

Science Skills Progression Map



School Readiness Intent: At St Francis CE Primary School we believe that science provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's prosperity and our children will be taught the essential aspects of knowledge, methods, processes and the uses of science. Delivering the science curriculum and embedding investigative enquiry skills will be developed alongside exploring a wider variety of 'possibilities,' resulting in pupils having a greater understanding of what they can achieve and therefore raising pupil's aspirations for their future. Our science curriculum in reception is based on the high-quality Corner Stones Curriculum, through which aim to provide our pupils with the foundations to understand the world around them.

EYFS Intent: Children in the Early Years Foundation Stage will be given the opportunity to develop their natural curiosity to find out about things. We will foster this through shared exploration, investigation and observation. Children will be encouraged to be curious and question their environment, both natural and man-made, in order to find out more about why things happen and how things work. Science features into the Specific Area Of Learning – Understanding the World (UW) – under the strand 'The World.'

EYFS Stage	Development Matters	Implementation/ Context
F3 	16-26 Months UW – The World • Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking. • Remembers where objects belong. • Matches parts of objects that fit together, e.g. puts lid on teapot. 22-36 Months UW – The World • Enjoys playing with small-world models such as a farm, a garage, or a train track. • Notices detailed features of objects in their environment	Opportunities to handle objects and sort them according to different properties such as like/dislike, colour, shape, size, feel, smell etc. Opportunities to handle familiar objects and small world resources which relate to pupil's immediate experiences and interests to embed observations that they have made about their own world. Exposure to scientific equipment such as torches, magnifying lenses, magnets, measuring jugs, electronic toys and make observations and explore their ideas.
F2 	30-50 Months UW – The World • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. • Can talk about some of the things they have observed such as plants, animals, natural and found objects. • Talks about why things happen and how things work. • Developing an understanding of growth, decay and changes over time. • Shows care and concern for living things and the environment.	Pupils will develop an understanding of questioning and how it can lead to learning new information and knowledge. They will have opportunities to share their own personal experiences and compare them to the lives of their peers. First hand experiences with animals and plants will be provided to enable children to discuss observations and changes over time. Pupils will be given responsibility of looking after their environment e.g. planting and looking after bulbs, creating an environment which attracts minibeasts and small birds into our Sensory Garden. Continuous access to scientific equipment such as torches, magnifying glasses, magnets and measuring jugs will allow children to make scientific observations and develop a sense task appropriate equipment.

Science Skills Progression Map

EYFS Stage	Development Matters	Implementation/ Context
Reception  	40-60 Months UW – The World Looks closely at similarities, differences, patterns and change. ELGs UW – The World Children 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.	Children will be given the opportunity to research key people that have made a scientific impact on the world. They will begin to consolidate their understanding of what it means to think scientifically by looking into the lives of note-worthy scientists, explorers, mathematicians and engineers. Children will be encouraged to observe and talk about similarities, differences, patterns and change through a variety of activities both indoors and outdoors. The children will ask and answer challenging questions, giving clear reasons why something has occurred or changed. Children will learn different types of investigative skills, such as evidence collection and evidence classification. Key scientific vocabulary will be taught to help pupils use task appropriate language. Children will investigate materials and objects and ask and answer questions about what they can see, whilst channelling their 5 senses to enable them to do so. Children will look closely at plants and animals whilst showing care and concern for their environment. Children will think about how they use, re-use and recycle objects in their classroom and at home. Children will have opportunities to explore growth and living things in order to develop comparison skills to help them make observations about changes over time. Children will use a variety of scientific equipment to collect evidence and test out their findings. Children will talk about their locality/their local environment and compare with other environments, whilst looking for similarities and differences. Clear labelling and identification of scientific equipment such as torches, magnifying glasses, magnets and measuring jugs and their purposes will enable children to explore scientifically using task appropriate equipment.

The Characteristics of Effective Learning and Teaching

Playing and exploring

Engagement:

- Finding out and exploring
- Playing with what they know
- Being willing to 'have a go'



Active Learning

Motivation:

- Being involved and concentrating
- Keeping trying
- Enjoying achieving what they set out to do



Creating and thinking critically

Thinking:

- Having their own ideas
- Making links
- Choosing ways to do things

