

# Church Aston Infant School



## Science Policy

March 2018

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Date Document Created	Date approved by Governing Body	Date of next Policy Review
January 2014	4 February 2014	January 2015
Reviewed: March 2016	8 March 2016	January 2017
Reviewed: March 2017	21 March 2017	March 2018
Reviewed: March 2018	28 March 2018	March 2019

## PRINCIPLES

To develop the children's enquiring minds about themselves, the world around them and how it works.

- To develop the children's scientific skills associated with scientific methods of investigation and communication.
- To develop the children's knowledge and understanding of scientific concepts.
- To develop a fascination for Science and foster their interest and motivation.

## GUIDELINES

Science is a core curriculum area and is taught in accordance with the requirements of the National Curriculum.

Long-term planning includes key scientific ideas that all children need to experience. It suggests an order in which these key ideas need to be taught in order to ensure continuity and progression throughout the school. By focusing on one area of Science in each half term, time is available to develop quality experiences.

Medium-term plans specify the planned content for Science and detail the work that will be taught each term. They identify the progress in investigative and illustrative activities that will be developed.

Daily planning gives details of the learning objectives, activities and assessments. Teachers frequently use key questions as starting points. These are developed into investigative science activities as appropriate to the expected outcome.

- **Investigation** is central to the pupil's experiences. Children gain an understanding of the investigational process and develop a clear understanding of key concepts in the Science Curriculum by using a set planning format that is used with all age groups throughout the school. The scientific process encourages children to observe and question ideas. It enables them to predict and plan a fair way to test their idea/question. They are encouraged to record their results in a meaningful way and compare them to their original idea. There are three levels of investigation used in school, Teacher-led, Intermediate and Independent. Each of these relies on a different level of teacher input.
- **Illustrative** activities enable children to gain experience of the key ideas. These are often used to stimulate questions that subsequently lead to investigations at a level suited to the children's understanding. These are essential to the children's understanding of key ideas in Sc. 2, 3 and 4.
- **Skills** development supports investigational work, i.e. learning how to construct bar charts, read and use measuring equipment e.g. thermometers. It is carried out in the context of other work.

Differentiation is planned for in the presentation of the tasks and by the outcome of the activity. Recording by the children can be presented through annotated drawings, written reports, photographic evidence or verbal feedback. English, Mathematics and ICT are used to support the Science curriculum. Links are also made between History, Geography, Music, Art, RE and PE where appropriate.

## **ASSESSMENT, RECORDING AND REPORTING**

At the start of a unit of work the children's ideas are sought in a variety of ways. These are compared to their understanding at the end of a unit of work. Each Intermediate and Independent investigation is used to assess children's investigative abilities. Progression in whole investigation work has been identified in the form of steps for each aspect of an investigation. These are used to assess the level at which each child is operating and identify the next steps required for each child to make progress.

At the end of Key Stage 1 the National Curriculum is used to determine whether a child is Working Towards, Working At or Working Beyond the expected level. Scientific Enquiry is weighted at 3:1 against the other three Attainment targets (Life processes and living things, Materials and their properties, Physical processes) in the National Curriculum.

## **ICT**

ICT can be used to support many aspects of the Science curriculum. It can be an important part of research as well as having numerous opportunities for being used in the process of an investigation in the form of Digital microscopes and Digital photography. Data programs can be used to record results quickly and efficiently.

## **RESOURCES**

Science resources are stored centrally. They are available for the children to access if required. Teacher's books and other supporting literature are located in the same area.

## **SPECIAL NEEDS**

Children identified as having Special Needs are given appropriate levels of support. This may take the form of human or physical resources to enable each child to reach his or her potential.

## **EQUAL OPPORTUNITIES**

All children have equal access to the Science curriculum and where necessary support is provided. Every effort is made to ensure that science activities and investigations are equally interesting for boys and girls. All children's ideas are valued.

## **HEALTH AND SAFETY**

Guidelines should be followed with regard to heat sources and electrical equipment. All children are taught the safe and appropriate use of equipment and materials as needs require. All substances used must meet COSHH requirements and are non-hazardous to children. During all aspects of the work the safety of children is highlighted. Where overt teaching of hazards and dangers is required this is highlighted on the lesson plans in red.