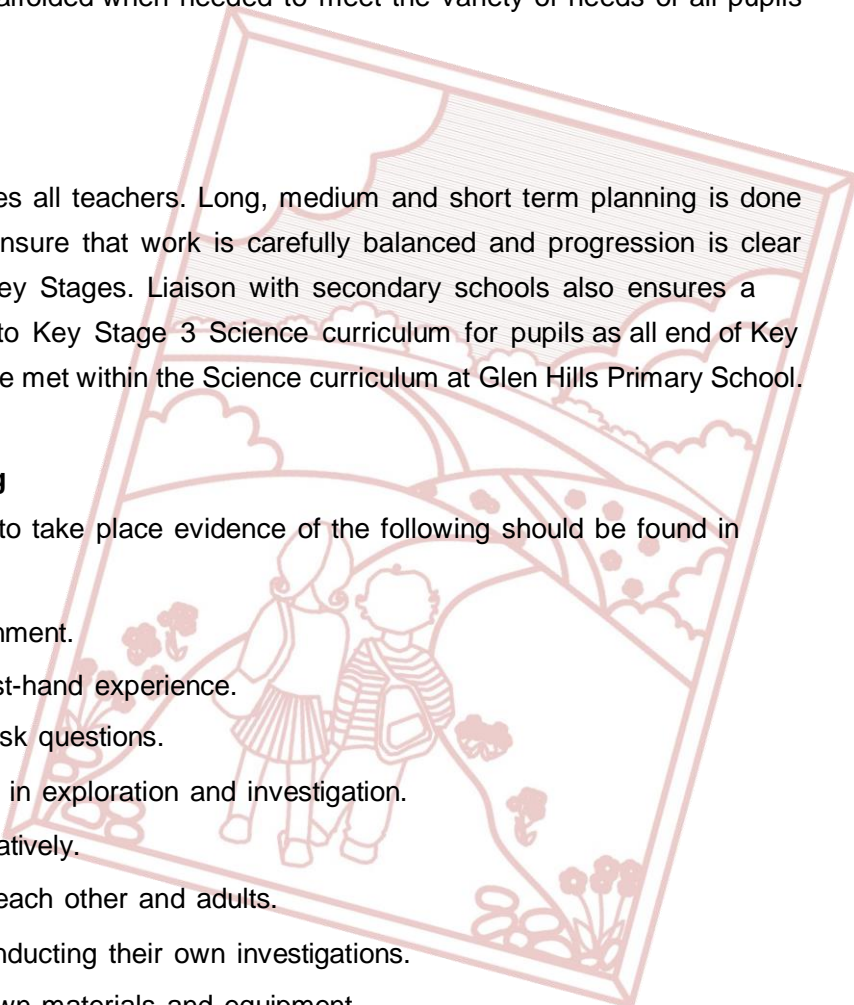
## **8. Planning**

Planning in Science involves all teachers. Long, medium and short term planning is done in teams/year groups, to ensure that work is carefully balanced and progression is clear across year groups and Key Stages. Liaison with secondary schools also ensures a smooth transition through to Key Stage 3 Science curriculum for pupils as all end of Key Stage learning outcomes are met within the Science curriculum at Glen Hills Primary School.

## **9. Good Science Learning**

For good science learning to take place evidence of the following should be found in classrooms.

- An active learning environment.
- Children working from first-hand experience.
- Children encouraged to ask questions.
- Children actively involved in exploration and investigation.
- Children working co-operatively.
- Children discussing with each other and adults.
- Children devising and conducting their own investigations.
- Children choosing their own materials and equipment.



- Children recording their findings in a variety of ways.
- Children drawing conclusions from their findings.
- Children showing enjoyment in the activities they are undertaking.
- Children revising previous learning through regular retrieval activities.

Wherever possible we encourage children to work in these ways (with links to Character Muscles), so that they will ultimately gain confidence to ask their own questions and devise investigations to answer them.

## **10. Grouping for Science**

At present, children are taught Science in mixed ability classes but with some adult support for children with additional needs to ensure all pupils can access the learning.

## **11. Health and Safety**

All teachers must be clear as to the purpose of the work and ensure that any “testing” that needs to be carried out by pupils complies fully with the Health and Safety policy issued by Leicestershire County Council. Safety hazards should be identified at the beginning of lessons and children regularly reminded of these throughout. Especially during research, children should be working in line with the school's policy on E-safety.

## **12. Resources**

The vast majority of resources are stored within “bases” and the Science Resources cupboard (Teacher Resource Room). Staff should notify the co-ordinator of any extra resources required, of any breakages or losses which occur and of any new materials, books, DVDs etc., which might prove to be useful. If available, new resources are bought from a Science budget to ensure each year group can teach their units as practically as possible.

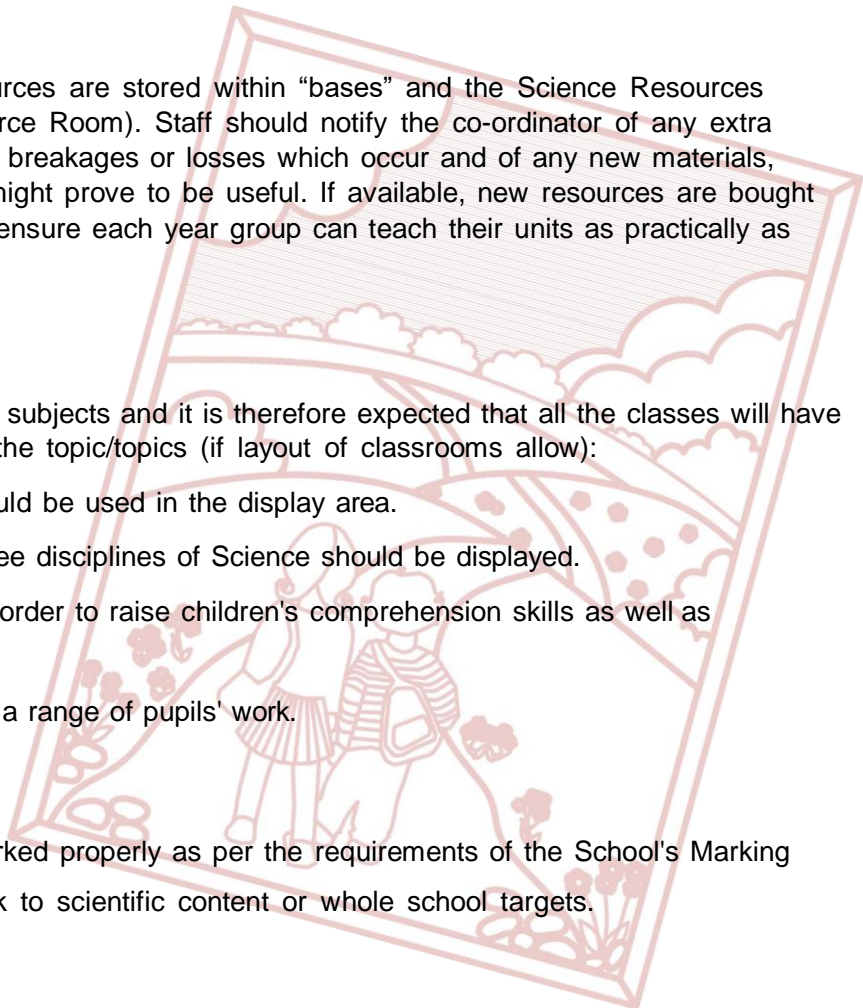
## **13. Displays**

Science is one of the core subjects and it is therefore expected that all the classes will have a display area related to the topic/topics (if layout of classrooms allow):

- Scientific vocabulary should be used in the display area.
- Information about the three disciplines of Science should be displayed.
- Questions to be used in order to raise children's comprehension skills as well as inquisitiveness.
- Display area could show a range of pupils' work.

## **14. Marking**

Pupils work should be marked properly as per the requirements of the School's Marking Policy. Marking should link to scientific content or whole school targets.



## 15. Assessment

Regular assessment and evidence of children's attainment can be gained from;

- observing them at work (individually and in groups),
- questioning and listening to them,
- assessing oral work, written work, drawings and results,
- assessing open ended tasks,
- Knowledge Organiser quizzing.

Formal assessment in Science will be carried out in two different ways.

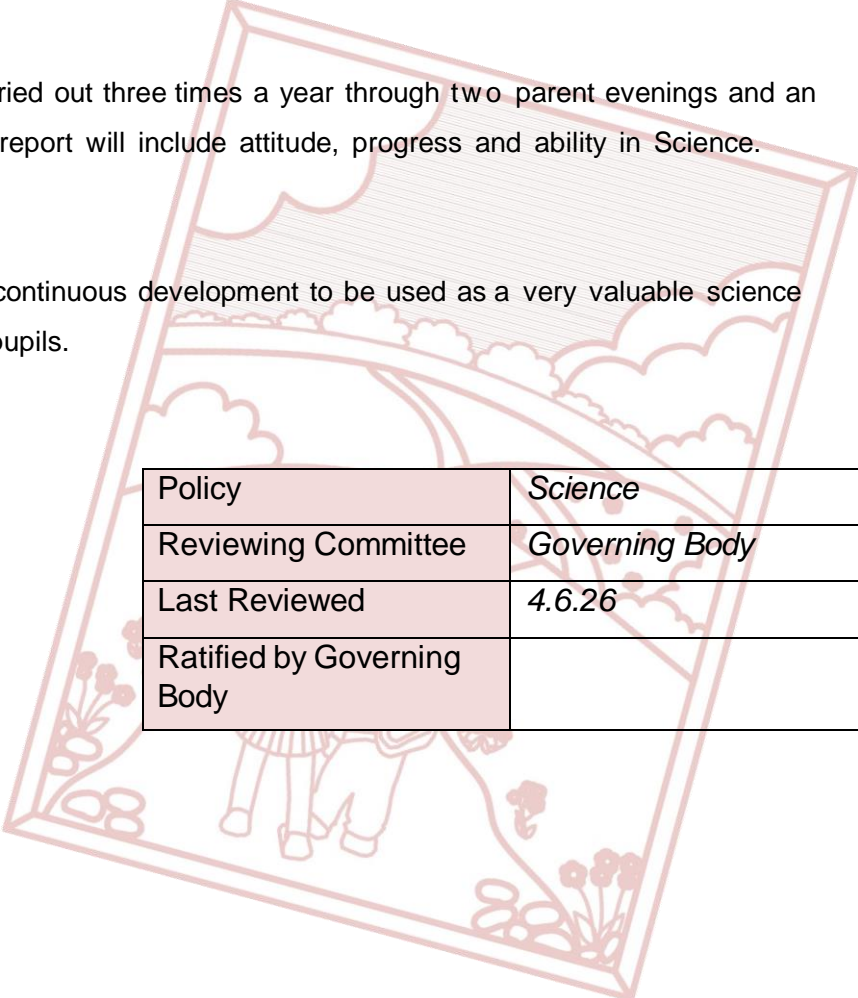
- **FORMATIVE** assessment is used as a guide to the progress of individual pupils in Science. It involves identifying each child's progress in each area of the Science Curriculum, determining what each child has learned and what, therefore, should be the next stage in his or her learning. Formative assessment is carried out informally by teachers in the course of their teaching.
- **SUMMATIVE** assessments – occur throughout the teaching of each unit to inform planning. End of topic assessments are used to look at progress from the Trigger assessments. Symphony assessment sheets are available for teachers to assess pupils against key learning outcomes in each year group.

## 16. Reporting

Reporting to parents is carried out three times a year through two parent evenings and an annual written report. The report will include attitude, progress and ability in Science.

## 17. School wildlife area

The "School Garden" is in continuous development to be used as a very valuable science resource by all staff and pupils.



Policy	<i>Science</i>
Reviewing Committee	<i>Governing Body</i>
Last Reviewed	<i>4.6.26</i>
Ratified by Governing Body	