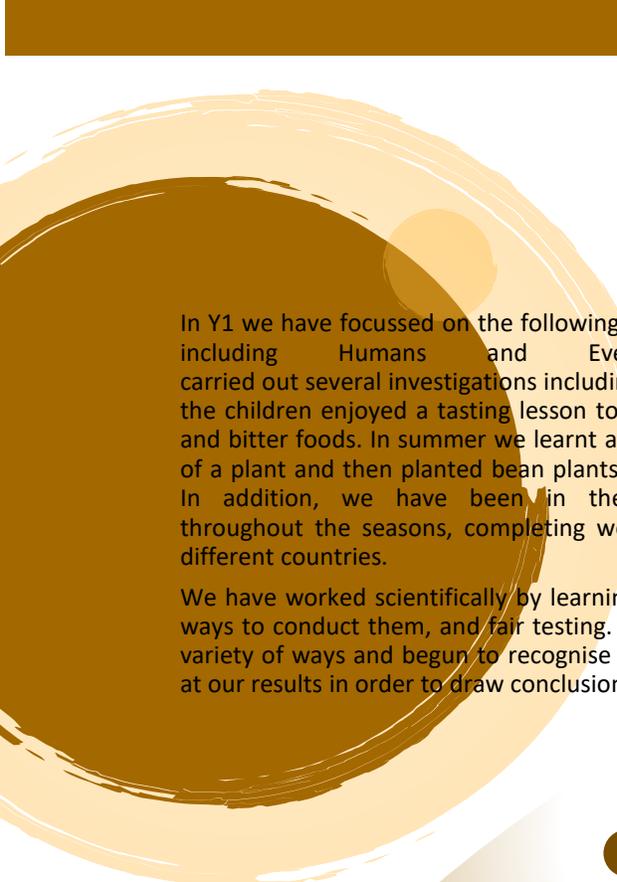


# 2021-22 Science Review

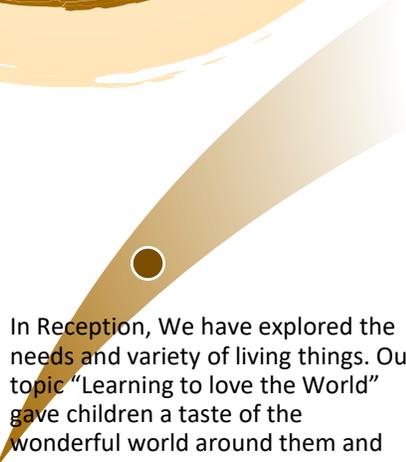
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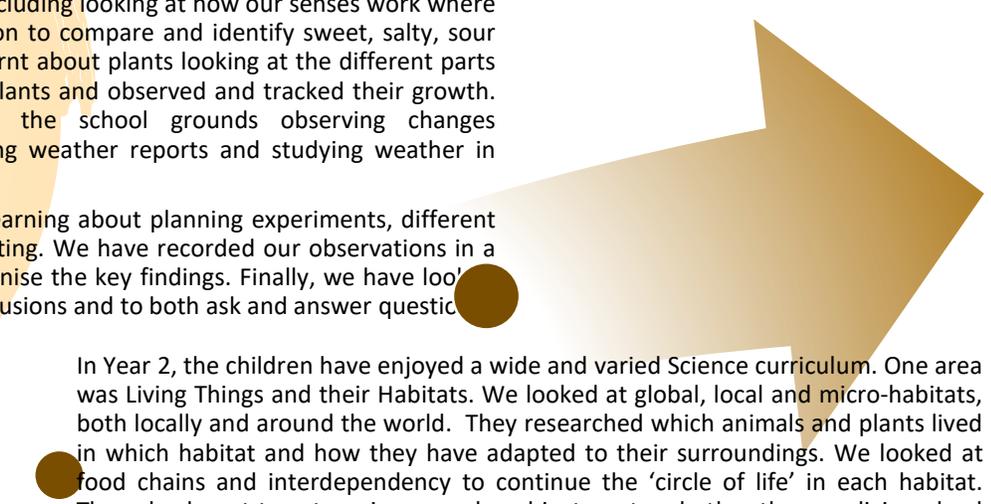


In Y1 we have focussed on the following units; Plants, Seasonal Change, Animals, including Humans and Everyday Materials. We have carried out several investigations including looking at how our senses work where the children enjoyed a tasting lesson to compare and identify sweet, salty, sour and bitter foods. In summer we learnt about plants looking at the different parts of a plant and then planted bean plants and observed and tracked their growth. In addition, we have been in the school grounds observing changes throughout the seasons, completing weather reports and studying weather in different countries.

We have worked scientifically by learning about planning experiments, different ways to conduct them, and fair testing. We have recorded our observations in a variety of ways and begun to recognise the key findings. Finally, we have looked at our results in order to draw conclusions and to both ask and answer questions.



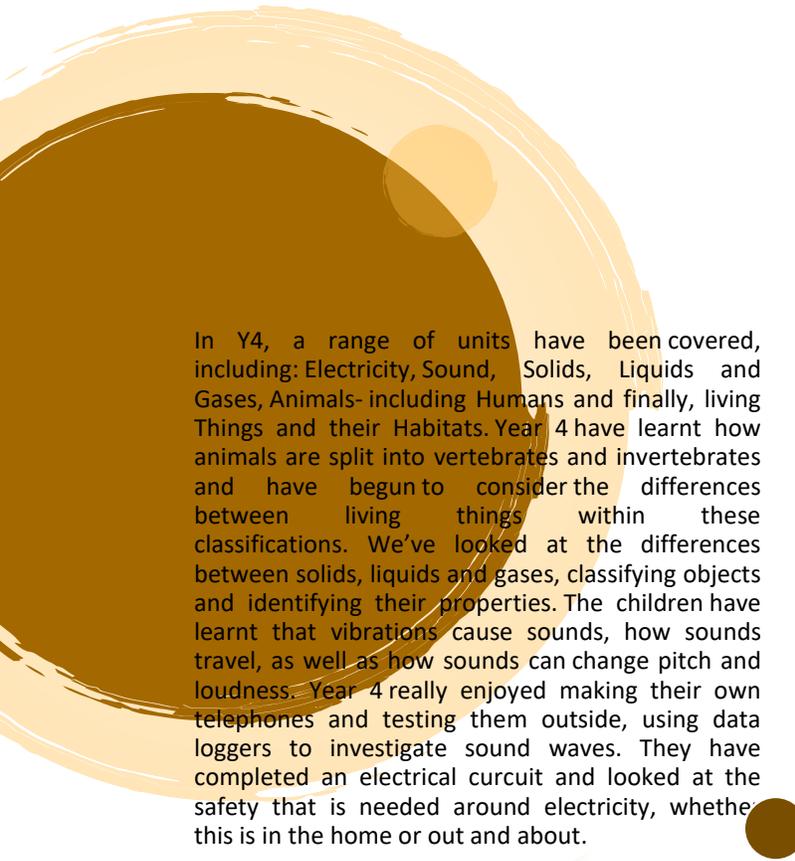
In Reception, We have explored the needs and variety of living things. Our topic "Learning to love the World" gave children a taste of the wonderful world around them and empowered them to create a wild flower garden and improve their local environment. We learn about the world in our continuous provision every day; through our investigations in our water tray, sand, curiosity corner, and in our cooking sessions. We learned about food chains, habitats and seasonal changes in the world around us. We particularly enjoyed our Virtual trips around Gedling Country Park where we hunted for habitats. We also talked about significant people in science such as Tim Peake, Maria Sibylla Merian and Katia Krafft.



In Year 2, the children have enjoyed a wide and varied Science curriculum. One area was Living Things and their Habitats. We looked at global, local and micro-habitats, both locally and around the world. They researched which animals and plants lived in which habitat and how they have adapted to their surroundings. We looked at food chains and interdependency to continue the 'circle of life' in each habitat. They also learnt to categorise everyday objects as to whether they are living, dead or have never been alive. Children looked at uses and properties of everyday materials and which materials were more suited to certain jobs depending on the properties they possess. Our unit on plants saw the children have great fun dissecting a flower to look at the parts in more detail and their role in the life of the plant. We also investigated how plants make food and the best conditions for helping a plant to grow. They recalled the life cycle of a plant and the ways the seeds disperse from the mother plant and start the process all over again. We also looked at the various parts of different plants that we eat. Animals including Humans is where we looked at which babies of the animal kingdom look like their parents and which do not. We described and understood the different stages of human life and discussed how to keep ourselves healthy (healthy eating, exercise and keeping clean) so that we can live to an older age.

The children have enjoyed experiments to see which materials would be the most waterproof and which most absorbent. This led their thinking of using materials for a specific purpose. They have considered the affects we are having on the world by the way we treat our environment. They also looked at the wider community of how our plastics affect habitats. We have also had lots of fun experimenting with different growing criteria for plants and now know the optimum growing conditions.





In Y4, a range of units have been covered, including: Electricity, Sound, Solids, Liquids and Gases, Animals- including Humans and finally, living Things and their Habitats. Year 4 have learnt how animals are split into vertebrates and invertebrates and have begun to consider the differences between living things within these classifications. We've looked at the differences between solids, liquids and gases, classifying objects and identifying their properties. The children have learnt that vibrations cause sounds, how sounds travel, as well as how sounds can change pitch and loudness. Year 4 really enjoyed making their own telephones and testing them outside, using data loggers to investigate sound waves. They have completed an electrical circuit and looked at the safety that is needed around electricity, whether this is in the home or out and about.

Year Four have been inquisitive and active in furthering their understanding in Science. They have posed and answered their own questions through observations, experiments, discussion and research. The children have also conducted fair tests and have applied their prior knowledge by making predictions, whilst also presenting and interpreting data.

In Year 3, we cover a range of units: Light and Shadows, Plants, Animals including Humans and Forces and Motion. In Light and Shadows, we had the chance to explore and make unusual shadow monsters! In our plants unit, we got chance to understand the life cycle, structure of a plant and how seeds are dispersed.

We have worked scientifically by asking relevant questions and used scientific enquiries to answer them. Collaboratively, the children have begun to set up simple practical enquiries, comparative and fair tests. We have made careful observations and taken accurate measurements to help present our data. Using results, we have drawn simple conclusions, made new predictions, suggested improvements and raised further questions.

All our units have been supported by our in house knowledge organisers. These are shared with the children as a pre learning tool and also a supporting tool throughout our lessons.

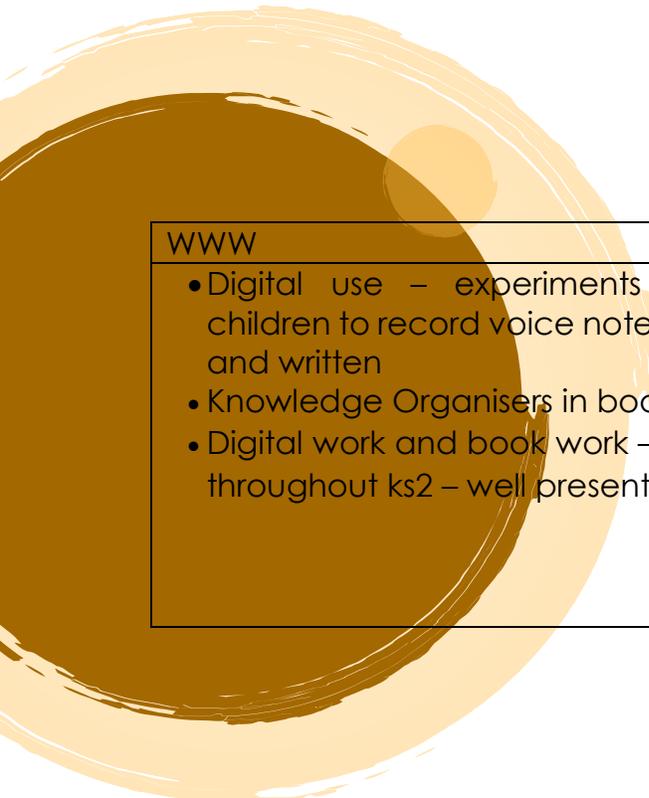
The main focus of science teaching in Year 6 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. We have done this by exploring and talking through children's ideas and giving the children opportunity to ask their own questions about scientific phenomena. This year in science, we have covered: Evolution and Inheritance, Animals including Humans, Living things and their habitats, Electricity and Light

Throughout our science lessons, there have been lots of opportunities for Working Scientifically. The children have taken control of their own investigations, thinking about the science behind the investigation and the reasons behind the results. In every investigation, the importance of prediction, reliable data and conclusions have been discussed.

In Y5, in the Autumn term, we learnt about materials and investigated the different properties and uses of materials. In the Spring term, we studied Living Things and their Habitat. Children looked at the differences in the life cycles of mammals, amphibians, insects and birds and made comparisons between the groups. We also learnt about the reproductive parts of a flower and the process of reproduction in plants, such as strawberries and potatoes. Our Summer unit was The Earth, Sun and Moon, focusing on the movement of these spherical bodies.

We have carried out various practical tasks in Y5. We planned experiments on seed dispersal, showing how we'd make the investigation accurate in our measuring. We planted vegetable seeds and made careful observations of their growth. We explored ways of filtering in the process of cleaning polluted water. In all our investigations, we focused on the scientific skills of fair testing.





WWW

- Digital use – experiments allowing children to record voice notes/photo's and written
- Knowledge Organisers in books.
- Digital work and book work – a variety throughout ks2 – well presented.

EBI

- Making sure the children understand how to use the knowledge organisers and use them as a go to tool.
  - Ensure that the scientist is covered and not just an add on, on the end of the unit.
  - Digital in KS1 – how to fit this in – using different apps.
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