



Reviewer's feedback

School: 15908 St Matthew's Catholic Primary School

Science Leader at school: Jenny Evans

PSQM Hub Leader: Tim Griffiths

Quality Mark submitted: **PSQM OUTREACH**

Reviewer: **Maria Dent**


Criteria	Indicator	Observations
SL1	There is a clear vision for the teaching and learning of science	Not only is there a clear vision for science, the principles underpin policy, and act as drivers for developing teaching and learning. They were developed by the whole school community, including parents and governors, bringing ownership. Your leadership skills recognised gaps in use of the principles in the classroom, and addressed these gently but firmly, building confidence and value to the vision. You must have been so encouraged by the feedback from the NQT that s/he became excited in the lesson observed. I am also very impressed that principles and policies were amended in accordance with COVID-19 restrictions, these then underpinned home learning to meet the needs of children during lockdown. Outstanding.
SL2	There is a shared understanding of the importance and value of science	You have really raised the profile of science in school and the wider community through your commitment and personalised support. You introduced a range of strategies to support staff and parents, including from the Ogden Trust and Explorify; it was wonderful to read feedback from parents, and it made me smile to think of the parent looking at the geo egg challenge every day. I am impressed that your insight and commitment enabled ICT equipment to be bought via Myclubmoor – this really gives a strong message of the value of science. Continuing to develop science online is an appropriate next step; you may want to consider presenting this at an ASE conference, and/or writing an article for Primary Science, now that you have attended the workshop.
SL3	There are appropriate and active goals for developing science	You have a number of active goals for developing science, all closely matched to your school's needs, and all evidence-based from your rigorous monitoring procedures. For example, in-depth analysis was inconsistent so you developed strategies to address this, which have also been shared with leaders across the city; impressive, inspirational work. You have also created knowledge organisers, which again have not only

		impacted on your own school, but on another primary school, and will be shared with School Direct student teachers. Although Covid-19 has limited your opportunity to evaluate, I am confident of their effectiveness. It is a shame that you will only be able to have one science week, rather than three – I wonder if you could create a ‘festival of science’ in much the same way that PSQM did during lockdown; it could open access to science and scientists across the world (imagine a scientist from CERN talking to your children!).
SL4	There is a commitment to the professional development of subject leadership in science	Your commitment to your own professional development is exemplary – it is evidence-based, responding to need, and from your passion for science, wanting to keep up to date with research. Your school is also committed to your professional development, giving you time to observe practice in Reception. This enabled you to develop your understanding and thereby inform how science is taught in EYFS. As lockdown postponed the observations and monitoring planned, you used your resourcefulness and used the online resource from PSTT. As you are interested in research, have a look at the ASE’s Journal of Emergent Science, now edited by Dr Sarah Earle (you may already do this). I suggest this as you may wish to get involved in some of the research work it publishes.
SL5	There are monitoring processes to inform the development of science teaching and learning	You clearly rigorously monitor science. A wide range of evidence is being gathered, scrutinised and evaluated to form a clear view of teaching and learning in science and inform actions. For example, as a result of lesson observations, you worked with staff on the roles children play in science enquiry activities. I particularly like your coaching and mentoring approach to working with staff and external colleagues; this ‘touching base’ has built confidence as staff feel listened to. These informal chats have also built your confidence in dealing with more difficult staff members, as well as allowing changes to be made in a timely, responsive manner.
T1	There is engagement with professional development to improve science teaching and learning	You have been proactive in leading CPD for your staff and external colleagues during this PSQM journey. This is built upon your rigorous monitoring strategies, driven by your passion for quality science teaching. This has had an impact as evidenced by your timely response to developing staff subject knowledge as they moved with their year group; your ‘Reach Out online’ staff meetings built confidence and reduced anxiety. Your mentoring of NQTs to support how they elicit and address misconceptions is exemplary, focussing on their own subject knowledge. I am confident that the intended impact will come to fruition. Are you aware of the work and research of Michael Allen on misconceptions in primary science? This may support your mentoring.
T2	There is a range of effective strategies for teaching and learning science which challenge and support the learning needs of all children	You have a wide range of strategies in place to ensure science is taught effectively, with the intention of supporting and challenging all children, e.g. SEND children can work alongside family members, and more able through an extracurricular STEM Ambassador club; assessment data confirms effectiveness. From this exemplary practice (and more as highlighted in your starting points section) we jump to this phenomenal achievement with the development of Windsor Green. Not only will this impact on the big picture of science, but on community engagement and cohesion raising the profile of science, and an improvement of mental and physical health. Outstanding. You may like to consider how you

		might support truly gifted scientists (as opposed to the more able) – Keith Taber is a good starting point.
T3	There is range of up-to-date, quality resources for teaching and learning science which are used regularly and safely	Resourcing of science is exemplary: they are audited, well -organised and accessible, and your strategic approach has impacted on how working scientifically is taught at Townfield. Health and safety practices are embedded via CLEAPPS; have you considered using the ASE’s ‘Be safe’ book? – there is an INSET book available to support CPD. The star of this criterion is the creation of ‘Science Ambassadors’ responsible for auditing and organising resources. Whilst this in itself is good practice, your approach will empower the children, add value to science, and build their science capital. You may like to include transition work for these ambassadors, making links especially between Y6 and Y7.
L1	There is a shared understanding of the purpose and process of science enquiry	Children are using the full range of enquiry types, and they ask and answer their own questions about what matters to them; there is most definitely a shared understanding by staff and children. You highlighted a gap in EYFS and this has been addressed as discussed previously; in addition, as a result of your strategic monitoring approach, you noted that facilitating time for an EYFS practitioner to observe Y1 and 2 teachers impacted on understanding of how to plan and deliver a fair test and research lesson. You also shared ‘Curiosity in the Early Years’ online CPD with the EYFS team, and you are building a portfolio together. You might like to look at ‘The Curiosity Approach’ for early childhood: an increasing number of nurseries have adopted this approach and you may like to work with your local nurseries to enable smooth transition.
L2	There is a shared understanding of the purposes of science assessment and current best practice	It is clear from this submission how well supported teachers in the school are in terms of strategies to judge progress and the positive impact this has had. You work closely with NQTs and RQTs, focussing on misconceptions. The knowledge organisers support assessment effectively, and you have begun to address assessment of children with higher prior attainment. You intend introducing the TAPS assessment tool, and I am sure that your staff will find the focussed assessment tasks supportive; they are also useful for mapping progression across the school.
L3	There is a commitment to developing all children’s science capital	Children are clearly developing their science capital, as are your staff through the CPD and activities facilitated. You are aware of issues of attitudes towards science and that these can be addressed; I assume that you have engaged with Prof. Louise Archer’s SPIRES project, and the impact of gender, ethnicity and family perceptions and background on the uptake of science. I am pleased to see that you will be capitalising on the Coronavirus pandemic, by inviting your family scientists to support industry week. You haven’t mentioned your own background as a Biomedical Scientist, and how you use this. You might also like to audit your school families to find out who works or has experience of a science-related job – they may be willing to come into school, or through online opportunities, to talk about their science jobs. You have not referred to ‘The Science Capital Teaching Approach’ in your documentation – is this something that you looked at? It would support you in considering how you could further embed the ‘dimensions’ and ‘foundation and pillars’ of science capital into science planning.

WO1	There are appropriate links between science and other learning	It is clear that there are appropriate links between science and other learning. Your strategic approach to monitoring highlighted that vocabulary is an area requiring development, and this drives the links made between other areas of the curriculum. You have referred to links with English, maths, ICT, RE, PE and PSHE in your starting points: do you make links with the other subjects in the wider curriculum, e.g. sound and music. Your vision for making links extends beyond the curriculum, and I am impressed with your focus on developing games to promote oracy. Have you considered the use of games more generally? At the ASE conference I attended a session by Dr Ran Peleg on escape room scenarios to enrich science (he is currently only working with secondary schools, so there is a gap for a primary practitioner).
WO2	There are appropriate links with families, other schools, communities and outside organisations to enrich science learning	This is an area of real strength, and you have highlighted the impact (and intended impact) which your links to your wider community have had/will have. As before, it is evidence-based with needs being highlighted by your rigorous monitoring. I was particularly interested that having focussed on girls engagement and attainment, you now see a gap between boys attainment, and you immediately put together a plan to address this; I am sure that post lockdown your intended impact will become a reality. Having said that, you haven't waited for lockdown to end: all of the other community links made during lockdown were designed to enthuse and promote learning for all children, and their parents. Your links have genuine facets of wanting to support and indeed serve your community; it is not simply about what school can get from them. Exemplary.
O1	There is a commitment to leading professional development and learning in science in other schools	It is clear that you are committed to leading professional development and learning in science in other schools, and this started prior to this part of your PSQM journey. Invitations have come to you, evidencing the reputation you have in your wider educational community. It is unfortunate that Covid-19 has impacted on monitoring outcomes, but even with these limitations staff in your outreach school are "extremely positive" with a "newly-found confidence"; it is clear that the strategies and relationships in place will impact on children's aspirations and achievement; the long term goal of everything you do.
O2	There is a commitment to working with other community groups and organisations to develop their science teaching and learning	It is almost an understatement to say that you are committed to working with other community groups. Yes, everything that you are doing is about developing science teaching and learning, and extending this into the community, but just as importantly it seems, your evidence paints a picture of serving and caring for your community. Much research shows that it is attitudes to science that limit aspirations, and here you have the potential impact of changing the perceptions of science in your community, building the community's cultural and science capital, thereby building that of your children. The development of St Matthew's Windsor Garden Wildlife Meadow will have been a costly undertaking for you, and I don't mean just financially; funding bids, planning applications, a multitude of planning meetings 15908 St Matthew's Catholic Primary School, all on top of your 'day job'.
	There is a commitment to sharing expertise in	You are clearly committed to sharing your expertise, as evidenced by your work with Liverpool John Moore University and Hope University. This impacts directly on whole cohorts of trainee teachers. Your work, again, is evidence-based looking to directly meet the trainees needs, in

03	science teaching and learning beyond the immediate community	<p>order to impact on children's achievement. It is high praise indeed to be asked to be a critical friend. You have begun your writing journey and I hope that the workshop on writing for the ASE was supportive. Have you considered writing, e.g., for your local Wildlife Trust, or the local authority's 'magazines' sent into home?</p> <p>Joining your regional ASE committee would also open up opportunities to extend your outreach. In addition, as you involve STEM Ambassadors in school, have you considered being involved in training them to work in schools? Just a few thoughts that may or may not be helpful.</p>
Final Questions		<p>Your 'final questions' highlights what an amazing science journey you, your school and your wider community have been on. Everyone is engaged and aware of the value of science and its importance in the world. You should feel very proud of your achievements: children have self-belief as scientists and are involved in conservation; colleagues are more confident, knowledgeable and reflective; and the community has the gift of St. Matthew's Windsor Wildflower Meadow. I can appreciate that your journey has been extremely difficult, but I am so pleased that it has been rewarding for you as well. I am in awe of you - very well done.</p>

Overall comment	<p>Jenny, what a pleasure to be able to share your PSQM journey.</p> <p>Overall, your application paints a picture of a school that is determined to bring science centre stage locally and more widely into the community, and you have achieved this despite the upheaval of lockdown. The foundations of outreach cannot be started during the PSQM journey, they are built over many years of building relationships. These relationships are only possible if the person is credible, knowledgeable, passionate and personable, with a range of leadership skills at their fingertips. This is the impression that I get of you. Whilst everything you do impacts on the engagement, attitudes and achievement of your children, this is not the whole picture. You genuinely want the best for your colleagues, your community and the wider community of schools and trainee teachers.</p> <p>As an aside, I haven't seen mention of whether you are a Chartered Science Teacher, if not you have more than enough evidence to support your application. You may also consider undertaking an EdD or PhD as I firmly believe that this will also have an impact on the aspirations of your children, families, colleagues and your wider community; it is also increasingly the only way to work in Higher Education, if this an aspiration.</p> <p>Congratulations and thank you.</p>
This submission meets the criteria for PSQM Outreach	<p> 26.03.2021</p>

Congratulations to everyone at St Matthew's Catholic Primary School and in particular to Jenny on the achievement of the Primary Science Quality Mark Outreach. It is wonderful to see how you have continued to develop science across the school and beyond, despite the challenges of the past year.



Helen Sizer

Deputy Director: Primary Science Quality Mark