'Learning for a fuller life...'

TAVERHAM VC CE JUNIOR SCHOOL CURRICULUM OVERVIEW	SCIENCE

CURRICULUM INTENT

At Taverham Junior School, we recognise the importance of science in every aspect of daily life. As one of the core subjects taught in primary schools, we give the teaching and learning of science the importance it requires. This core subject is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with science through enquiry.

The aims of our science curriculum link directly, and are key to, our school aims for developing successful and happy individuals. We strive to enable our pupils to become confident, resilient and responsible citizens, both on a small school scale but also on a wider global aspect. By allowing our pupils to safely explore and discuss the natural phenomena that are all around them (and governs everything we do), the children will become more caring, reflective individuals and inevitably allow them to learn for a fuller, more informed life.

At Taverham Junior School, in conjunction with the aims of the National Curriculum, our science teaching offers opportunities for children to:

- become curious and wonder about the world around them and the things that they observe, experience and explore
- develop a love and respect of nature and a knowledge of the flora and fauna found locally
- reflect on their observations, and those of others, and realise that science is about being wrong, finding patterns and moving forward, building resilience
- develop respect for the environment and living things, including themselves and each other, working cooperatively with each other and nature
- acquire and refine the practical skills necessary to investigate ideas and questions safely and confidently
- use their experiences to develop understanding of the key scientific ideas and use progressively technical scientific vocabulary
- practise mathematical skills (e.g., drawing graphs) and enhance literacy skills (listening and speaking, writing and reading) within real contexts
- use a range of media including ICT to extract scientific information.

The National Curriculum will provide a structure and skill development for the science curriculum being taught throughout our school and - to ensure full coverage of the curriculum - much of our science curriculum is taught discretely. However, links are made with other curriculum areas wherever possible.

At Taverham Junior School, children have weekly science lessons using plans and resources based on the Collins Snap Science programme. This is enhanced with activities such as Science Week - when a whole school science project takes place and professionals are invited into the school not only to extend the children's learning from their science lessons but also to help enthuse, encourage and engage them further in the subject. We endeavour to ensure that the science curriculum we provide will give children the confidence and motivation to continue to develop their skills into the next stage of their education and beyond.

WORKING SCIENTIFICALLY

IN LOWER KS2:

During years 3 and 4, pupils are taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- Asking relevant questions and using enquiries to answer them
- Setting up simple practical enquiries
- Making systematic and careful observations
- Gathering, recording, classifying and presenting data
- Recording findings
- Reporting on findings from enquiries
- Using results to draw simple conclusions
- Identifying differences and similarities
- Using scientific evidence to answer questions

IN UPPER KS2:

During years 5 and 6, pupils are taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- Planning different types of scientific enquiries
- Taking measurements using a range of equipment
- Recording data and results
- Using test results to make predictions
- Reporting and presenting findings from enquiries
- Identifying scientific evidence to support or refute ideas

PROGRAMMES OF STUDY

	AUT 1	AUT 2	SPR 1	SPR 2	SUM 1	SUM 2
YEAR 3	Rocks, Soils and fossils	Light and shadows	Forces: friction and magnets	Movement and nutrition for the human body	Flowering plants and plant growth	Flowering plants life cycle
YEAR 4	Electricity: circuits	Classification of plants and animals	Digestion and food chains	Human impact on the environment	Changes of state	Sound
YEAR 5	Forces and mechanisms	Earth and space	Properties and uses of materials	Plant and animal life cycles	Separating mixtures and changing materials	Human growth
YEAR 6	What light does	Evolution and inheritance	Body health	Human circulation	Electricity: changing circuits	Classification of living things

Support for SEN/disadvantaged children:	Additional opportunities for more able children:
At Taverham Junior School (TJS) it is a stated aim that 'all of our pupils aim for the highest standards in all that they do'. Our approach to everything that we do is guided by our Christian vision of 'Learning for a Fuller Life. In adopting this approach, we want all children at TJS to become: ● successful and happy individuals, who participate fully; enjoy learning; make progress and achieve ● confident and resilient young people who are able to live safe, healthy and fulfilling lives. In our school, pupils are taught in mixed ability classes in line with the schools teaching and learning policy. The principle of core task, extension and support are used to ensure that no ceiling is placed on pupils' achievement and that learning should also be accessible for all children. Our school aims to encourage learning through investigation, with an emphasis on first-hand experience. The school has a wide range of science resources, which are available to the children for carrying out scientific investigations. At TJS, we use the Collins Snap Science programme, which is a dynamic, comprehensive programme, packed with inspirational resources, designed to support our staff in delivering engaging science learning throughout our school. In addition to this, we provide a wealth of enrichment activities such as science week, visitors, trips, artefacts, films, animations; interactive and pictorial resources and scientific displays to underpin children's learning.	Lesson plans incorporate a range of challenges to stretch and challenge more able students: Three levels of differentiated task are included in every lesson to ensure that children with different starting points in knowledge and skills (including the more able) are enabled to meet the learning objective in each lesson. Lessons are designed to cultivate a spirit of enquiry in pupils through practical exploration and investigation activities – and more able pupils are encouraged to consider and formulate their own scientific questions during these science lessons.

How does Science contribute to the overall school aims? (*Children who are: Successful and Happy; Confident and Resilient; Responsible; Caring; Respectful and Tolerant and Reflective)*:

The science aims link directly (and are key to) our school aims for developing successful and happy individuals. We strive to enable our pupils to become confident, resilient and responsible citizens, both on a small school scale but also on a wider global aspect. By allowing our pupils to safely explore and discuss the natural phenomena that are all around them (and governs everything we do), the children will become more caring reflective individuals and inevitably allow them to learn for a fuller, more informed life.

Key aims:

- For pupils to become curious and wonder about the world around them and the things that they observe, experience and explore
- For pupils to develop a love and respect of nature and a knowledge of the flora and fauna found locally
- For pupils to reflect on their observations, and those of others, and realise that science is about being wrong, finding patterns and moving forward, building resilience
- For pupils to develop respect for the environment and living things, including themselves and each other, working cooperatively with each other and nature
- For pupils to acquire and refine the practical skills necessary to investigate ideas and questions safely and confidently
- For pupils to use their experiences to develop understanding of the key scientific ideas and use progressively technical scientific vocabulary
- For children to practise mathematical skills (e.g. drawing graphs) and enhance literacy skills (listening and speaking, writing and reading) within real contexts
- For children to use a range of media including ICT to extract scientific information.

In order to achieve these aims we will:

- Provide a stimulating and safe environment to promote effective learning in science
- Ensure continuity and progression in science by liaising with colleagues in feeder schools
- Give children lots of opportunities to develop and apply investigative skills
- Provide necessary resources for the children to be taught effectively

How does Science contribute to the spiritual development of children?

Science allows children to be curious about the wonders around them and to learn more about themselves and their place in the universe. Children will ask questions, experience awe and wonder and take time to enjoy beauty in the world.