Science Policy
Glenmere Primary School

Rationale for teaching at Glenmere

- Science at Glenmere Primary School is viewed as teaching children not just scientific facts and 'truths', but as training children to think and enquire as young scientists. In line with the new curriculum and the assessment criteria outlined within, we aim to encourage children to investigate and carry out their own experiments, draw their own conclusions and understand the relevance of their discoveries to the world in which they live, alongside learning the facts and theory behind their enquiry.
- Science is viewed as a process and not just a body of knowledge, and therefore, all children are encouraged to be inquisitive; to question, investigate, experiment and conclude for themselves.
- The school approach is represented in Attainment Target 1 of the National Curriculum. Teachers do not neglect the knowledge and understanding of scientific concepts, we recognise that some factual input must be provided by the teacher; however, we present these facts in a way that enlightens children, and the children are then educated further through their own discoveries.
- Policy Development

  The whole staff are involved in assessing the progress of Science teaching at our school, and this policy is based on the identification of needs we have identified to move the subject forward to maximise the success and progress of each child.

- Attitudes and Skills

  In Science we hope that children will:

  - Understand the world in which they live
  - Explore and investigate how and why things happen
  - Develop a sensitivity and respect for the environment
  - Explore the ways in which they can contribute to their own healthy lifestyle

- These skills and attitudes work towards the development of children who are aware and contributing to a sustainable environment fit for their future, enabling them to keep healthy, in line with the Every Child Matters agenda, and enquiring minds that will encourage them to question the process of elements around them.

- In Science work, we encourage the development of scientific enquiry through:
  - Questioning
  - Predicting
  - Observing
  - Fair testing
  - Concluding

- Content of the Science Programme

  Science is taught in EYFS through the system of Early Learning Goals, and through topics and child initiated learning. Throughout the rest of the school, Science topics are set out for each age range and six areas are covered in each academic year. Each teacher has a science skills tracker to enable continuity and progression of skills.

- Planning and Organisation

  We use the Science National strategy and QCA documentation as a basis of the School scheme of Work. Each topic is set out with related skills and opportunities for enquiry; Although, investigation and experimentation is encouraged across the curriculum and in everyday life, so that children understand the context of what they are learning and how the subject fits in with everyday life in the real world.

- Links with other subjects

  Science teaching forges natural links with the application of many mathematical skills, from basic data collection, to the drawing and interpretation of graphs. ICT can be used to good effect with basic computation, presenting experiments or evaluating data.

  The links between Science and Speaking and listening is also strong and both discussion and debate are a key aspect of scientific enquiry. Science is also linked with PE, PSHE and Technology, and every opportunity is taken within the teaching of science to extend the opportunities of learning,

  A variety of teaching methods are used when discussing and assessing the knowledge of the children, including brainstorming, and like methods, group or paired work and whole class teaching. We recognise that reporting back as a class can challenge original concepts, and that teachers' questioning throughout can raise scientific understanding.

- Although science teaching is chiefly activity based in the primary school, there are occasions when it is necessary to make a recording of what has been seen or done, particularly in KS2. These recording methods may include:
  - Data handling
  - Tabulation
  - Helping to plan an activity
  - Comparing and examining patterns
  - Assessing and drawing conclusions from data
  - Predicting or challenging pre-conceptions
  - Observational methods
  - Assessing and evaluating
  - KWL notation of what the children would like to achieve at the end of the activity.

- Ways of Recording

  There are a number of ways to record lesson activities or observations, many of which are cross-curricular, and these may be as varied as possible.
  - Written accounts or reports
  - Pictorial or photographic, either drawn/ made by or showing the child within the activity.
  - Audio or Video tape, again, commenting upon or showing the child within the process
  - Venn/ Caroll diagrams
  - Data base/ questionnaire or other form of data collection.
  - Graphs, charts, diagrams or other means of presenting data.
  - Recording of oral statements, particularly in EYFS and early KS1.

- Access and entitlement

  We believe that every learner is entitled to the full range of activities, and that these should be relevant to all children, irrespective of age, gender, ethnic background, language or disability.

- Differentiation

  To allow for differentiation, we plan to cater for different ages and abilities, including those with additional needs or those who are gifted and talented, as set out in the MIN guidelines. We plan this through:

  - Ways of recording and presenting
  - Year group interest
  - Rotating and mixing ability groups
  - Different, prompted or supported tasks.

- Gifted and Talented

  Further to normal class differentiation, we try to provide further challenge to our most able pupils, whether this be through leading an activity, guiding a small group, or extending their learning further through a higher level of work. This is met through extension materials and links with High School where appropriate.

- Enrichment of the Curriculum

  We try to provide enrichment opportunities where appropriate throughout the school, in order to bring Science alive. In the past, Bushloe High school staff have come in to give lessons, and visits to the high school are arranged for year five. More recently, Science Week activities and Mad Science Club has proven to be popular amongst the children, and has developed their interest within the subject.

- Assessment and Record Keeping- Progression

  Children are given clear objectives throughout the year, and they are assessed upon these targets through on-going assessment throughout each unit of Science taught. Teachers are given skills trackers for each child, and at the end of each academic year, these trackers will be passed up, to ensure progression of skills throughout the school.

- Safety

  Our policy follows safety guidelines and we believe that it is important for children to be actively taught how to handle equipment, and to take care when doing so within science lessons and throughout the curriculum.

- Resources

  Science resources are contained within the science cupboards, and are in labelled drawers and boxes. Each teacher has a copy of the resources and how they might be used within each area of the curriculum.

- Science coordinator

  The Science coordinator is responsible for monitoring and evaluating Science within the curriculum. Each member of staff is responsible for ensuring that each child in their class has access to and experiences of science. The coordinator has made ideas available to and will be available to assist with ideas for planning.

Monitoring and Evaluation

The science teaching is monitored by the science coordinator and the coordinator is available to assist with planning ideas and resources enquires. The coordinator will carry out pupil interviews in the summer term in order to evaluate the progression on scientific skills across the school. Work samples are also collected throughout the year to support this monitoring.

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