

HOLY TRINITY



C.E. PRIMARY ACADEMY
(HANDSWORTH)

Science Policy

Subject Champion: Abi Jobburns

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Holy Trinity CE Primary Academy Vision Statement

At Holy Trinity CE Primary Academy our distinctive Christian values are at the heart of all we do. Our children develop independent curiosity, acquire a life-long appetite for learning and become well-rounded individuals who achieve their full potential, both personally and academically.

“For I know the plans I have for you,” declares the Lord, “plans to prosper you and not to harm you, plans to give you hope and a future.” – Jeremiah 29:11

1. Intent

1.1 Holy Trinity Curriculum

Our curriculum is about **bringing engagement, fun and enthusiasm** to learning so that our children develop independent curiosity, acquire a lifelong appetite for learning and become well-rounded individuals who achieve their full potential, both personally and academically. Our curriculum starts from the children in our academy and works out.

1.2 Science at Holy Trinity

Our aim at Holy Trinity is to provide a high-quality Science curriculum that enables all pupils to develop as curious and knowledgeable scientists. Children study units across biology, chemistry and physics that build upon previously developed knowledge and skills. We believe that Science should be engaging to ensure that children leave us with a life-long curiosity that motivates them to question and understand the rapidly changing world that we live in.

1.3 Curriculum aims

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

2. Implementation

2.1 Curriculum delivery

Science at Holy Trinity is taught through progressive units. Science lessons are taught weekly in Years 1-6.

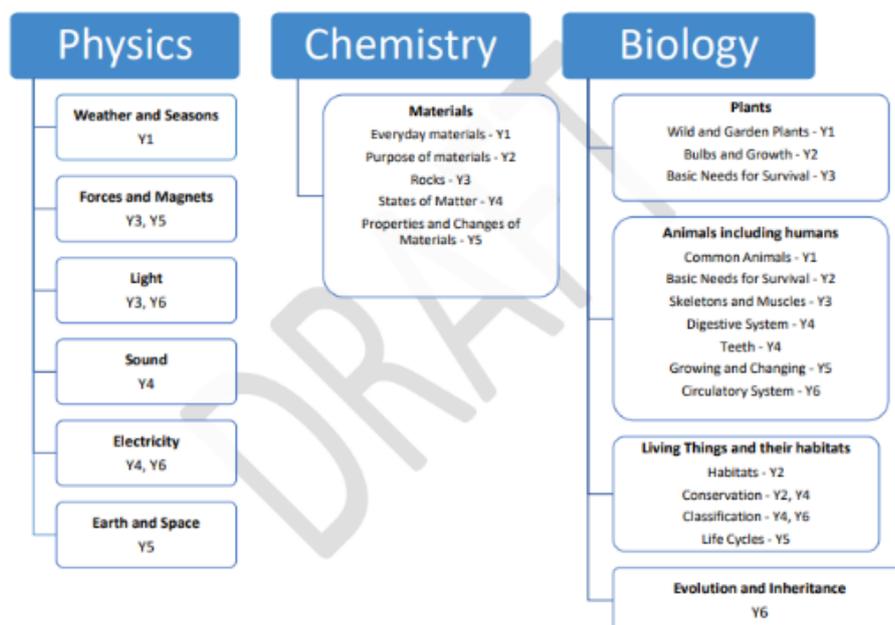
Science in EYFS is taught weekly through Understanding the World. Pupils are provided with practical opportunities to investigate and develop their independent curiosity.

2.2 Planning

To support the planning of Science at Holy Trinity we use Ark Curriculum+. The AC+ science curriculum is fully aligned to the National Curriculum. The units of work ensure pupils gain the knowledge they need to discover, understand and begin to explain the world and phenomena around them whilst also ensuring pupils are equipped with the skills and knowledge of processes through which science is achieved and applied. The knowledge builds sequentially in the three disciplines with pupils often revisiting an idea or concept in a later unit. In some units, progression is clear however in others it is within a more complex thread of learning.

Using Ark Curriculum+ supports the teaching of Science at Holy Trinity as it provides a clear and consistent approach that enables pupils to have correctly pitched, knowledge based opportunities for learning. The scheme also supports the working scientifically strand of Science as it has investigations planned throughout the units.

Progression of units taught



The unit order is built in a way which ensures pupils have the knowledge they need to work scientifically in a meaningful way. Rather than pupils learning solely from practical work, they will gain knowledge of the scientific concept first before deepening it through

'working scientifically'. The different types of scientific enquiry have been incorporated across the units and as a result pupils encounter opportunities to take part in: observing over time, pattern seeking, identifying, classifying and grouping, comparative and fair testing and researching using secondary sources.

Science in the EYFS is planned to connect to each topic throughout the year. Skills and knowledge taught is that expected through the statutory framework for Early Years within the Early Learning Goal, Understanding the World. While Science in EYFS is not planned using Ark Curriculum+, children still develop their independent curiosity and their communication and language skills as children are effectively questioned to develop their understanding and are encouraged to question and explain using age appropriate Scientific vocabulary.

Pupils leaving EYFS are prepared for Year 1 as the units taught within Reception are designed to provide children with the foundations that they need to be able to develop their understanding during the Year 1 units.

2.3 Teaching and Learning

Teachers use the lesson plans from Ark Curriculum+ to deliver weekly Science lessons. Each Science lesson begins with the children completing a quiz assessing knowledge acquired from previous lessons within the unit.

Children record their learning in workbooks that clearly match the resources used by the teacher when delivering the lesson. The workbooks start with knowledge organisers which the children are encouraged to use throughout their learning.

Science in EYFS

Science is taught in Reception within the Understanding the World area of learning during the year. We link the scientific aspects throughout each unit to the objectives set out in the Early Years Curriculum. Pupils have the opportunities to develop alternate Early Learning Goals as children are given opportunities to discuss, question and explain. The focus for EYFS is the natural world as children learn about animals and plants and focus on how the natural world changes over time. The investigation based learning that the children partake in within the EYFS enables them to develop their independent curiosity and love of learning that will support them as they progress to Key Stage 1.

Science in KS1

The principal focus of science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about

what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

Science in KS2

The principal focus of science teaching in Key Stage 2 is to enable pupils to broaden their scientific view of the world around them and to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

3. Impact

3.1 Assessment

- Assessment is used to monitor progress and to identify any child needing additional support as soon as they need it.
- **Assessment for learning** is used:
 - daily within class to identify children needing support and adapt teaching.
 - weekly in planning meetings to assess gaps and address these immediately.
 - during marking to highlight misconceptions and identify next steps.
- **Summative assessment** is used:
 - at the end of each unit to assess progress, to identify gaps in learning that need to be addressed, to identify any children needing additional support and to plan the support that they need.
 - by the Senior Leadership Team and scrutinised through assessment trackers, to narrow attainment gaps between different groups of children and so that any additional support for teachers can be put into place.

Please read this policy in conjunction with our *Assessment Policy*.

3.2 Monitoring

The subject is led by the Subject Champion and supported by the Senior Leadership Team. Each year, time is set aside to review standards and monitor curriculum provision and ensure training and resources are up to date.

Monitoring takes place regularly by the Subject Champion and the Senior Leadership Team through sampling children's work, book trawls, learning walks, lesson observations and pupil voice.

3:3 Equal opportunities

This policy firmly supports the equal opportunities philosophy of the school. Every child, regardless of gender, ethnicity or ability is given equal access to all aspects of the curriculum and participates fully in all lessons.

At Holy Trinity we recognise protected characteristics from *The Equality Act 2010*.

The following characteristics are protected characteristics:

- age
- disability
- gender reassignment
- marriage and civil partnership
- pregnancy and maternity
- race
- religion or belief
- sex
- sexual orientation.