

Science at The Meadows

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Introduction

**‘The scientist is not a person who gives the right answers;
he's the one who asks the right questions.’** (Claude Lévi-Strauss, ‘Le Cru et le Cuit’, 1964)

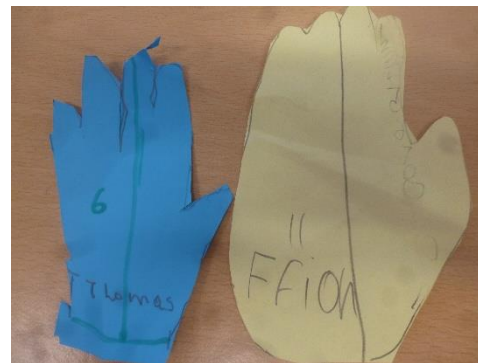


Investigating properties of materials



SOUND: Pan pipes

Scientific Enquiry: Pattern Seeking
Are all boys' hands bigger than girls' hands?



“I like science because you do it physically; test things, like testing magnets. I like having a clipboard and moving around, finding out new stuff.” Y4 pupil

“Science is fun. You learn about lots of different things.” Y4 pupil

“I like science because it's practical.” Y5 pupil

“I like investigating in a group; trying something new.” Y5 pupil

“Science is interesting. I enjoyed learning about Light/Dark using torches. I enjoyed exploring. It was ‘hands on’. My favourite part though, was designing and making a periscope.” Y6 boy

Intent: [Why we do what we do](#)



The Meadows Primary School

Vision for Science-Intent



To explore and discover the world around them. We know that young children are naturally curious and passionate about learning. A stimulating, hands-on science curriculum, which provides opportunities to question and explore, provides the children with 'light-bulb' moments and the joy of 'finding out'.

To challenge existing ideas and address misconceptions in real-life situations and give children the confidence to ask and answer questions. Through shared discussion, and practical tasks, children can secure and extend their scientific knowledge and vocabulary; to give them a deeper understanding of the world in which they live.

To promote and develop transferable skills such as: observation, enquiry, problem-solving, communication and teamwork and allow mathematical skills to be applied.



Why do we teach science?

To know more and REMEMBER more

To give them the power to change the world.

To provide and support challenging experiences to ensure our children are confident, life-long learners who will continue to explore the world around them as they grow.



How we teach science at The Meadows

- ❖ A range of science topics are taught in every year group. Scientific enquiry skills are embedded in each topic and these are revisited and developed throughout their time at The Meadows Primary School. Topics such as Plants or Materials, for example, are taught in Key Stage One and studied again in further detail throughout Key Stage Two. This model allows children to build upon their prior knowledge and provides progression in skills and knowledge.
- ❖ All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their science-based questions. Specialist vocabulary for topics is taught and built up, and effective questioning to communicate ideas is encouraged.
- ❖ Termly 'enrichment weeks' are full of new and exciting learning opportunities for the children; many are science related. Activities include experiences the children have asked to learn about.

Impact: How we will know if we have been successful

Each unit of work has between three and five key questions to ask the children to see what they have remembered/ know. These questions probe their scientific enquiry skills and the knowledge and helps determine whether the children have learned what they need to learn before moving on to future new learning.

When we have been successful in achieving our vision for science:

We will see	We will hear	We will have children who
❖ children who are excited and eager to learn; ❖ 'busy' children, engrossed in their learning tasks; ❖ children happily working collaboratively together; supporting each other's learning; ❖ pairs and groups of children engaged in deep and rich scientific discussions; ❖ children working independently of the teacher, using a range of equipment; ❖ children purposefully moving around different settings, inside and outside the class, demonstrating high levels of working energy; ❖ smiling, happy, engaged children; looking like they are enjoying science; ❖ children who are able think creatively in order to explore ideas to solve investigations; ❖ children teaching, coaching and mentoring their peers; ❖ children who have amazement on their faces when discovering something new and exciting. ❖ children using a range of strategies to demonstrate their learning such as writing, drawing and acting.	❖ the energy in a classroom; ❖ an excited 'buzz' in the atmosphere (productive) ❖ lots of good questions being asked by the children of themselves and each other; ❖ children justifying their answers and questioning their own and others' ideas; ❖ children using scientific vocabulary to explain to each other; ❖ children sharing good ideas, ❖ children bonding with each other and building effective relationships in the joint pursuit of achieving a challenge; ❖ children encouraging each other; offering praise and celebrating together; ❖ highly effective explanations and logical hypotheses being offered by children; ❖ children who are caught up in the moment, oblivious of others around them ❖ lots of new and previously learnt language being used accurately and effectively as children work. ❖ children's excited voices of celebration when experiencing 'eureka' moments ❖ children reflecting and talking about past experiences; making connections between past and present scientific learning; ❖ children talking about their own experiences in relation to new learning.	❖ are curious, enthusiastic learners; ❖ feel challenged, yet supported; ❖ feel mentally exhilarated; ❖ become intrinsically self-motivated; ❖ feel personally empowered ❖ gain a sense of wonder at the magical connections they discover; ❖ feel like all the pieces in a jigsaw are coming together and that science is finally beginning to make sense to them; ❖ are confident to have a go; ❖ feel prepared to take risks and make mistakes in order to learn from them; ❖ feel a great sense of personal achievement and self-satisfaction that they persevered and achieved; ❖ have a growing self-belief in their own ability; ❖ are disappointed at the end of the lesson that they have got to stop what they are doing; ❖ continue to learn outside of the lesson due to being scientifically stimulated ❖ use transferable skills such as communication and mathematical skills. ❖ possess the ability to think logically and creatively to find answers to key questions in order to deepen their scientific understanding.

How can you help your child at home?

Useful links:

<https://explorify.uk/> (get your child thinking like a scientist)

<https://wowscience.co.uk/> (science games and activities)

<https://climatekids.nasa.gov/>

Climate Kids provides up-to-date data and information about our planet.

<https://kids.nationalgeographic.com/>

National Geographic Kids presents their information in an accessible way to help your students boost their brains. You can use their resources to learn about many cool science projects and make cross-curricular connections with other subjects. They have a series of mind-blowing videos on topics such as why some animals have strange traits and the preparation work that astronauts must go under before going into space. They also have a glossary of relevant scientific terms for kids and many interactive games to encourage their scientific discovery.

<https://www.bbc.co.uk/bitesize/subjects/z2pfb9q>

KS2 Science revision site