

St Peter and St Pauls' Catholic Primary School



4/2021 Science policy

Staff Involved	Carla Hughes-Harvey	
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Reviewed	Annually or earlier if necessary	

*Tell me and I will forget,
Show me and I will remember,
Involve me and I will understand.
Aristotle*

Rationale

The aims of Science at SS Peter and Paul are to enable children to:

- *Develop knowledge and understanding of important scientific ideas, processes and skills and relate these to everyday experiences.*
- *Develop effective and creative ways of thinking, finding out and be able to communicate scientific ideas and information.*
- *Explore values and attitudes through Science*
- *Find science irresistible*

Rationale

Science is a core subject at St Peter and St Paul's school. It is where children can make sense of the world around them. Science equips children with key skills that will enable them to continue learning within the classroom and beyond, fostering a respect for the environment locally and globally. It enables them to work independently, be resilient learners as they take responsibility for their own learning and that of others through a creative and stimulating curriculum. Science is taught both discretely and linked to other subjects. However it is planned, we meet our aims by ensuring that all science lessons:

- Start with a question
- Encourage creative thinking
- Include first hand experiences (children use all their senses to investigate real things)
- Have a context that connects with children's own lives and experiences
- Allow pupils to ask their own questions and discover Science themselves through practical investigations and research
- Include discussion
- Make good use of resources that are exciting, high quality and are of a quantity that allow full participation
- Offer opportunities for formative assessment and self or peer evaluation
- Take into account pupils' prior knowledge and understanding
- Provide opportunities to support and challenge all pupils within a lesson
- Support children communicating their scientific findings and understanding in different ways including talking and writing in different forms using science vocabulary, pictures, graphs and using ICT
- Promote cross curricular links

The lessons are:

- Safe, but allow for calculated risks
- Indoors and out
- Exciting and stimulating for pupils, allowing pupils to explore their own related ideas
- Well organised with a clear structure
- Relevant to all pupils' needs
- Predominantly practical with opportunities to support and extend understanding through scientific theory
- Memorable

Pupils are assessed:

- Regularly, using formative and summative methods
- Using a consistent approach across the school
- In all areas of Science- knowledge, skills and understanding
- To enable teachers to adapt their teaching to address the needs of their class
- Using a variety of informal and formal methods: observations, marking, games, discussions and focused assessment tasks

Different staff have different roles in ensuring that these aims are met:

Head Teacher and Curriculum Lead

- Overall monitoring of science curriculum entitlement for all pupils
- Keeping the governing body informed about the progress of the subject
- Ensure that science maintains a high profile in the school's development plans

Science subject leader

- To be a role model for science teaching and demonstrate good practice
- Keeping the governing body informed about the progress of the subject
- Review the science policy annually
- Monitor planning, teaching, learning and assessment. Identify and meet professional development needs of colleagues
- Liaise with other subject leaders to ensure coherence across subject areas
- Plan an annual science week which includes visits from specialist organisations and individuals
- Keep up to date with national and local developments in science through reading relevant materials and attending courses where appropriate
- Work to achieve equality of opportunity throughout the school
- Maintain an accessible range of up-to-date, quality resources specifically for teaching and learning science, including ICT resources
- Ensure high visibility of science throughout school; displays, assemblies, website, communication with parents.
- Make links with other organisations to enhance science

Teachers:

- Feel confident about teaching subject knowledge and skills in Science and are aware of their own professional needs
- Actively make science visible (displays, assemblies, outings, involve parents)
- Are enthusiastic and committed to taking on board and developing new approaches to science teaching and learning
- Plan creative activities that generate rich assessment evidence
- Make good use of resources

SEND and Equal Opportunities

- We aim to provide a supportive and flexible atmosphere in which all children are enabled to achieve success.
- All pupils are given access to the Science curriculum regardless of sex, religion, age, ethnic origin.
- Targets from Individual Provision Maps should be incorporated into the planning for Science, providing additional resources as necessary, and flexibility in expectations of children with Special Educational Needs, particularly in recording.
- In school we aim to meet the needs of all our children by differentiation in our science planning and in providing a variety of approaches and tasks appropriate to all ability levels.

Health and Safety

All teachers are conversant with the ASE Be Safe safety booklet. Where appropriate reminders will be given to children about potential hazards and care of the equipment they are using. For additional advice subject leader will refer to CLEAPSS .

SS Peter and Paul Catholic Primary School Science with SMSC

Spiritual

Explore beliefs and experience; respect faiths, feeling and values; enjoy learning about oneself, others and the surrounding world; use imagination and creativity; reflect.

- Ability to be reflective about their own beliefs, religious or otherwise, that inform their perspective on life and their interest in and respect for different people's faiths, feelings and values
- Sense of enjoyment and fascination in learning about themselves, others and the world around them
- Use of imagination and creativity in their learning willingness to reflect on their experiences

At SS Peter and Paul we foster spirituality by:

Exploring the wonder about what is special about human life.

Developing awe at the scale of living things from the smallest micro - organism to the largest tree.

Appreciating the beauty of the world around them.

Understanding how sometimes science and spiritual ideas do cause conflict but in a modern society it is important to understand why these conflicts arise so we can respect the views of others and move forward.

Appreciate how all living things are interdependent and work together.

Know how beliefs about foods affects everyday life.

Appreciate food which keeps our body's healthy and about fair share of distribution of the world's resources.

In SC1 we develop this through planning, doing and reviewing their investigation of the

world around them.

Reflect on new life when discovering life cycles of different animals.

Fascination of the world around them during Forest School activities learning about forces, zip wires, discovering the beauty of creation.

Understanding of sound including hearing and lack of hearing.

Moral

Recognise right and wrong; respect the law; understand consequences; investigate moral and ethical issues; offer reasoned views.

Pupils' moral development is shown by their:

- Ability to recognise the difference between right and wrong and to readily apply this understanding in their own lives, recognise legal boundaries and, in so doing, respect the civil and criminal law of England
- Understand of the consequences of their behaviour and actions
- Interest in investigating and offering reasoned views about moral and ethical issues and ability to understand and appreciate the viewpoints of others on these issues

At SS Peter and Paul we foster morality by:

Ensuring pupils realise that moral dilemmas are often involved in scientific developments. Understand the importance of how decisions made about the environment can have a huge impact on future generations.

Explore moral issues linked to the use of products - should we test medicines for humans that could save lives on animals causing them cruelty?

To develop open mindedness to the suggestions of others and to make judgments on evidence not prejudice.

To develop safe working practices during investigations.

Responsibility to work cooperatively in a group to complete investigations and tasks.

Foster a respect for equipment.

Distribution of the world resources* see above.

Understanding drugs misuse through STAR project.

Develop a responsibility for looking after the world and resources we have by picking up litter etc.

John Muir Award in year 6 develops the responsibility we all have to help the environment by: discovering wild places, having adventures, conserve the environment and sharing their experiences with others.

Understanding of how we can improve the environment by using renewable energy sources.

Social

Use a range of social skills; participate in the local community; appreciate diverse viewpoints; participate, volunteer and cooperate; resolve conflict; engage with the 'British Values' of democracy, the rule of law, liberty, respect and tolerance.

Pupils' social development is shown by their:

- Use of a range of social skills in different contexts, for example working and socialising with other pupils, including those from different religious, ethnic and socio-economic backgrounds
- Willingness to participate in a variety of communities and social settings, including by volunteering, cooperating well with others and being able to resolve conflicts

effectively

- Acceptance and engagement with the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs; they develop and demonstrate skills and attitudes that will allow them to participate fully in and contribute positively to life in modern Britain.

At SS Peter and Paul we foster social interaction by:

Group practical work provides opportunities for pupils to develop team working skills and to take responsibility.

Pupils must take responsibility for their own and other people's safety when undertaking practical work.

Pupils are encouraged to consider the benefits and drawbacks of scientific and technological developments and the social responsibility involved.

Pupils must consider their impact on the world around them and start to look at what we can do to help the next generation have a habitable planet.

Develop an understanding that scientists work together on research projects towards a common goal.

Enabling children to show the local community what they have learnt in our annual science fair.

Studying a range of famous scientist and their view of the world around them and how we must look after them.

Visiting a range of local areas of interest including Forest Schools and interactive science areas at RAF Cosford and Enginuity

Cultural

Appreciate cultural influences; appreciate the role of Britain's parliamentary system; participate in cultural opportunities; understand, accept, respect and celebrate diversity.

Pupils' cultural development is shown by their:

- Understanding and appreciation of the wider range of cultural influences that have shaped their own heritage
- Willingness to participate in, and respond to, for example, artistic, musical, sporting, mathematical, technological, scientific and cultural opportunities
- Interest in exploring, understanding of, and respect for cultural diversity and the extent to which they understand, accept, respect and celebrate diversity, as shown by their attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities.

At SS Peter and Paul we foster culture by:

Pupils will understand that scientific development comes from all across the world, from people of all backgrounds and cultures.

Through the study of famous scientists an understanding that some of science's most important discoveries have come from other parts of the world.

Pupils will explore how different needs in other parts of the world mean different scientific projects and developments occur.

Pupils will look how we need to share the worlds resources more fairly.

Linked documents:

Please read Science Curriculum explained for more detailed information about our science curriculum.

[\Curriculum\Subject leaders\Subject overviews explained\SSPP Science overview explained.docx](#)