

Learning walk: Science November 2023

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Focus: The continuity of Vocabulary across the key stages.

Area: Science

Observations	Evaluation
<p>The children enjoyed the last STEM after school activity run by the Saffron Team.</p> <p>Year R</p> <p>Hygge outdoor learning is forming a key element of science investigations for Year R. In the classroom, the children have an investigation table. Currently they have a Gigantic Pumpkin (40kg) that has been cut open and the insides scooped out, the children have delighted in finding the seeds that could be used next year and thinking about how something so small can grow into something so big. There is a high percentage of outside work, especially Wonderlust Wednesdays, gathering and looking at natural resources.</p> <p>The children are now moving onto looking at Bones and have a skeleton in the class to look at how the bones in the body are linked together.</p> <p>KS1</p> <p>Seasonal Changes was the topic for the first half of the Autumn term. A trip to the school allotment to look closely at how things were changing helped them to think about language and how to describe Autumnal changes. The children could name the seasons and use vocabulary concerning: changes, temperature, length of days and rain, sleet, heat etc. They understood about Polar regions and this was a link across to their work in History and Scott's exploration. Focusing on cold climates, the children could talk in some detail about penguins and polar bears, they appeared fascinated by the fur being transparent and the flesh black! The children had looked at how plants are affected by the seasons and linked this to Harvest. They also had looked at how shadows lengthen depending on how high the sun is in the sky. They are currently embarking on a study of Everyday materials.</p>	<p>Teachers all use hands-on learning as a key feature of imparting scientific understanding.</p> <p>All the classes had some form of investigation materials that the children could use during free choice.</p> <p>Yr R: The scooped out Pumpkin. (Before that it had been a segmented apple, examining the peel, pips and flesh).</p> <p>KS1: Information and toy animals representing the wildlife that inhabit cold climates. The ceiling was decorated with a range of "weather" symbols, lightening, rainbows, rain, sunshine as the Seasonal Changes display was still enjoyed by the children as a Severe Weather warning was in place at the time of this learning walk.</p> <p>KS2 Within the Continuous Provision section there was the Pre-Teaching for the next half term. Children would all have time there to spend a quiet half an hour working through the investigations on their own or in pairs. Currently the desk had</p>

KS2

The first half term had been based on electricity and the children are frequently choosing to go onto the laptops to use ICT to help them build virtual circuits and investigate how a parallel circuit compares to a series circuit. The children were able to use the vocabulary for that topic with ease: circuit, "towards the positive" mains, battery, green energy, solar wind turbines, crocodile clips" Several children also made links with the vocabulary from the Music investigation using little keypads with crocodile clips.

The current topic is States of Matter.

In the science books each child has a topic vocabulary list, which is used as a reference throughout each topic and a quick recap of vocabulary is carried out at the start of each session.

information about the eye, with convex and concave lenses to look through and compare how writing looks different when a lens is used. There is also a range of optical illusion sheets to explore.

Assessments went from verbal in Year R, to Verbal and written in KS1 to Written in KS2, sometimes teachers using a quiz format. Vocabulary forms a key part of each assessment and teachers say that they really emphasise the learning of key words throughout each topic.

Work was evident in books, differentiation of worksheet, or adult support.

There is a clear link between the key stages supporting each other and demonstrating the spiral curriculum and making children aware of how they build knowledge on previous learning.

All teachers are keen to use **outside learning**. The allotment , or the Year R area, Forest Schools and Field trips.

Resources within the school to support scientific learning are of a good standard and allow for greater depth learning.

What are we doing for SEND pupils?

On several occasions it has been noted that certain children on the SEND register, including ones with an EHCP, have shown a real flair for science. All children, regardless of need, are encouraged to participate in science investigations, some require adult support, others require help in order to work as part of a small group. If a child requires support in order to be able to follow instructions, then Task Plans are used.

Overall Evaluation:

- All teachers are aware of the need to frequently use key vocabulary, the learning of which is aided within each classroom due to the hands-on "discovery areas" in each class. Adults are keen to teach science accurately and take time to allow children to carry out investigations. In all Key Stages the children have ample opportunity to have independent time to investigate resources which is then backed up by group work, class discussion and adult feed-back.
- Children are very keen to discuss findings and to talk about the work in their books.
- Children are learning how to set up fair tests and to record results.
- A recent Pupil Voice (November 2023) showed that the children can recall prior learning. For example, when the KS1s talked about weather the KS2s recalled the work they had undertaken when they were in Squirrels.
- Teachers are all aware of assessment of learning and use a range of formative and summative assessment dependent on age and the topic being taught,

- **Areas for development:**

To build on the use of the words Hypothesis, and Fair Test throughout the school. The children were keen to talk about topic words, and could give definitions, however the scientific basic words were less frequently used.

To increase the reliability and accuracy of recording results in KS1 and KS2 and being able to discuss and make children aware of anomalies in scientific research.