

NPQML Case Study

The Impact of Enquiry based learning in Science to enhance progression.

Name: Robyn Anderson

School: Whalton Church of England Primary School

Our school is a small, rural Church of England school in Northumberland, which became a Primary School in 2017. Our school is also part of a Federation, between two partnerships. 13% of children are on the SEND support register, (with 4% in receipt of top up funding); 2% of our children are EAL and 8.5% free-school meals with 6% Pupil Premium children (post LAC). Our current number of pupils is 47 meaning all behaviour and attitudes to learning are exceptional, thus facilitating the children to be inspired by the initiative and therefore the staff. Our level of attendance is above national average at 97% and new figures have highlighted we are below the national average of overall absences at 2.45% vs 4.8%.

I wanted a triangulated view of measuring the children's learning. Teaching staff were therefore required to use formative assessment (to identify children's on-going strengths and target areas of weakness) as well as a range of summative assessments, linked to the National Curriculum Objectives. This allowed a bench-mark across each school, where we could begin to measure the impact qualitatively, showing deeper understanding in the children's reasoning and what they were retaining in their long-term memory. After meetings with Science Co-ordinators across the Partnership, Rising Stars assessment was introduced throughout school. The impact of this was that the teachers became more confident in what 'expected' and 'greater depth' looked like in Science, which enabled them to challenge children more effectively. As the Standards and Testing Agency (2018) stated, the Science Framework has been revised, meaning there is a great importance for the moderation of the 'I can' statements which allows for greater clarity on children's outcomes in Science. Based on feedback from teachers and other educational experts, transition has been supported from KS2 to KS3, so that the children can further develop their scientific understanding at High School, which this assessment method has enabled. Further impact of using this assessment model in Science was their use of scientific vocabulary. This was particularly noted at the Partnership Moderation Meeting which I hosted, which again demonstrated how working in partnership not only benefitted the children at our school, but the children across the Partnership. Feedback was very positive and encouraging for all, demonstrating leading with impact as well as working in partnership with others.

The impact the programme had on me as a leader was the opportunity to share my passion for the subject of Science. In being a passionate leader, I could bring energy and enthusiasm to the initiative. My team were confident that I was committed through my words and actions; I wanted my passion to be infectious which enabled me to consider solutions from multiple angles. I took control and delivered all the possible alternatives, allowing staff to choose which resources worked for each of their different classes, all working towards the same goal.

Due to this programme, I constantly reflected on my own performance with participants to ensure they felt more confident, not losing hope when something went wrong, but using it as strength in the future. I persevered and was very resilient and eager to learn in my new role; determination is what has enabled me to become a high-impact leader. This element made me proud of who I have become as a leader, as I continue to learn and develop with the new scenarios I face. Due to who I am as a colleague and person, I wanted every conversation to end with someone feeling heard and in a better place than before-even when delivering bad news. I continue to give words of faith and encouragement, keeping momentum and a positive outlook upon the initiative in order to produce the highest impact.

I attended a Partnership Science CPD course to collaboratively raise the attainment in Science, ensuring this was not a one-off event as part of my role. I took a pace setting and democratic approach using Twitter, to effectively communicate with all staff and to maintain this positive outlook. This facilitated my ability to build and sustain relationships and created team alignment as I shared pictures of our Science lessons and used enquiry based learning to answer questions. I then asked each member of my team if they could then plan a session for the following week which I could photograph and share on the feed.

Staff felt valued that I wanted to share their lessons online and it allowed for opportunities to reflect informally on the session, thinking about how to move forward next time. This was a key theme outlining how I ensured that everyone was on board and the impact of myself as a leader. I showed a genuine interest in those who I was supporting to ensure that they understood their goals, reflected on their strengths, and found ways to improve any areas of weaknesses, giving timely and constructive feedback.


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The buzz has continued throughout Years 5 and 6 in regards to their Astronomer visit, from Kielder Observatory. He brought us some fantastic equipment to use such as a spectra lamp, infrared camera, meteorites and much more! We look forward to further exploring our topic!




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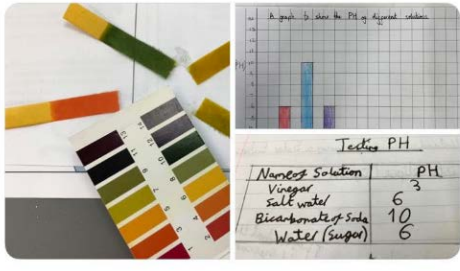
Class One received a letter today to take part in a space investigation- look at what they've produced! 🌍 🌑 🌒 🌓



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In Science, Class 3 have been testing the PH of different solutions. They recorded the data collected in a table, before presenting their findings as a graph 📊



Testing PH	
Names of Solution	PH
Vinegar	3
Salt water	6
Bicarbonate of Soda	10
Water (Sugar)	6

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In Yesterday's Science lesson, Year 4 were setting up their own investigations - ensuring they were a fair test- to see if air had weight. This was in order to contradict the misconception that 'air is nothing' 🤖

