Science Curriculum

Glascote Academy Curriculum

Aim	Our aim is for every child to be a citizen of the world with an instilled sense of **Pride** in themselves, in their work, in their school and in their community							
Trust Vision	Inspiring all to excellence							
Trust Values	We care 	We leave no-one behind 	We celebrate individuality 	We are brave 				
Virtues	**P**erseverance 	**R**espect 	**I**nquisitive 	**D**uty 	**E**xpressive 			
Big Ideas	**G** Globalisation 	**L** Leadership 	**A** Adventure 	**S** Significance 	**C** Change 	**O** Observe Critically 	**T** Traditions 	**E** Enterprise 

Curriculum Intent

We consider our Glascote Family to be special and unique and as such our pupils deserve a curriculum that…

Upholds and promotes our vision of "Pride"

Raises aspirations and open's their eyes to a world beyond their immediate surroundings

Shapes independent and co-operative learners who learn from their mistakes

Promotes a life-long love of learning

Promotes practical everyday life skills that prepare them for their future

Promotes creativity, curiosity, and confidence

Secures knowledge and skills across all EYFS and National Curriculum subjects that build upon prior knowledge

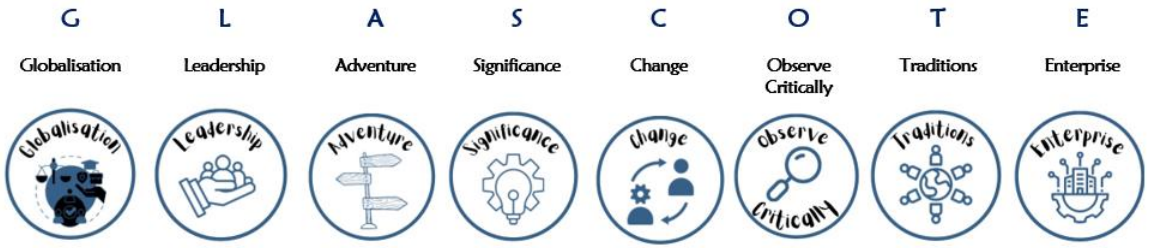
Builds character, resilience, self-motivation, and a will to succeed

Subject Specific Sequencing and Key Concepts:

Each subject has been planned to ensure that knowledge and skills are sequenced from Early Years to Year 6. Key Concepts are the subject specific '*Golden Threads'* that children will learn about, return to and revisit as they progress through our school. Our pupils will have opportunities to link new learning to prior knowledge thus building a rich and deep knowledge of these '*Golden Threads'* with each encounter. (*See Science long term plan with key concepts)*

Big Ideas:

These are the overarching *'Glascote'* concepts that pupils can use and apply across different curriculum subjects. For example, in all areas of the curriculum, children will build an understanding of 'significance'; learning about significant authors, artists, scientific discoveries, pieces of music, figures and events from different cultures, religions and history.



Character Virtues:

These are the underpinning qualities and character traits stemming from *'Pride'* that we desire all of our children, and staff, to demonstrate.

IMPLEMENTATION – Our approach

Science at Glascote Academy, is taught by following the scheme of work from White Rose. We chose White Rose for our pupils as we believe that it supports our aim to build citizens of the world, our intrinsic values, virtues and 'Big Ideas'.

"White Rose Science uses a "small steps" approach to science teaching and follows the national curriculum for science for years 1 - 6. It gives specialist and non-specialist teachers a one stop solution as they help children develop scientific understanding and grasp scientific ideas. White Rose Science teaches practical approaches to science in an engaging and logical way. Our schemes of learning provide full coverage of the national curriculum for science, covering scientific questions around sustainability and the planet, and help children develop an empathy for the local and wider environment. Through experiment, practice and discussion, children gain core knowledge around:

- *Scientific vocabulary*
- *'Working scientifically' skills including systematic and careful observations and following practical scientific methods*
- *The gathering and interpretation of straightforward scientific evidence*
- *The use of everyday materials and scientific equipment to solve science problems*
- *Articulating scientific concepts and using five types of science enquiries" (White Rose)*

IMPLEMENTATION – Our approach

The sequential progression of substantive knowledge and disciplinary skills are set out to build and develop the following:

- scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- An 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
- scientific knowledge required to understand the uses and implications of science, today and for the future.

Staff at Glascote Academy create a positive attitude towards geography learning both inside and outside the classrooms and promote the expectation that all children can achieve highly through adaptive teaching. Recall, repetition, modelling and practice are key facilitators used to support all children in their learning. Key vocabulary is an integral part of each unit of work, enabling children to have a greater understanding of important key concepts, '*Golden Threads*', thus enabling them to communicate as Scientists.

EYFS Development Matters 2020: Understanding of the World

Understanding of the world involves guiding children to make sense of the physical world and their community. The frequency and range of children`s personal experiences increase their knowledge and sense of the world around them.- from visiting parks, libraries and museums to meeting important members of society. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support, understanding across domains. Enriching and widening children`s vocabulary will support later reading comprehension.

Key Stage National Curriculum Expectations: Science

Science provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

IMPACT– Our approach

At Glascote Academy, we are determined that teaching and learning in all subjects is driven by our curriculum intent. Therefore, we monitor the impact of learning in each lesson through teacher observations, discussions, experiment evaluations, low-stake quizzes and work produced which is evidenced in children's books, displays, and Curriculum Power Points.

Impact is also measured at the end of a unit of work through:

- the use of subject specific Assessment One Notes
- Internal and external picture building