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St Anthony's Catholic Primary
School
Science Policy

Rationale

Science is important because it is a body of knowledge essential to our understanding of the world around us.

Children are scientific by nature. They have an inherent curiosity and, at St Anthony's Catholic Primary School, we enable our children to develop their knowledge and understanding of scientific ideas, processes and skills. We encourage ways of thinking, discovery and communicating ideas in order that children can begin to appreciate the way science will affect their future.

Science should not be seen as a subject in isolation but rather one which encompasses a wide range of cross-curricular activities, drawing from and contributing to, many other subjects.

Science vision

All children will become scientifically minded, their eyes opened to the wonders of science. They will journey on a path where they are constantly inspired by the world around them.

Principles

Principles drive science in order to realise the science vision. Both the school vision and the principles should be displayed and regularly referred to.

- Be engaged, inspired and challenge ideas.

- Children have good, appropriate resources to select from.
- Children have opportunities to be inquisitive and independently explore and investigate.
- Work confidently and independently.
- Enhance scientific enquiry through questioning.

The fundamental skills, knowledge and concepts of the subject are categorised into 4 attainment targets.

1. Working scientifically (Sc1)
2. Biology (Sc2)
3. Chemistry (Sc3)
4. Physics (Sc4)

Aims:

The study of science promotes:

- A positive attitude towards ourselves and our environment.
- An appreciation of the nature of science and its relationships.
- Opportunities to use senses to observe, experience and explore the world.
- The ability to challenge ideas in a practical and creative way.
- A rational way of working, using the ability to think clearly and build on ideas.
- An understanding of the process of enquiry and investigation.
- The development of safe practices.
- Motivation of further learning arising from children's interests.
- Scientific skills and knowledge.
- An opportunity for children of all abilities to succeed.

Objectives:

- To give the opportunity, through investigation, to develop the ability to think and enquire purposefully and safely.
- To develop personal skills through observation and research
- To develop an understanding of the processes that shape their surroundings.
- To develop the ability to use scientific and mathematical language to explain their findings.
- To enable all children to communicate in a variety of ways, including the use of charts and diagrams.
- To provide opportunities to enhance speaking and listening skills.
- To enhance research skills using reference books and the internet where appropriate.
- To develop attitudes of co-operation, understanding and respect for others.

Science Planning:

The Science curriculum is organised into topics and based upon the requirements of the EYFS Statutory Framework and KS1 & KS2 of the National Curriculum.

Foundation stage:

We teach science in reception as an integral part of the topic work covered during the year. Lancashire Foundation Stage medium term plans are used to provide adult led and child initiated activities to support 'Development Matters' (2021) in particular the 'Understanding the World' area.

KS1 & KS2

Planning overviews map the scientific topics studied in each half term within each year group. They identify learning objectives and outcomes. Topics build upon prior

learning and progression is built in so that children are increasingly challenged as they move up the school. Each teacher also produces, detailed weekly lesson plans which are differentiated and linked to Assessing Pupil Progress in Science.

Science should be planned and taught for a recommended 1 ½ hours per week at KS1 and for 2 hours at key stage 2 which may include cross curricular links. Due to timetable restraints this remains a recommended amount of time. Science should be taught weekly by teaching staff with an agreed one unit able to be taught by PPA.

Equal Opportunities:

We aim to prepare all pupils for life in a multi-cultural society. Pupils' own experiences, which should be the basis of much science learning and teaching, may be very different as a consequence of physical and cultural differences. We will ensure that all children are given the same opportunities to develop their scientific knowledge and understanding.

SEN/ Gifted and talented:

Science work is differentiated or children grouped in such a way as to allow each child to progress at their own rate or level.

Teaching is matched to the child's needs and specific targets related to science may be identified.

Resources:

Science resources are held centrally to enable access by all staff. An annual audit of resources is carried out and new resources ordered as appropriate.

Classroom resources in science include a dedicated area suitable for scientific work and display. Some resources

used in science can be linked to ICT including digital microscopes and data logging equipment.

Formative Assessment:

Children's skills, knowledge and understanding in science are assessed through formative assessment. Teachers assess as an on-going process, addressing misconceptions and giving feedback during each science lesson.

Each lesson is evaluated against the lessons objective and success criteria with notes to aid future planning and to identify children who need further support or extension. Work is marked in line with the school's policy and children are given time to read feedback and action teacher comments which focus on the learning objectives.

Assessment and Recording:

All Science assessment is teacher based and on an agreed assessment document. This is to be completed upon the conclusion of a unit of work and uploaded onto the relevant year group and academic year folder within the Science file on the school's database.

Monitoring and Review:

Monitoring is carried out by the science subject leader together with the head teacher. It involves monitoring the standards of children's work and the quality of teaching / planning / environment.

The subject leader is also responsible for supporting colleagues in the teaching of science, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in school.

A termly report on standards within Science and an annual action plan indicating areas for development is given to the head teacher by the science subject leader.

Health and Safety

The National Curriculum states;

‘When working with tools, equipment and materials, in practised activities and in different environments, including those that are unfamiliar, pupils should be taught:

- a) About hazards, risks and risk control.
- b) To recognise hazards, assess consequent risks and take steps to control risks to themselves and others.
- c) To use information to assess the immediate and cumulative risks.
- d) To manage their environment to ensure the health and safety of themselves and others.
- e) To explain the steps they take to control risks.
- f) To use tools and suitable materials in a safe manner.

Risk assessment sheets (Cleaps) can be found centrally which cover all aspects of health and safety issues that may be encountered during a science lesson or activity.

Mrs A Noonan

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