

**Science**

**at Sharlston Community School**

**Intent**

At Sharlston Community School we are committed to providing all children with learning opportunities that will engage them in science. A high-quality science education should;

* Provide the foundations for understanding the world through biology, chemistry and physics.
* Teach children how science has changed our lives and is vital to the world’s future prosperity.
* Include the substantive and disciplinary knowledge, methods, processes and uses of science.
* Develop a sense of excitement and curiosity about natural phenomena.
* Allow opportunity for regular scientific enquiry that enables pupils to predict, explain what is occurring and analyse causes.

Our intent, at Sharlston Community School, is to offer a broad and balanced science curriculum, providing opportunities for our children to gain the essential knowledge, skills and understanding which will enable them to flourish and reach their full potential in life and SHINE!

In EYFS we have designed a progressive and bespoke curriculum, where knowledge and skills are retrieved regularly and are taught through practical, real experiences, and fully prepares children for the next step in their learning. We are using the KAPOW curriculum to support the teaching of Science throughout KS1 and KS2. The knowledge and skills build upon what has been taught and experienced in the Early Years Foundation Stage and content is regularly retrieved to ensure that knowledge sticks in the long-term memory. Disciplinary knowledge is carefully planned to ensure progression in skill and to ensure that there is a range of coverage of the key features of working scientifically, including observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing and researching using secondary resources.

Our curriculum is interwoven with developing the key attributes embodied within our AT SHARLSTON WE SHINE message:

**S**how Respect -Respect ourselves, others, property and our surroundings.

Intent: to develop confident, responsible and compassionate global citizens who demonstrate an appreciation of **science** in the world we live in.

 **H**ave ambition -Have high aspirations to succeed in life.

Intent: to inspire pride, aspirations and high expectations of what can be achieved both during lesson and in the future, **and develop an awareness of Science capital by exploring the vast range of career opportunities available by studying science.**

**I**nvolve every one -Enjoying being together, and celebrate differences.

Intent: to develop kind, fair members of a multi-cultural society who can communicate effectively, celebrate diversity and uniqueness, tackle discrimination, challenge stereotypes and promote equity. **Through the teaching of science, long standing stereotypes of gender, race and age are challenged, to encourage pupils from all backgrounds to see themselves as scientists.**

**N**ever give up -Be resilient and determined to do your very best

Intent: to develop resilient learners who persevere, take risks, are open to feedback, self-reflect and embrace challenge with a growth mindset. I**n science, become resilient and determined to succeed, through taking risks and making and learning from mistakes, during the process of working scientifically.**

**E**njoy learning –Engage with learning new things in and out of school

Intent: to provide rich learning experiences which develop language both within and beyond the classroom, linking and recapping prior learning and motivating and engaging learners. **Ensuring children’s Cultural Capital and Science Capital is developed by providing opportunities to visit educational sites e.g. recycling plant and have first-hand experience of participating in scientific enquiry.**

**Implementation of the Science Curriculum**

We believe that science has an important place in our school curriculum. A two-year, long-term rolling programme maps out the coverage of teaching and learning opportunities for children to develop and embed progressive skills that they are taught.   Our curriculum is designed and planned to show progression in skills from Early Years to Upper Key Stage 2.

At Sharlston Community School we want all of our children to reach key milestones at the end of each key stage. In each of the disciplinary concepts, that underpin every science topic that we teach, children learn how to be a scientist, and through working scientifically, pupils will

* **Make observations over time**
* **Notice patterns**
* **Group and classify**
* **Carry out simple comparative and fair tests**
* **Find things out using secondary sources of information.**

We have a spiral curriculum, with essential substantive knowledge and skills revisited with increasing complexity, allowing pupils to revise and build on their previous learning. Animals and humans, in particular, will be reviewed and built upon in each year group so that this will consolidate children’s understanding of key concepts, such as comparison and classification. Cross-curricular links are included throughout each unit, allowing children to make connections and apply their science skills to other areas of learning e.g. maths and design technology.

Enquiry questions form the basis for our units, meaning that pupils gain a solid understanding of scientific knowledge and skills by applying them to find answers and a conclusion. Through working scientifically children learn how to predict, question, test, observe and measure, record, interpret and communicate results through first-hand experience. Each unit contains elements of scientific knowledge and enquiry skills to ensure that these are practised as often as possible.

**Impact**

After following our carefully designed SHINE Curriculum , the impact is that by the time pupils leave Sharlston Community School they have a secure understanding of the academic content of our science Curriculum; with the understanding of how to be socially, morally, spiritually and culturally responsible and aware; how to make positive contributions to the local community and how to endeavour to be the best that they can be. They see themselves as scientists and they understand the vast range of career opportunities open to them if they work hard.

We aim for all of our children to leave our school respectful, skilful, ambitious and with a thirst for life and all it has to offer.