SCIENCE POLICY
REVIEW FEBRUARY 25

Why do we teach Science at Herrick Primary?

- To enthuse and excite pupils in order to enable them to make sense of their world and environment through observation and practical investigation
- To allow children to focus and build on their natural curiosity and knowledge and develop an enjoyment of Science
- To promote positive attitudes and values towards Science through exploration, investigation and discovery
- To help children develop their Scientific knowledge, skills and concepts by providing whenever possible, opportunities for first hand, 'hands on' experience aided by a vast variety of resources
- To understand the role of Science in everyday life, building on what the children already know and understand
- To give children of all backgrounds and cultures equal access across all aspects of the Science Curriculum by aiming to provide experience appealing to all
- To engender in the children the initial concepts and understanding of what is meant by Scientific investigation i.e. the ideas of enquiry, careful observations, individual finds and conclusions and prediction.
- To develop an awareness and understanding of all aspects of health and safety in Science practice

Our objectives for pupil learning

- The children should have the opportunity to:
- Investigate living things, materials, phenomena and processes
- Raise questions of how, what, why things happen
- Communicate data effectively in a number of different ways e.g. writing, drawing, diagrams, tables, charts etc. appropriate to their individual levels of ability
- Learn the importance of Science in everyday life and it relevance to their own health and safety
- Carry out scientific activity in safety by following simple instructions and recognising potential hazards when working alone or collaboratively
- Understand the issues of conservation and environmental protection for future generations

Use ICT for storing, retrieving and presenting information

- Confidently use a computer to research and present relevant scientific information and findings in an appropriate manner
- Sometimes we use ICT to record and analyse scientific measurements with accuracy and confidence

We aim for children to develop the following skills, attitudes and values through Science

- Natural curiosity through the use of science facilities around school • Interest in scientific knowledge and processes

- Objectivity and originality in thoughts and ideas
- Co-operation , collaboration and perseverance
- Open-mindedness and a willingness to accept the ideas of others
- Self-appraisal i.e. realise their successes and know when they are making progress
- Enjoyment which leads to self-exploration and self-directed motivation
- Nurture a personal enquiry for life and living processes and so develop a mind of investigation
- To develop a love of nature and so a respect for the environment

Extend children's vocabulary:

- Scientific vocabulary is used from the beginning of each pupil's educational experience and they are encouraged to use scientific vocabulary themselves in order that it becomes second nature to them.
- Clear vocabulary is to be displayed in each classroom.
- It is the responsibility of the class teacher to use this and draw it to the attention of the children in their class.
- Key vocabulary is included in every lesson, specific to the unit of work which is being taught.

Documents used

- The National Curriculum is delivered through a scheme of work appropriate to each Key Stage and Year group.
- Science is taught as part of a connected curriculum or as a discrete unit.

Planning

- Lessons are planned weekly or as a unit
- Lessons also include aims, objectives and learning outcomes together with the necessary scientific vocabulary relevant to the group and ability levels;
- Planning is done individually by each year group/unit. The work is modified in the most appropriate method to meet the needs of our children;
- Cross-curricular links are employed at every opportunity with particular emphasis on Literacy and language development, Numeracy and computing.
- The National Curriculum and Chris Quigley milestones are used to plan the learning objectives and success criteria

ICT Links

- Wherever possible, ICT will be employed to record data, complete written work or investigate phenomena through the Internet.
- ICT — ipad applications and the use of the internet as well as ActivPrimary are available to all classes via IWB.

Teaching and Learning in the Classroom

- Teaching and learning is delivered in the most appropriate manner based on each teacher's professional expertise, paying attention to the individual needs of all pupils within the class, including those with disabilities.

- Practical application of Science is encouraged whenever possible. There is a resource cupboard to support staff, available for each topic. This is updated and checked regularly.

Community links/out of class activities

- Whenever practical, Science trips will be organised by the class teacher and/or Science Leader if the trip is considered important to the furthering of pupils knowledge or useful to them in understanding a scientific concept or phenomena.
- Careful consideration should be given to the needs of pupils with disabilities.
- Links will be made with local secondary schools to ensure children are given a range of opportunities for out of classroom experiences

Assessment and Record Keeping is achieved through:

- Discussion- question and answer assessment
- Video or voice recording using the iPads
- Pencil and paper assessment e.g. written work, drawings, annotated drawings, completed worksheets, mind maps
- Marking completed work e.g. children's diaries, pupil exercise book/science files, worksheets and Topic books.
- Recording practical tasks e.g. photographs, teacher notes, completed checklists, video recording
- Judging outcomes e.g. sorting and classifications, constructed database, posters, drama, cartoons, made models and completion of a set task
- Mind maps are to be used (at the beginning of each section of work) as a way of assessing pupil's initial knowledge across the school.
- All children should have the opportunity to produce cross curricular writing for example a dictionary, information text, leaflet/pamphlet - to link with other areas of the curriculum and support language development.

Continuity and Progression

- This is achieved through careful assessment, mind maps, accurate record keeping and cooperation between year groups. The Chris Quigley milestones should be used to monitor progression throughout the year

Monitoring and Evaluation Procedures

- Each year group/unit is responsible for developing medium term planning including aims, objectives, teaching activities, resources, vocabulary and learning outcomes. These should be available for monitoring by the Science leader.
- Selections of pupils work needs to be compiled for the Science portfolio, showing progression and differentiation.

Roles and Responsibilities

- The Headteacher must ensure that the Science Leader is working in accordance to the post-holder's job description. The Science leader, along with the Headteacher must ensure that the policy is being used by all staff and remains up to date. This includes matters relating to disability and accessibility.

- The Science Leader, who works alongside the Headteacher, has the responsibility for progression and co-ordination of teaching the Science Curriculum. S/he has the day to day responsibility of maintaining science resources and for purchasing new equipment and materials. The Science Leader will support colleagues who are planning Science activities or trips.

- S/he will keep up to date with current developments within the subject and, as far as possible, be a resource of Science knowledge for all the school, organise and encourage Professional Development of all staff in line with the SIP. and school needs.

- The class teacher will work in accordance with the Science policy at all times and aim to follow the modified curriculum guidelines as is appropriate for each unit of work. All children will be actively encouraged by their teacher to participate in all Science activities whatever their individual ability, and to achieve their full potential in Science.

Health and Safety

- Aspects of Health & Safety will influence the participation of children in experiments e.g. hot water, splashes, and heat application. A Risk Assessment will be completed for potentially hazardous "experiments."

- The Teaching Assistant will work to support the class teacher in the delivery of Science in class and during practical activities, paying special attention to those pupils who need additional support in Science.

Review date: February 25