



# St Francis Xavier Catholic Primary School

## Science Policy

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| <b>Date written</b>       | September 2023 |
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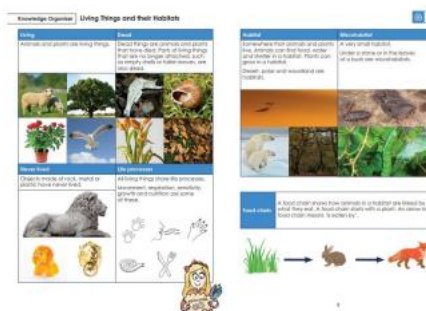
## Intent

At St Francis Xavier, it is our intention that our fully resourced, knowledge-rich curriculum aims to ensure children leave primary school with skills that are vital to the learning process. By having a strong foundation of knowledge, it will make the children's practising of skills meaningful. Our curriculum encourages curiosity, interest and enquiry into our world and the universe around us through the specific disciplines of biology, chemistry and physics. Children will be immersed into the science curriculum through being exposed to a varying type of lesson structures to develop their understanding of scientific: processes, knowledge, methods and uses. Children are encouraged to ask scientific questions, plan and perform experiments to practice their scientific knowledge practically. As children progress through our school, they will build upon their prior knowledge, ensuring the knowledge and ability to work scientifically is embedded in their long-term memory.

## Implementation

Below, are statements for how Science is delivered in St Francis Xavier.

- Science is taught throughout the year in half-termly or termly topics which are designed to ignite curiosity about the world we live in and its processes.
- Science is taught through a vocabulary rich curriculum allowing children opportunities to learn new terminology and imbed this within their long term memory which will be evident within their work and classroom discussion.
- As children progress through school they are provided with opportunities to develop their knowledge and working scientifically skills which enable them to ask questions and investigate the world around them.
- Each classroom will have a Science display which clearly shows the learning journey of the topic. The display must include vocabulary (with pictures) and the knowledge end point organiser to support learning. Children's work is to be displayed through out the topic.
- It is important that children develop the skills of a Scientist by fully immersing them in all areas of the subject. The local area is fully utilised to achieve desired outcomes, with opportunities for learning outside the classroom embedded in practise. School trips and fieldwork are provided to give first hand experiences, which enhance children's understanding of the world beyond their locality.



An example 'knowledge organiser' referred to as 'knowledge end points'. Y2

## Impact

By the time children leave St Francis Xavier they should:

- Achieve age related expectations in science for the end of their cohort year.
- Gain and use a wide variety of skills linked to both scientific understanding and scientific enquiry/investigation.
- Have a general knowledge of biology, chemistry and physics which will allow them to make sense of the world around them. Hence enabling them to take on further learning and acquire new skills.
- Use a richer vocabulary and be able to convey meaning of taught concepts.

- Become 'scientists' with a love, curiosity and understanding of the subject.

## Expectations

Science should be evident in the weekly timetable of each class, taught by the class teacher where possible. All children are to be engaged and part of the lessons and a clear sequencing of lessons will be evident within books.

The structure of a Science lesson follows guidance from the Ark Curriculum.

It is expected that the following items are evident in Science lessons:

- Knowledge end points and front covers to be stuck in books at the start of each topic.
- High expectations of vocabulary. For example, children to be encouraged to speak in full sentences and use correct terminology within their answers and classroom discussions.
- High level of vocabulary to be modelled by all staff using correct terminology at all times.
- Clear skills and outcomes in all sessions to be presented spread using a variety of presentation devices. For example leaflets, water cycle spinner and written work, investigations.
- Learning objectives to be stuck in the books each lesson along with core knowledge and vocabulary taught in the lesson.
- Children to be aware of the learning journey to understand what they have learnt previously and what they will learn.
- Engagement of all pupils
- Questioning
- A love of learning
- Developing curiosity about the world around them.
- Where appropriate children to have practical experiences and use experiments to investigate hypotheses.

## EYFS

Ways of teaching in Early Years can look a little different to those used in KS1 and 2, many of the objectives are covered through play-based activities and tasks, within the continuous provision both inside and outside. Assessment is done by observing the children in a range of different activities across the half term, term and year. Children in Nursery are expected to be at least 30- 50 months secure by the end of the year. Children in Reception are expected to achieve the ELG's for each area. As the objectives are from a variety of different areas of learning and the main bulk of learning ones are from the area 'Understanding the World', there is no separate assessment for Science. Please refer to the separate document produced by the Early Years leader for further details about how science is taught in Early Years and for more detailed planning of unit titles to be covered throughout the year.

## Key Stage 1 and 2

We use the Mastery Curriculum+ for Science in Key Stage 1 and Key Stage 2 to ensure full coverage of the subject is taught. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit. Opportunities for progression are

planned for to ensure that children are increasingly challenged as they progress through the school. Long term plans Our Long Term Plan for Science provides each year's long term objectives. Medium term plans These are broken down into half termly, of termly units of work based on long term planning. Plans are reviewed on a regular basis.

## Responsibilities of the Science co-ordinator

The co-ordinator will be responsible for:

- The implementation, review and update of the policy.
- Providing schemes of work for all aspects of the Science Curriculum.
- Consultation and advice on resources and activities for other teachers.
- Attending any relevant courses and cascading relevant information.
- The ordering, storage and inventory of Science resources.
- Monitoring and evaluating how the curriculum is delivered.
- Auditing the needs of staff and arranging CPD.

## Equal Opportunities

All children must have equal access to similar activities and be encouraged to develop to their maximum potential regardless of race, gender, class and physical capability or disability. All children will be taught a broad, balanced and differentiated curriculum.

## Monitoring & Evaluation

The Science co-ordinator will monitor the delivery of Science within the school informally and through lesson observations. These will take place within the school's identified programme of monitoring and evaluation. This will provide individual feedback to teachers, a general overview of good practice and areas for development and identify areas for CPD.

## Assessment

Assessment for learning strategies are to be used in the classroom during Science lessons allowing staff to address any misconceptions and support children within their learning. Teachers will use pre and post assessment sheets to aid their judgement. Staff will upload assessment data on to O'Track each term to show assessment of skills, knowledge and understanding. Teachers should then use this to guide their teaching and identify any gaps in learning.