



Biscovey Academy Science **Science Intent Statement**



Biscovey Academy is a school where everyone **DREAMS** big! DREAMS is capitalised within our tag line as it stands for our core values which underpin all the work we do here at Biscovey Academy.

D= Diversity Our children are encouraged to recognise the impact that different individual, civilisations, communities and genders have had on shaping the world as we know it today. We believe it is important for stereotypes surrounding science to be broken and encourage all our children that anyone can be a scientist!

R= Rules We have high expectations for behaviour and adhere to our school rules of 'Ready, Respectful and Safe.'

E= Empathy Children at Biscovey are able to look at the world around them from an empathic point of view. Children are aware of the issues in the modern world and can discuss this sensitively and with compassion.

A= Aspirations We celebrate the contribution made by a range of Scientists and promote various careers that link in with science. We have high aspirations for our children and want to share and celebrate the successes of others around the world who have a passion for science.

M= Motivation We plan engaging and innovative lessons which encourage children to want to know more and remember more about science. We provide opportunities for Cultural Capital through trips and visits. Our careers fayre during STEM week motivates children to find out more about a range of careers that they might not have thought of before.

S= Success We believe that high-quality science lessons encourage children to be curious about the world. We want children to ask why. We want children to be thinking about the positive change that they can make on the world and encourage children to take this curiosity with them throughout their journey in education and beyond.

Driven by our Dare to Dream Curriculum, we are committed to providing access to a first-class education for all pupils, which is highly ambitious for those with Special Educational Needs and Disabilities (SEND) and other vulnerable groups. All pupils are entitled to have access to a broad, balanced, and relevant curriculum, which is scaffolded and differentiated to meet individual

needs. Pupils are supported to keep up, not catch up. Biscovey Academy staff recognise and are committed to fulfilling their responsibility to ensure that every pupil has an equal opportunity to attain good outcomes in their learning, progress and personal development. Scaffolding in Science may take the form of paired work, greater use of visuals, vocabulary prompts, tasks broken down into smaller steps, teacher modelling or use of templates.

Science at Biscovey is designed to give children the cultural capital that they need to succeed in life. Children at Biscovey are given an ambitious curriculum which has carefully identified core knowledge for each unit, whilst scientific skills are progressive to their academic age. We ensure that children have first-hand, practical opportunities for learning throughout our curriculum to develop their scientific enquiry skills. Our aim is that these stimulating activities secure and extend their scientific knowledge and vocabulary, give children the opportunity to question the world around them and promote a love of learning.

Science Implementation Statement

At Biscovey, Science topics are taught within each year group according to the National Curriculum. Science is a core subject and therefore is taught weekly.

Teachers are given a progression of skills and knowledge document that allows them to see a breakdown for each year group. These skills build upon each other as children move up the school. Each topic has an 'umbrella question' and key enquiry questions. Our key enquiry questions are based on National Curriculum objectives and are carefully sequenced to ensure that key skills and knowledge are built upon and revisited. As children move through the enquiry questions, they are equipped with the knowledge and skills to be able to answer the umbrella question at the end of the topic. Children also learn about different scientific enquiry approaches and scientific enquiry skills in their lessons. Each skill and approach has been carefully mapped out to link with each enquiry question.

In order to support children to 'know more and remember more' there are regular opportunities to review learning that has taken place in previous lessons as well as previous topics. We ensure that rich, subject specific vocabulary is used in each session to allow for pupils to talk about science in a mature manner.

Each lesson follows a consistent structure

- Challenge questions. These may be linked to learning from a previous lesson.
- A scientific figure linked to the current topic. We show children a diverse range of scientists from different backgrounds.
- The Learning Journey is shared (key questions) so children can see what came before and what will follow.
- Umbrella question and Key Question shared.

- Vocabulary focus, ensuring children understand the meaning of topic specific words as well as the origin of words.
- Main learning focus and independent learning.
- Learning Journey – where next?
- End of unit assessment to address misconceptions.

Our curriculum is: aspirational, ignites a love of learning and is diverse. These curriculum drivers feature heavily throughout our science curriculum. We want our children to know there are no limits to what they can do.

We carefully assess our pupils in Science in a range of ways. Retrieval activities in weeks 2,4 and 6 help children to know more and remember more. End of lesson documents address misconceptions from that lesson and ensures that these misconceptions are raised and talked about.

Science Impact Statement



End of lesson assessment will show the progress pupils have made in their learning and ensure misconceptions are addressed before learning moves on. This will also be evident in the retrieval activities pupils complete every 2, 4 and 6 weeks of a unit.

As pupils complete work at Biscovey, their understanding is assessed in each enquiry question based on the knowledge and skills mapped out in medium-term planning for them to achieve. This is drawn from the progression of skills and knowledge document, which is in turn created from the National Curriculum. This ensures pupils progress is clearly shown and regularly analysed and

assessed. Pupils meeting the knowledge and skills consistently are meeting the expected standard. Pupils also successfully accessing carefully crafted challenge questions are considered to be working above this level. Where whole year groups show less than expected progress, the following years' curriculum will be adapted to ensure key skills and knowledge are given to all pupils. Our bespoke assessment offer allows us to assess the progress pupils make confidently and accurately in foundation subjects.

The impact of this curriculum design allows for an immersive and high-quality Science education that provides children with the knowledge and skills to become confident and enthusiastic scientists. We want to empower our children so that they have high ambitions for their futures. Through opportunities for outdoor learning, trips and visits, children have the understanding that science has changed our lives and that it is vital for the future. We discuss the possibilities of scientific careers throughout our curriculum to ensure that all pupils are aware of the career paths that are available to them. By constantly adapting our curriculum to meet the needs of our learners, pupils at Biscovey leave our school as confident