



Science at East Park Academy

Intent

The 2014 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 skills** required to understand the **uses and implications** of science, today and for the future. We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this

At East Park Academy, we encourage children to be inquisitive throughout their time at the school. The Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the curriculum at East Park, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific enquiry.

Implementation

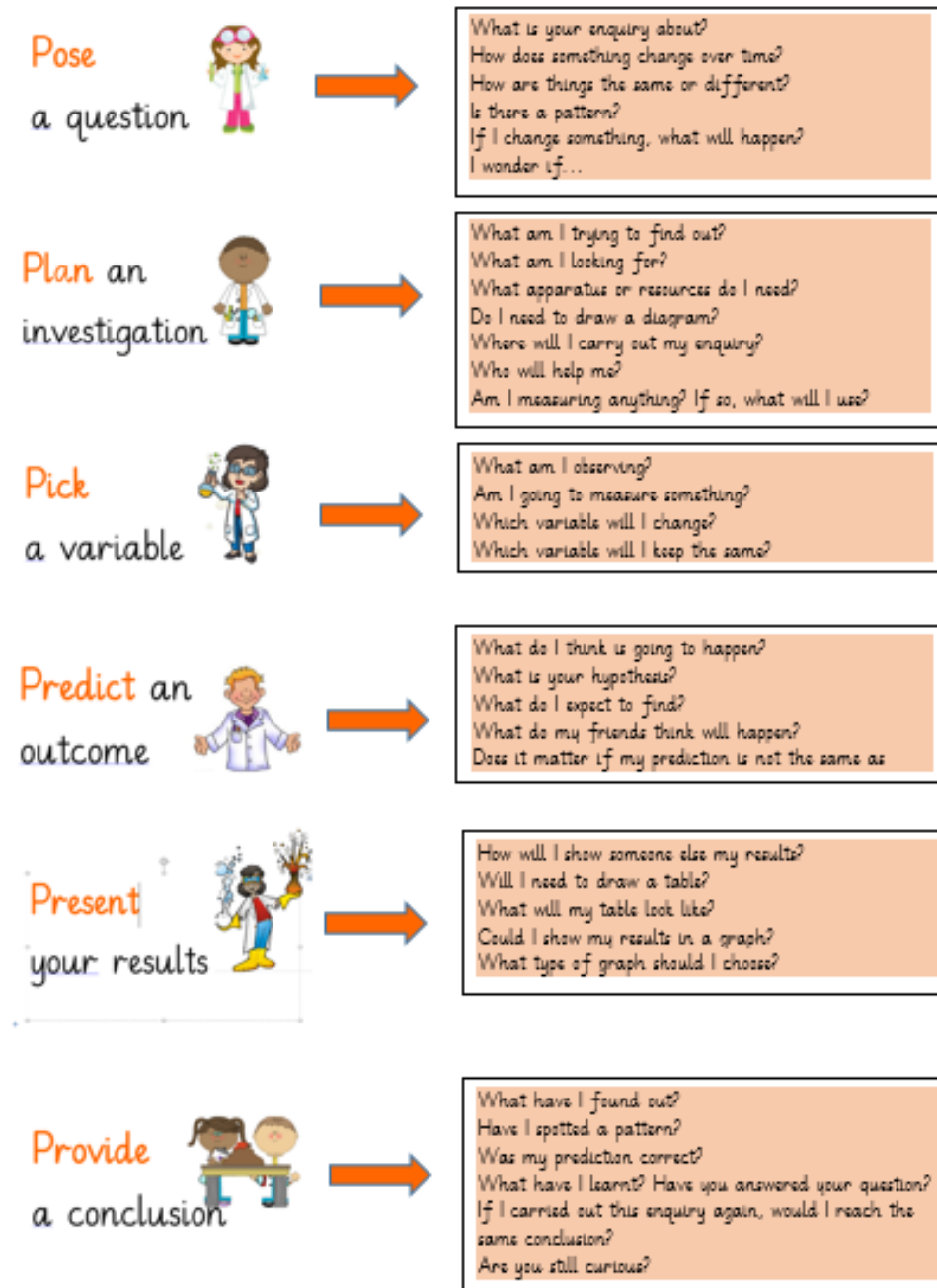
At East Park Academy we are committed to teaching high quality science lessons that meet our aims for each of our pupils. Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topics and this can be seen in the **East Park Science Curriculum Overview** document
- We build upon the knowledge and skill development of the previous years and are aware of future learning. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced and developed.

- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and enrichment activities
- Children are offered a wide range of extra-curricular activities including visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.
- Regular events, such as Science Week, provide broader provision and the acquisition and application of knowledge and skills. These events often involve families and the wider community.
 - Oracy is a skill taught at East Park across the curriculum including science. Children will be given the opportunity to talk about their learning; use key scientific vocabulary; discuss and explain their science investigations or enquiries.

Science Enquiry at East Park will take many forms including: observations, grouping and classifying, looking and noticing patterns, research and comparative and fair testing. We will teach scientific enquiry using the Ps:

Scientific Enquiry – The 6Ps



Science in our East Park Academy EYFS forms part of the 'Understanding the World' aspect of learning. In this area, we aim to nurture in our children a wonder of the world around them, encourage them to be curious and guide them to make sense of their physical surroundings through exploration and investigation.

Through an exciting, rich and varied curriculum children will access such activities as making observations and drawing pictures of animals and plants, looking in detail at similarities and differences between contrasting

environments and understanding important life processes and changes in the natural world around them, including the seasons and changing states of matter.

To provide a robust framework for their learning, children will be introduced to 'The Four Ps' (Pose, Plan, Predict, Provide), enabling them to start each investigation with a scientific model to develop and hone their thinking. This framework will then be expanded upon as they transition from EYFS, thereby providing a consistency of approach that runs throughout school.

Learning will initially begin as small group, adult-led focus activities with children invited to draw on and offer their own personal experiences to create an initial 'mind map' of ideas. As with each aspect of our curriculum, much emphasis is placed on developing oracy outcomes with children given ample opportunity in 'time to talk' to develop their vocabulary and language.

Following this, children will then have the opportunity to put their investigation into practice through independent application in their own exploratory play. To facilitate this, practitioners observe and identify 'teachable moments' specific to that child through the modelling of language, showing, demonstrating and explaining, exploring ideas and questioning, providing a narrative and setting challenges, to gauge understanding of each concept.

IMPACT

Our approach to teaching science results in a fun, engaging, high-quality science education, that provides children with the foundations and knowledge for understanding the world. All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable the children to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.

Our Science Curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. In addition, we measure the impact of our curriculum through the following methods:

- In EYFS our youngest children will develop their independence and interests in the world, taking those vital first steps to becoming confident, eager scientists in their own right as they transition to KSI and beyond.
- A reflection on standards achieved against the planned outcomes (TAFs)
- A celebration of learning for each term which demonstrates progression across the school;
- Children at the end of Key Stage 2 achieve ARE or better

Review Date July 2022

