

Holy Trinity Science Policy



Mission statement – Growing and learning in Christ through faith, family and friendship

At Holy Trinity, we endeavour to make learning an exciting adventure for all our children. We want all our pupils to achieve their full potential and ensure that they are fully prepared for the challenges that lie ahead in their secondary education and the world of work.

Rational

Science at Holy Trinity is very much a practical part of the curriculum. We aim to enable the children to make sense of the world around them through exploration, investigation and discovery. We aim to develop our children's key scientific skills of observation, questioning, predicting and investigation whilst preparing our children for a life in a world that is rapidly developing in science and technology.

Our Approach to Science

- ICT is used widely in science. Children are given opportunity to practise skills and enhance their presentation using carefully chosen software, as well as the internet. ICT equipment is used for enquiry work, including microscopes, video, digital cameras for capturing images and activities and data logging.
- In our topic based approach, we use cross curricular links wherever possible. Science relates especially well to curriculum subjects such as, English, Mathematics, ICT, Design & Technology and P.E.
- EXTENDED WRITING

Attitudes

- Encourage the development of positive attitudes towards science.
- Build on children's natural curiosity and help them to develop a scientific approach to problems.
- Encourage open-mindedness, self-assessment, perseverance and responsibility.
- Build our children's self-confidence to enable them to work independently.
- Develop children's ability to work in different groups.

- Provide our children with an enjoyable experience of science, encouraging them to develop a deep and lasting interest in science.

Skills

- Give our children a background in science and help them develop practical scientific skills.
- Develop skills of investigation including, observing, measuring, predicting, experimenting, communicating, explaining and evaluating.
- Become familiar with scientific terms.
- Develop the use of ICT in investigating and recording.
- Enable our children to become successful communicators.
- To enhance reading, writing and maths core skills through the study of science.

Working Scientifically

The national curriculum (2014) specifies that children in each group should start to work scientifically to support their understanding of nature, process and methods in science. Working scientifically should be embedded within the content of biology, chemistry and physics, with a focus on scientific enquiry so that children can learn to use a variety of approaches to answer relevant scientific questions.

Early Years Foundation Stage

Children in EYFS are encouraged to learn through making sense of their physical world and their community. Children are given the opportunity to explore, observe and find out about people, places, technology and the environment.

The national curriculum suggests that pupils know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.

Science in Key Stage One

The national curriculum states that during their time in Key Stage One children should have opportunity to explore and investigate the following areas:

- Working scientifically
- Plants
- Animals, including humans
- Everyday materials and uses
- Seasonal changes
- Living things and their habitats

<u>Year 1</u>	<u>Year 2</u>
Plants (Common names)	Living things and their habitats
Animals, including humans (Humans: Basic structure and senses)	Animals (Animals survival and growth)
Every day materials	Uses of everyday materials
Animals (Basic structure)	Health – Animals including humans (Grow & staying healthy)
Plants (Theme continued throughout the year)	Plants (Growing plants)

Science in Key Stage Two

Children in lower key stage two should be encouraged to broaden their scientific view of the world around them. The national curriculum suggests that they should do this through exploring, discussing, testing and developing their ideas. Children should observe and make decisions about scientific enquiry and draw conclusions. Key vocabulary should be shown to the children to give opportunities for them to read and write scientific terminology.

Building on their skills from lower key stage two, the main focus of science in upper key stage two is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. The children should be encouraged to explore, discuss their ideas, asking their own questions and analysing functions.

<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Plants (Functions of plants parts and growth)	Living things and their habitats (Biodiversity & classification)	Living things and their habitats (Life cycles)	Living things and their habitats (classification)
Light (Shadows and Reflective surfaces)	Animals including humans (Teeth and Digestion)	Earth & Space	Evolution and inheritance (adaptations)
Animals including humans (Skeletons and Movement)	Material Properties	Forces (Friction and air resistance)	Animals including humans (Circulatory system and exercise)
Health & Nutrition	Material Changes (States of Matter)	Properties and changes of materials (Testing material properties)	Animals including humans (Keeping healthy, diet and lifestyle)
Forces & Magnets	Sound	Properties and changes of materials (Reversible changes)	Light (Light and astronomy)
Rocks	Electricity	Properties and changes of materials (Irreversible changes)	Electricity

Planning

Teachers throughout EYFS, KS1 and KS2 include their science planning within their long term planning every half term. Medium term planning is created to break down the half termly learning into manageable weekly lessons with clear learning objectives. Weekly planning is then completed by individual teachers and outlines in detail the learning objectives, the learning taking place, resources, organisation and means of assessment. Science is taught for two hours per week at Holy Trinity at Key Stage 2.

Science serves as a main subject for many of the topics in all year groups throughout school; this ensures that science is a high profile subject in our school. Teachers planning for topics ensure that biology, chemistry and physics are taught during the year.

Resources

Holy Trinity is well resourced with scientific equipment. Resources are located in both Key Stage One and Key Stage Two. They can be found in the Key Stage One resource area and in the Upper Key Stage Two resource area. A list of resources can be found in both resource areas.

Monitoring and Evaluation

The science subject leader will monitor science in the school throughout the year and will feed back to the staff and the link governor, this will include;

- Work sampling/book scrutiny
- Planning monitoring
- Learning walks
- Staff questionnaires
- Pupil voice interviews

Assessment and Recording

Teachers assess the children's work after every science lesson following the school's marking and feedback policy, ensuring that the children are given positive feedback and a next step to further their learning.

Teachers input science attainment levels into the Lancashire Tracker at the end of every term. This is monitored by the Head teacher and the science subject leader. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Reports are sent to parents at the end of every academic year, describing each child's attainment in science.

Extra - Curricular Activities

At Holy Trinity, Key Stage Two children are given the opportunity to take part in a weekly science club. Science club is held every week by Miss Hines and Mr Kinsman. The children are given the chance to carry out their own investigations and explore the world of science.

Policy to approved by Curriculum committee Autumn term 2016

Review date Summer Term 2018