

Exciting Visitors

We work hard to ensure that the children are excited and enthused by their Science learning. One way that this is achieved is through inviting STEM Net ambassadors or Science experts. Our visitors come for varying amounts of time to speak with different classes and year groups about their learning. The special visitors talk about how Science learning is relevant to their jobs in the real world; completing interesting, practical Science investigations and answering tricky questions that only an expert would be able to answer.

We have had visits from ambassadors who have had interests in nature and animals, earth and space, sound and engineering. We are looking forward to inviting more ambassadors to enhance our Science learning throughout the year. If you are in the Science profession and are happy to share your knowledge with different year groups across the school, we would love to get in contact with you.

Science at Fir Tree

Science at Fir Tree aims to build on children's enthusiasm and natural sense of wonder about the world whilst treating the living and non-living environment with respect and sensitivity. Children are encouraged to be inquisitive and to question the world around them and to offer their own suggestions.

A Practical and Investigative Approach

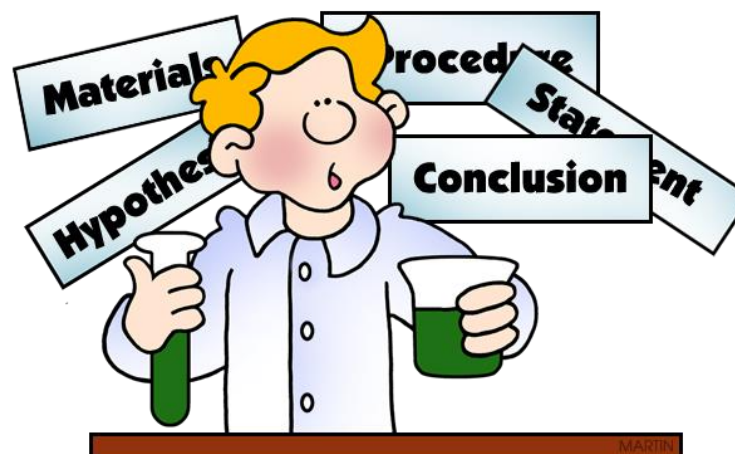
Children are encouraged to think carefully about what they would like to learn about in Science so that they can take responsibility for their own learning in order to make it meaningful to them. They develop their knowledge through practical work and the skills of observation, prediction, investigation, communication, questioning and hypothesising. Children at Fir Tree are encouraged to develop their skills of co-operation through working with others. Where possible, children are encouraged to explore Science in ways which are relevant and meaningful to them.

Children's knowledge and understanding is backed up through this practical emphasis as well as opportunities, where possible, to have real-life experiences of the phenomena that they are learning about.

Cross Curricular Learning

Fir Tree Junior School takes a cross-curricular approach to teaching and learning where children are taught their subjects through projects which link in a meaningful and purposeful context. Where parts of the curriculum do not fit easily into the projects that are being covered, Science is planned and taught discretely. The amount of Science taught per week may vary from class to class due to this cross-curricular approach, however, an average of two hours per week is taught.

Where possible, Science is linked closely with both maths and computing in order to enhance the learning. For example, children are taught how to use data loggers to record light, temperature or noise over a period of time. Computing is also used to create databases or graphs of results. Where it is not possible to experience a real investigation, for example, seeing the growth of a plant, children may use a computer simulation to show changes quickly.



Curriculum

Website

The Science area of the Fir Tree Junior School website (www.firtreejuniors.org) contains information and resources to help parents and guardians to keep up to date with what their child is learning in school. The following resources and information about how Science is taught at Fir Tree can be found on our website:

- Science Annual Overview
- Science Policy
- Science visits and events
- Science Club

There is also an area to find copies of the scientific vocabulary that your child will be learning at school. It would be beneficial for your child to have consistency between the Science language that they are learning at school and the language that is used to discuss it at home. If you have any questions about the website content or suggestions for items to include that would help your child's Science learning, please let us know!

Scientific Vocabulary

Children are encouraged to learn and use the correct scientific vocabulary for what they are learning about. This is taught explicitly near the beginning of a unit to give the children the correct words to use. The language of investigations is also explicitly taught and modelled so pupils use the correct terminology.

Included below are Fir Tree Junior School's Science vocabulary sheets. These show the scientific terminology that your child will be learning in their lessons throughout the year. They will also be included on your child's individual class page when the appropriate project is covered. It would benefit your child if the vocabulary used to talk about Science at home was consistent with the terminology used at school.

<https://www.fir-tree-juniors.org/Science-vocabulary/>

Storytelling Science

We have been working in a cross-curricular way to link our Science learning with our English learning. We have been putting our Science projects into context through learning Science stories. This has really helped us to bring our Science learning alive and to spark the children's imaginations within a meaningful context. Children have used the storytelling techniques of Imitation, Innovation and Invention to learn stories such as The Lighthouse Keeper's Son (electricity); Three Princes' Teeth (Animals including Humans) and Bird in the Forest (Plants).

Science at Home - Useful Links

Here is a list of useful links that can be used to help support your child with their Science learning:

- <http://www.bbc.co.uk/Science>
- <http://www.bbc.co.uk/bitesize/ks2/Science/>
- http://www.bbc.co.uk/bitesize/ks2/Science/living_things/
- <http://www.bbc.co.uk/bitesize/ks2/Science/materials/>
- http://www.bbc.co.uk/bitesize/ks2/Science/physical_processes/
- <http://www.primarygames.com/Science.php>
- <http://www.primaryhomeworkhelp.co.uk/revision/Science/>
- <http://www.primaryhomeworkhelp.co.uk/Science/index.html>
- <http://www.Sciencekids.co.nz/>
- <http://www.crickweb.co.uk/ks2Science.html>

Assessment at Fir Tree

Assessment helps the children engage more fully in their own development and learning. They are able to respond to the challenges if they can see what they need to do to make progress and why. Children are encouraged to take responsibility for their learning and together with the teacher's guidance and support they will know what they have done well and what they need to do to improve further. Teachers give children feedback and this is a combination of both verbal and written. They are also encouraged to self-assess against the success criteria that is built up as part of the lesson.

Science Assessment at Fir Tree

The curriculum is underpinned with ongoing assessment, which goes hand in hand with our learning and teaching. It is an essential prerequisite for effective teaching that meets the needs of our children and is embedded in the learning environment.

Targets in Science

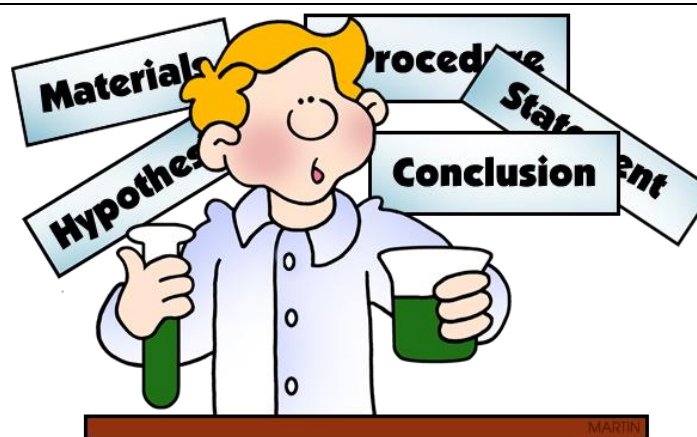
Teachers engage children in learning conversations. These may take place on a one to one; in pairs or in small groups as part of guided group work. These sessions help children to understand how well they are doing and what they need to do next in their learning.

To understand the criteria used for assessment and next steps in reading, writing, maths and Science, the children have targets in their books. They also have the opportunity to set their own targets. Assessment is a two way process and we strongly believe it can only be successful when the child is involved.

Cross Curricular Approach

Our cross-curricular approach to learning and teaching enables children to undertake their Science learning in a meaningful context. The knowledge-based objectives are taught through practical experiences, which develop the skills-based objectives.

We aim to build on children's enthusiasm and natural sense of wonder about the world whilst learning about the living and non-living environment with respect and sensitivity. Children are encouraged to be inquisitive and to question the world around them. Science is either taught discreetly or through a project and where relevant it is linked with both maths and computing in order to enhance the learning.



Assessment

Developing Children's Knowledge

Children develop their knowledge and skills of observation, prediction, investigation, communication, questioning and hypothesising through practical work and investigations where the correct use of scientific vocabulary is taught. They are encouraged to explore Science in ways which are relevant and meaningful to them. We recognise the significance of learning through real-life situations where children can experience the scientific phenomena that they are learning about.