

**Subject Area Science****Believe-Achieve-Belong****Intent**

*Man explores the universe around him and calls the adventure Science.* - Edwin Powell Hubble

**The curriculum at St Michael and All Angels Catholic Primary School promotes curiosity and a love and thirst for learning. It is ambitious and empowers our children to Believe, Achieve and Belong.**

**At St Michael and All Angels, we are scientists!**

**Our intent is for children to explore their natural curiosities of the world around them and enjoy their scientific adventures and discoveries.**

**We intend to enthuse and ignite their inquisitive nature so that they are ready, willing and able to develop as scientists, equipped with the extensive curriculum knowledge and skills to explore and answer scientific questions. We aim to immerse children with opportunities to work scientifically and acquire the skills to explore scientific enquiries with progressively more independence throughout their primary school life. As scientists, we want our children to realise that 'nothing in life is to be feared, it is only to be understood' (Marie Curie). We intend to provide them with the knowledge to understand and make sense of the universe and strive to keep asking more questions as, 'what we know is a drop, what we don't know is an ocean' (Isaac Newton). We want the children of our school to recognise the opportunities that science opens for them and encourage them to follow their ambitions to be tomorrow's microbiologists, doctors, vets, astronauts and science teachers.**

**Implementation**

**In the Early Years it is the first opportunity to see how a child interacts with their environment and how the environment influences them. Staff follow the Early Years Foundation Stage (EYFS) Statutory Framework which aims to guide children, to make sense of their physical world and their community by allowing them to explore, observe and find out about people, places, technology and the environment – this is the first step of becoming a scientist.**

**We use formative assessment at the beginning of each topic to identify strengths/weaknesses in prior learning and inform our teaching, tailor the content and delivery and clear any misconceptions.**

**We begin each lesson with flashbacks to aid the retention of knowledge. We explicitly teach the vocabulary needed to access the learning for the lesson and we plan for the use of**

stem sentences to help children to articulate their learning using the learnt vocabulary.

We use knowledge organisers to help with the acquisition and retention of knowledge and vocabulary.

We believe that our pupils need to be actively involved in making sense of their learning and therefore an enquiry approach is implemented. We identify the disciplinary knowledge the children need to learn the substantive knowledge, and the disciplinary skills are taught explicitly. As the children move through the school, they develop their independence in the planning and implementation of their enquiries using an ever-increasing range of skills. Time is given to reflect upon evidence that they have gathered from their scientific enquiry to answer their questions and children are encouraged to make links with their substantive knowledge. These links lead to a deeper understanding.

#### **Accessibility and Equal Opportunities**

Please refer to the school's Equal Opportunities Policy, Accessibility Policy and Special Educational Needs Policy for further information.

All pupils have equal rights to access learning opportunities across the whole curriculum irrespective of ethnicity, religion, gender, disability or social circumstances. A wide variety of strategies can be used to ensure that teaching meets the needs of different groups of pupils. These include:

- Differentiating lessons (through use of resources, tasks, level of support, outcome);
- Using a range of teaching styles to match the range of learning styles represented in a typical class;
- Ensuring the classroom environment is safe and secure and accessible for all.

#### **Impact**

We use both formative and summative assessment information in Science. Our curriculum has key objectives and we have set out our expectations around these.

We assess pupils' depth of understanding frequently and use this to forecast as to whether pupils are on track to meet our curriculum expectations. This process provides an accurate and comprehensive understanding of the quality of education in Science.

#### **Monitoring**

The Subject Leader will monitor progress according to the monitoring timetable. Subject leaders are expected to monitor in the following way over the course of the academic year:

- Learning Walks;
- Co-coaching;

- **Pupil Voice;**
- **Book scrutiny including learning logs;**
- **Planning scrutiny;**
- **Lesson drop ins**

**Adequate notice should be given and provide a clear focus for any activity that is due to be undertaken. The outcomes of any monitoring activity is feedback to the SLT and staff through the relevant meetings.**

**Progress should be clear over the course of each topic.**

**We believe that our children will:**

- **have a love of science and an inquisitive mind to continue to ask questions about the world they live in;**
- **understand and use scientific vocabulary as a tool for explaining their ideas and reasoning about the world;**
- **have a good base of disciplinary skills in order to carry out scientific enquiries;**
- **be clear in their substantive knowledge and able to make links to real life contexts;**
- **have the confidence to have no limits to what their ambitions are if they are considering a future in the field of science;**

**At St Michael and All Angels Catholic Primary School our children are scientists who can Believe-Achieve-Belong in the local and global world now and in the future.**