



Glen Hills Primary School

Science Policy

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 the new 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:

Symphony group have developed the Symphony Assessment System (SAS) grids. These are topic based with end of Key Stage expectations.

1. Science Policy

The study of science at Glen Hills 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.
- At Glen Hills we recognise that good science in the Primary school is firmly based on children's first hand experiences and the sorting and classifying of these experiences in a responsive and logical way.
- 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 the National Curriculum Science curriculum 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 ICT wherever possible.
- 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 ICT).
- 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 good quality books, CD Roms, the internet, loan services and the local library.
- To teach pupils to understand and develop a spiritual, moral, social and culture awareness about the effects of their actions on their environment.

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 school follows the Science Curriculum Sept 2014 and its end of Key Stage expectations.

4. Early Years Science – Foundation Stage

Of the six areas of learning, children in the Reception Unit are taught science primarily through **Knowledge and 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, DT, History, Geography, RE and ICT. 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.

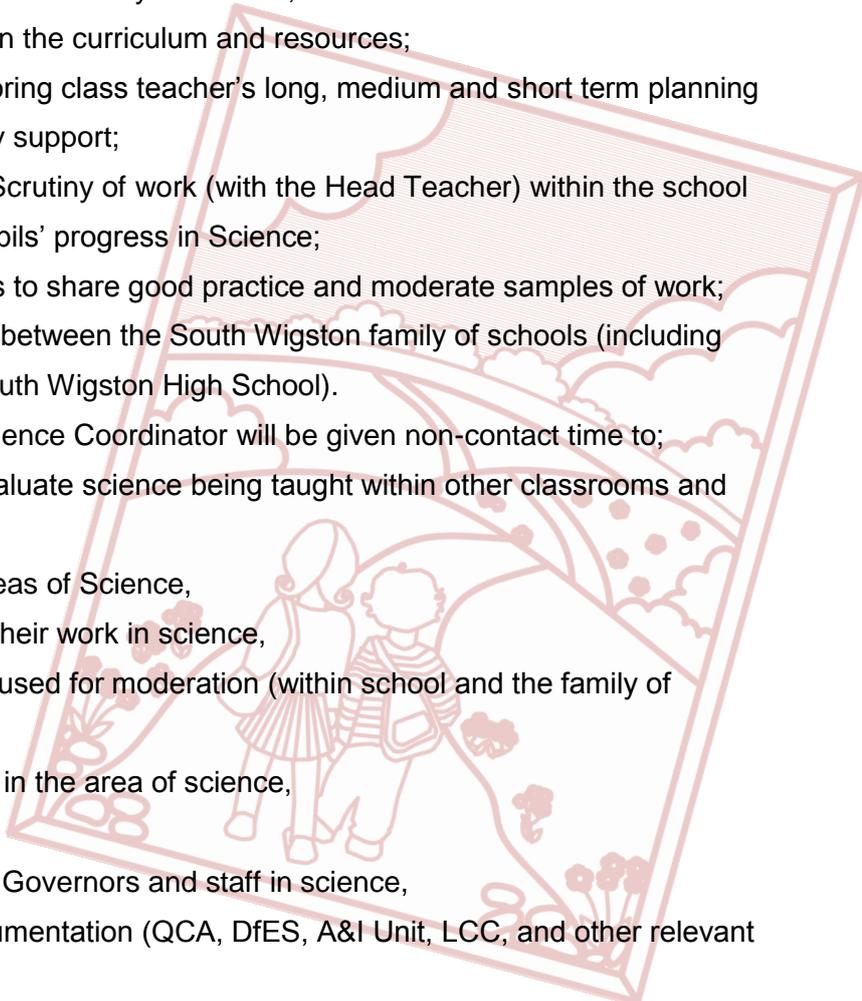
5. Co-ordination

The Science Coordinator;

- is responsible for the Science Policy document, the scheme of work 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 the Head Teacher) within the school once a term to monitor pupils’ progress in Science;
- will lead INSET meetings to share good practice and moderate samples of work;
- is responsible for liaison between the South Wigston family of schools (including Parkland, Fairfield and South Wigston High 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 in science,
- read up on relevant documentation (QCA, DfES, A&I Unit, LCC, and other relevant agencies),



- liaise with other schools within the Wigston Family of schools.

6. Equal Opportunities

All pupils at Glen Hills 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 Special Educational Needs

Specific equipment/materials/resources and additional adult support for pupils with Special Education Needs 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 extension work and open ended tasks.

Work in science (differentiation) will be provided at different levels 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 also the full coverage of the Foundation Stage Curriculum Guidance (for Reception Unit children) and National Curriculum have been taken into consideration. Liaison with South Wigston High

School also ensures that all areas of the Science curriculum are covered across all four year groups in Key Stage two with sufficient time left for revision for KS2 SATs. (See scheme of work for full details).

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.

Wherever possible we encourage children to work in these ways, 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 team teaching, ability grouping and or collaboration as and when necessary for some topics. In some year groups, SEN children are taught in smaller nurture groups.

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

Leicester County Council (see copy in staff room). Safety hazards will be pointed out to the

children at the beginning of any work.

12. Levels/Standards in Science

The different Levels within Science at Glen Hills school follow the Foundation Stage (through the baseline assessment) and Key Stage 1 and 2 via the Symphony Assessment System descriptors for emerging, expected and exceeded levels in each topic.

13. Resources

The vast majority of resources are stored within “bases” and the Science Resources cupboard. For KS2 some other resources will be stored in the food technology 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,

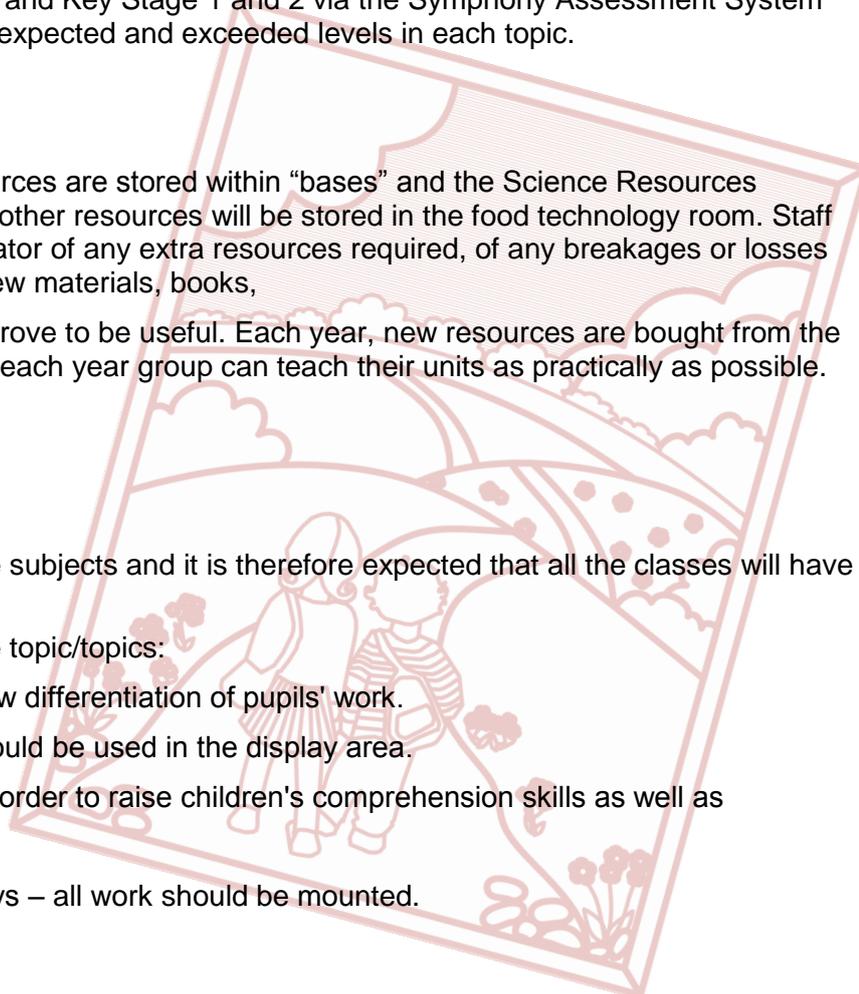
videos etc., which might prove to be useful. Each year, new resources are bought from the science budget to ensure each year group can teach their units as practically as possible.

14. 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:

- Display area should show differentiation of pupils' work.
- Scientific vocabulary should be used in the display area.
- Questions to be used in order to raise children's comprehension skills as well as inquisitiveness.
- Before putting up displays – all work should be mounted.



15. Marking

Pupils work should be marked properly as per the requirements of the School's Marking Policy.

16. 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,
- testing.

Formal assessment in Science will be carried out in two different ways (**FORMATIVE** and **SUMMATIVE**).

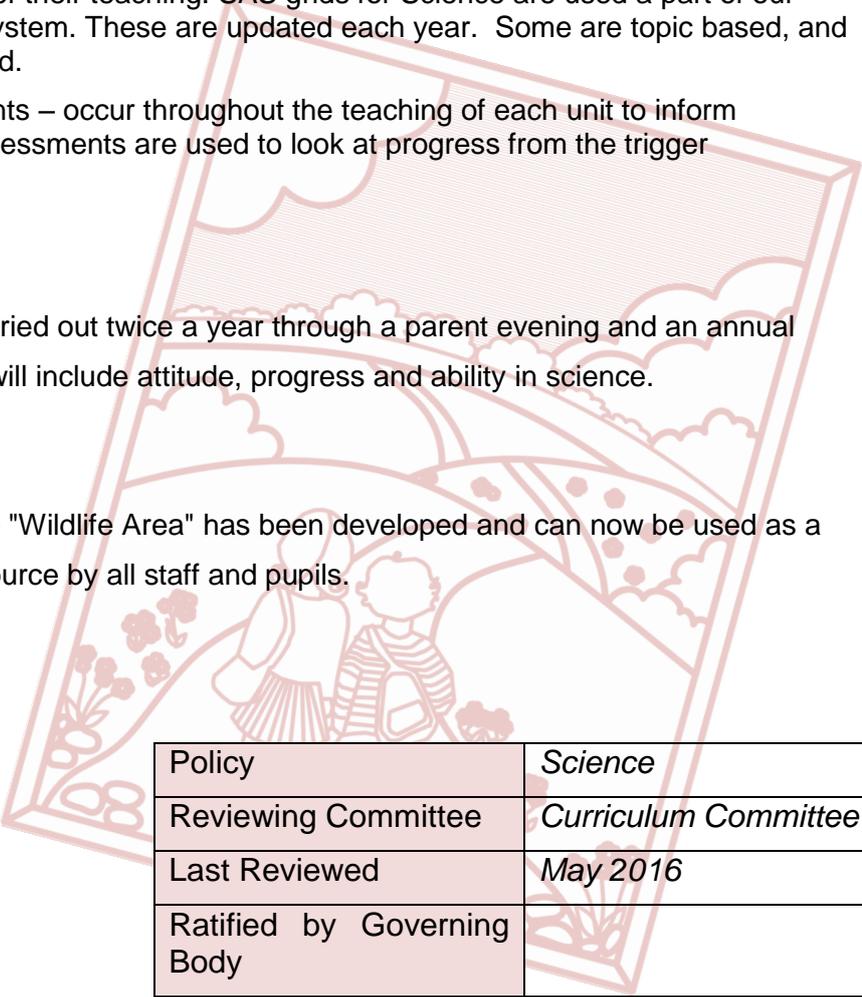
- **FORMATIVE** assessment is used as a guide to the progress of individual pupils in science. It involves identifying each child's progress in each area of the Science Curriculum, determining what each child has learned and what, therefore, should be the next stage in his or her learning. Formative assessment is carried out informally by teachers in the course of their teaching. SAS grids for Science are used a part of our Symphony Assessment System. These are updated each year. Some are topic based, and some are year group based.
- **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.

17. Reporting

Reporting to parents is carried out twice a year through a parent evening and an annual written report. The report will include attitude, progress and ability in science.

18. School wildlife area

As per the school SDP the "Wildlife Area" has been developed and can now be used as a very valuable science resource by all staff and pupils.



Policy	<i>Science</i>
Reviewing Committee	<i>Curriculum Committee</i>
Last Reviewed	<i>May 2016</i>
Ratified by Governing Body	