



## Eden Primary Curriculum: Science Intent

At Eden Primary, our vision for science education is to inspire our pupils' passion, curiosity, and wander so that they develop a love of learning. We will encourage all pupils to confidently explore and discover the world around them by thinking and working scientifically. We will encourage this by delivering a curriculum that is meaningful and relevant as well as ambitious for capable and engaged learners. Wherever possible, we will employ the philosophies of the schools of Reggio Emilia, delivering our curriculum through inspiring, creative and research based projects that are open to the interests and questions of all our pupils. This practise is inclusive therefore being inclusive to all types of learners. Children will develop a deeper understanding of, and fascination with, the ever-changing world we live in. We aspire to offer our children a taste of real and current scientific investigations so they can see themselves as active participants of the science of the 21<sup>st</sup> Century.

We recognise the importance of Science in every aspect of daily life and therefore will ensure that it is integrated with other aspects of our curriculum, as well being delivered through discrete teaching to ensure we maintain the subject discipline. We also understand that children have a natural curiosity for the world and environment around them. Our learning environment will both inspire and support pupils and ensure that all learners can access and enjoy the curriculum.

Eden fosters a love of nature, the environment, and outdoor education so that the children can develop self- confidence and well-being. Additionally we will inspire our pupils to learn how to enjoy, protect and take responsibility for the wider world around them as well as understanding and respecting its diversity. Our study of science links directly to this core strand of our ethos. We will use this ideology as a springboard to encourage discussion and debate so that our pupils will be inspired to think creatively. Furthermore, as a Jewish community, we aim to spark discussions about our responsibility to look after and respect our planet. We also seek to find links between our Jewish identities and the ever changing, scientific world that we live in.

As one of the core subjects taught in Primary Schools, we seek to give the teaching and learning of Science the prominence it requires through the disciplines of Biology, Chemistry and Physics; for this we follow the National Curriculum. Through the progression and coverage of relevant and non-negotiable key skills and knowledge, we aim to build up pupils' scientific understanding of our world. We also focus on developing the skills and language associated with Science, in particular thinking and working scientifically, so that our pupils will ask thoughtful and intelligent questions and graduate Eden as collaborative, inquiry based learners.

## Eden Primary Curriculum: Science Implementation

We will:

- Use the Science curriculum and local environment to highlight the presence of Science everywhere we go.
- Highlight the many different faces of Science across the world.
- Challenging any stereotypes to broaden children's view of Science.
- Use assessment for learning to tailor lessons around our children and help us plan for next steps.
- Strongly encourage all pupils to use specific topic related vocabulary.
- Develop children's knowledge and key skills during each topic.
- Ensure that there is appropriate and relevant scientific equipment available to children.
- Provide staff with opportunities to develop their subject knowledge.
- Provide opportunities for children to conduct experiments, working as an individual and as part of a larger group.
- Ensure even coverage of all five lines of scientific enquiry throughout all topics, modelling appropriate selection.
- Empowering children in Upper KS2 to be able to select appropriate enquiry types to answer their own questions.
- Provide children with is appropriate and relevant Scientific equipment.
- Enable children to engage with the language of science and to justify their ideas with evidence.
- Design and manage genuinely effective group talk, using prompts where necessary, to allow children to discuss and justify their ideas.
- Develop a range of strategies to enable pupils to give rational explanations and to make cognitive gains in science through group talk activities.

We aim to:

- Provide regular opportunities for children to raise their own questions.
- Promote an excitement about developments in the scientific world.
- Provide opportunities for children to research science stories in the news.

We will provide:

- A Clear and comprehensive scheme of work in line with the EYFS, National Curriculum.
- Access to key scientific vocabulary in order to understand and readily apply in order to communicate their findings clearly.
- Access to resources to acquire learning through science equipment, digital technology, practical experiences and school enhancement experiences.
- A range of secondary resources to develop our pupils' knowledge and understanding.
- Practical opportunities for inquiry in every unit.
- Opportunities for children to reflect on previous learning.

- Opportunities for children to build on prior knowledge and link ideas together, enabling them to question and become inquiry based learners.
- Educational visits and trips.
- Links to Science through topical learning where applicable,
- Outdoor learning

At Eden, every unit of work in all year groups must include the following 6 elements:

1. A “Big Picture” Start – finding out with what the children know, understand, are able to do and able to say.
2. Review: Revisit previous learning connected to the specific topic.
3. The provision of relevant information and scientific concepts.
4. The provision of specify key vocabulary to be used in conjunction with its meaning.
5. Opportunities for the children to investigate in a variety of contexts
6. Opportunities to obtain and present evidence through observations, comparisons and collected data.

## Eden Primary Curriculum: Science Impact

Our Pupils will:

- Be enthusiastic about science and enjoy this area of learning.
- Understand that science is vital all around the world and numerous people contribute to its ongoing advancement.
- Have a well-rounded view of what Scientists look like, what their work place is like and what type of work they engage with.
- Know that scientists can be any gender, race, ethnicity or nationality.
- Be curious about science.
- Be excited about science and the ongoing developments in the world of science
- Produce high quality research about current and up to date advancements in science.
- Be engaged with their science learning.
- Be challenged appropriately and develop good subject knowledge.
- Be equipped with the necessary scientific skills to carry out inquiries both collaboratively and independently.
- Have a firm grasp on scientific vocabulary and be able to engage in topical scientific conversations.
- Show high levels of engagement in Science.
- Recognise opportunities to engage in scientific thinking and investigations within school and the wider world.
- Enhance their scientific learning through extra activities such as clubs and fairs.
- Know how to use a variety of scientific resources.
- Understand and use scientific language and engage in scientific discussions.
- Ask meaningful and well considered questions that may shape their investigations.
- Think scientifically.
- Understand how to accurately explore and answer their own questions.

- Be reflective learners and relate their learning to their own lives and find meaning in the material provided.
- Know how to ask questions that will help them to extend their scientific knowledge.
- Be proficient in the five different types of inquiry.
- Develop confidence in conducting scientific discussions.
- Know how to use evidence and to defend their views and findings.
- Know how to carry out an investigation to answer their own questions.
- Think scientifically.
- Use appropriate scientific language to justify their theories, predictions and findings.
- Know how to work scientifically both independently and in group settings.