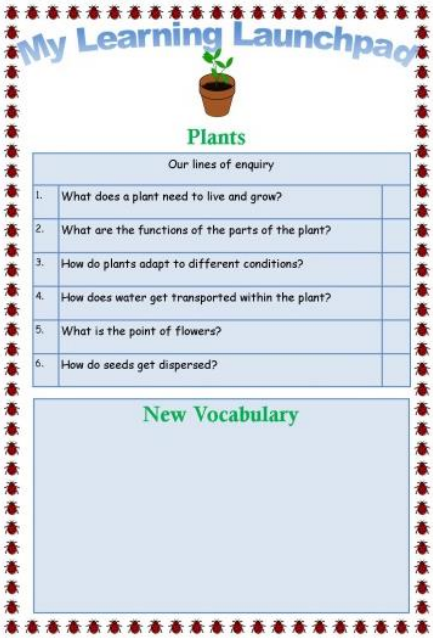
Science Teaching at Hermitage

Science is taught form Nursery to Year 6. In the Foundation Stage, Science is taught through practical activities and through encouraging pupils to investigate the world around them. In years 1-6 Science is taught each week for one hour, with a follow-up 30 minute session later in the week. The school's long term plan and Curriculum Maps provides further detail on which units are covered by each year group.

The majority of lessons (if not all) are enquiry based with pupils planning their own investigations and deciding for themselves how to best record their findings. The follow-up session allows for pupils to reflect on their learning during the practical session.

Teaching

All topics start with a Learning Launchpad. This covers the main objectives of the topic and allows for pupils to add in key vocabulary as they learn it. Objectives are phrased as 'lines of enquiry.'

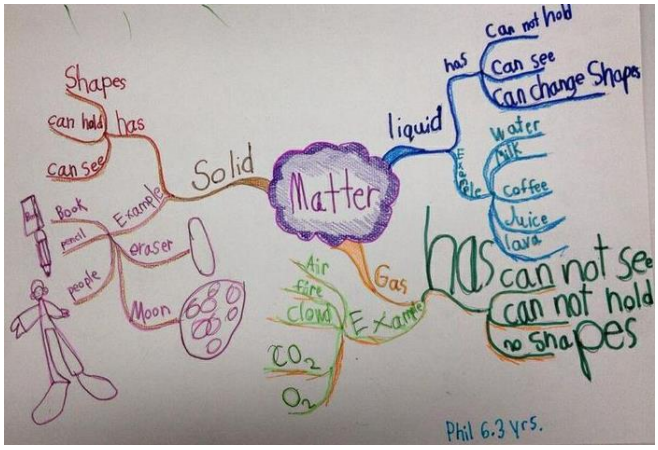

My Learning Launchpad

Plants

Our lines of enquiry	
1. What does a plant need to live and grow?	
2. What are the functions of the parts of the plant?	
3. How do plants adapt to different conditions?	
4. How does water get transported within the plant?	
5. What is the point of flowers?	
6. How do seeds get dispersed?	

New Vocabulary

Pupils start with an initial mind map that details what the children already know about the topic. This is important to ensure that the teacher recognises the pupils' prior learning and plans for new learning. At this stage pupils are encouraged to pose questions about what they would like to know.



After covering the mind map, the first lesson of a topic is a 'hook lesson.' This is as an opportunity to enthuse and engage the pupils with the topic, to make it as interesting as possible to the learners and hopefully inspire independent research.

Subsequent lessons investigate each line of enquiry (following the Learning Launchpad). This is done in the form of an investigation. The best lessons are pupil-driven with the children planning their own investigations and deciding how they should record their findings.

Working Scientifically

Working scientifically is the term given for scientific enquiry. This is a broad term and covers 5 main types of enquiry:

- **Observing over time** – children observe or measure changes over time
- **Noticing patterns** – children observe and record phenomena, carry out surveys or collect data from secondary sources and then identify relationships between data in their findings
- **Grouping and classifying** – children identify features or tests that help distinguish between different things
- **Fair testing** – children identify the effect of changing one variable on another whilst attempting to keep other variables constant
- **Research** – children use secondary sources of evidence

Pupils carry out a range of enquiries throughout the school year; also presenting and reflecting upon their results/findings. Ideally, pupils plan and lead the direction of investigations where possible, including the collecting and recording of results.

Working Books

Working Books are used to record learning during practical lessons. Younger pupils have one working book per class which develops into individual books as the pupils get older. This allows pupils to focus on investigations rather than recording.

Assessment

At the beginning of any unit, children's prior knowledge is assessed. During the topic, pupil's learning is continuously assessed the class progresses through the objectives. Class teachers report on progress to the leadership team half termly.