Science @ Granby Juniors:

Science at Granby Junior School aims to ensure children:

- See science as an enjoyable experience;
- Can work individually and cooperatively, listening to, and valuing, the opinions of others;
- Can observe, question, hypothesise, plan, measure, construct a fair test, communicate and draw conclusions based on evidence.
- Can use skills from other subjects, such as Maths to represent data, and technology where appropriate to enhance the science curriculum.
- Are observant, curious and caring about our environment;
- Are able to relate science to everyday life and appreciate its contribution both in the present, and historically, to our British values and other cultures;
- Appreciate the nature of science and the importance of collecting fact-based evidence

'Golden Nuggets'

We would like our pupils to:

- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs
- Use test results to make predictions to set up further comparative and fair tests
- Report and present findings from enquiries, including conclusions and explanations of result

Content and Sequencing:

A clear and comprehensive scheme of work that is in line with the Key Stage 2 curriculum for science is taught at Granby Junior School. This is sequenced to build on prior knowledge. It distinguished between the disciplines of biology, physics and chemistry so that children are aware what in which area their learning sits and are able to make appropriate links when needed.

Whole class teaching, co-operative group work, paired work and individual work are all utilised as appropriate by teachers to enable children of all abilities to progress. Discussion, research, questioning and practical innovation are central to our philosophy of relating Science to everyday life.

Granby Junior School also participates in National Science education initiatives such as National Science week.

Collaborative work with STEM ambassadors in the community and the development of a STEM afterschool club provides opportunity for children to extend their love of science, in conjunction with the other disciplines of maths, technology and engineering.

Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers.

Planning

Science is delivered through a creative, cross curricular themed topic-based curriculum and is supported by science specific knowledge-based projects, where learning will be planned for practical investigative opportunities.

Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves.

Planning for science consists of three types: long term plans, medium term plans and short term plans.

Progress/Assessment

Science assessment is a continual process, being carried out regularly to assess a taught unit.

These assessments are in the form of topic beginning/mid-term and end vocabulary assessment sheets, focused questioning, discussion or the application of scientific knowledge and understanding in the children's written work.

At Granby Junior School, we put emphasis on checking back on science taught in previous lessons. All science lessons now begin with a recap on relevant prior knowledge this a starter activity.

We use a lot of multiple-choice questions for quick, formative assessment. 'Explorify' is used as a tool to support this informative assessment process.

SEND:

Adaptive science teaching focuses on the whole class while providing scaffolding such as differing levels of support, access to resources, modelled first step examples or focused questioning to those who need additional initial support or challenge in order to access the same ambitious curriculum and meet our high expectations.

Safeguarding

Consideration for health and safety is considered before a topic is introduced in the classroom. The curriculum guidelines within each topic are taken into account with reference to HES Health and Safety guidelines. Electrical equipment is regularly tested and PPE precautions are used where necessary.

Outdoor Learning:

At Granby Junior school, we are ideally located to utilise the natural environment – both in our school grounds and in the immediate area. A short walk to the local allotments, Bennerley viaduct, Ilkeston canal and Shipley Park enables our children to explore a range of habitats. We provide an excellent foundation for further learning in KS3 and have strong connections with Outreach Special Projects that promoting science-driven careers and equality by challenging stereotypes.

Support for staff:

Science Leads - Julie Godson/Ami O'Connell

Staff have regular training opportunities linked to STEM subjects. Science has been well-supported by STEM ambassadors that work alongside teachers in the delivery of science-based sessions. Strong links to local secondary schools have allowed for effective use of specialist science equipment too.

Links to other curriculum areas:

The use of scientific vocabulary is practised through cross curricular writing, displays, word banks and teacher modelling. Similarly, Mathematical skills such as graph work, data handling and measurement are reinforced as an important element in the children's understanding of scientific enquiry. Children have access to key language and meanings, in order to understand and readily apply to this to their written and verbal communication of their skills. Design and technology links are also made through cross-curricular work and STEM topics.