Review feedback (R22 Autumn)

School: 158130322 St Michael at Bowes C of E Junior School

Science Leader at school: Greg Hunt
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PSQM Hub Leader: Naomi Hiscock

Quality Mark submitted: **PSQM**

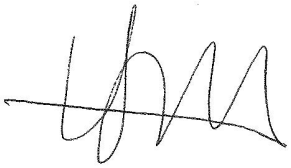
Reviewer: Tracy Tyrrell

Strand	Aim and PSQM Criteria	Observations
SCIENCE LEADERSHIP AIM: Science subject leadership has been strengthened and developed. Science is valued and improved through the development of effective processes for subject leadership.		
SLa	There is a clear vision for science, created and implemented by teachers and children, through principles for teaching and learning.	A clear vision and set of principles have been developed by both staff and pupils, with the 'three C's' truly leading the way in raising the profile of science and engaging children. Focusing on the attitudes and skills of scientists, and celebrating great examples of these in the 'scientist of the month' awards has enabled more children to see themselves as scientists. There are plans to increase visibility of the vision outside the school grounds. To ensure the principles and vision remain at the forefront in lessons, it would be useful to repeat the monitoring - are they being fully implemented or do areas, e.g., science vocabulary, need development/support?
SLb	Strategic support for subject leadership is provided and includes: Focussed CPD for subject leader Regular release time Resources to facilitate development in science.	It is good to see the new science subject leader has been supported by an extended hand-over period with the previous lead, consultations with SLT and regular release time. Evidence in the SDL shows that release time has been used for subject leader CPD, monitoring and support for teaching colleagues. Planning clinics have been especially useful to teachers, ensuring clear expectations, increased confidence in subject knowledge and pedagogy and the production of teaching resources. And the SL's training with CLEAPSS/Science Ninjas will benefit the school's working scientifically provision. This training is ongoing and will continue next year.
SLc	There is a monitoring cycle, including pupil voice, that informs actions taken and the development of science.	The submission shows a wide range of evidence has been gathered and evaluated to form a clear view of teaching and learning in science. As a result, the subject lead has been able to use staff meetings to develop focus areas such as recording and formative assessment, and also provide personalised planning support for some year groups. Now the SL is familiar with the science teaching and learning provision in general, it is good to see monitoring will concentrate on one key area – assessment - next year. It would be worth looking at 'Being Focussed' by Dr Lynne Bianchi – it includes very useful tools to develop monitoring further.

TEACHING AIM: Science teaching has been strengthened and developed. Subject leadership responds to development needs in science teaching.		
Ta	There is provision and signposting of relevant internal or external professional development and support with which staff engage.	An initial appraisal of teaching was used to good effect, identifying a range of CPD needs. Core documents show the SL has subsequently provided support in key areas for development in the form of staff meetings, 1-1 support and recommendations of resources such as Explorify. The introduction of the 'A good science lesson includes…' checklist has scaffolded planning and will be useful for new staff arriving at the school. As a result of these actions, teacher confidence and expertise has improved. Planned next steps aim to continue staff development based on the most recent monitoring in the new academic year. It is good to see some of these plans include training TAs too.
Tb	Teachers are supported to use a range of effective strategies for teaching science which challenge and support the learning needs of all children.	There is evidence that a range of teaching strategies are used to support the needs of all learners, such as real-world links, hands on experiences, problem solving activities, higher order thinking tasks, role play and oral rehearsal. Recording is scaffolded for pupils with SEND to ensure they are able to evidence their knowledge and understanding. Future CPD on science pedagogy is planned which will focus on strategies to deepen challenge for pupils. There should also be some form of monitoring of newly introduced strategies so the impact on children's learning can be evaluated.
Tc	Resources are audited annually, well-organised and accessible, so that children can regularly and safely use appropriate practical and digital resources, information texts and the outdoor environment.	The SL has put in place an effective approach to managing the school's newly reorganised science resources by recruiting a group of children to be responsible for resource auditing and maintenance. Now staff have easier access, it would be useful to introduce a resource sign in/out sheet to ensure they are being used to their full potential. The portfolio shows evidence of good use of technology to gather and record quantifiable results. More frequent science work outdoors has meant the children have a better understanding of their local environment and how to care for it. They are now redeveloping areas of the school grounds in an eco-friendly way.
LEARNING AIM: Science learning has been strengthened and developed. Subject leadership develops teachers' practice.		
La	Children are taught to use different enquiry types to answer scientific questions about the world around them, through the use of scientific enquiry skills.	It is great to read of the monitoring and teaching of skills and not just enquiry types. The ongoing work with CLEAPSS and the Science Ninja means both teachers and children have a growing confidence in their knowledge and understanding of a wide range of scientific enquiry skills and how these can be used to answer investigation questions. The portfolio shows a wide range of evidence of a skills focus in science lessons across the school, and lots of different enquiry types being used to answer questions. This will be monitored over the next academic year to ensure coverage, progression and consistency and identify support needs.
Lb	A range of strategies and processes for formative, summative and statutory assessment are used, which reflect a shared understanding of the purposes of assessment in science and current best practice.	Well done for recognising the common pitfalls of primary science assessment in the justification: a heavy focus on summative assessment and assessing children according to their English/maths ability. On the basis of this, the school has introduced a range of formative assessment strategies. These have been used to form a better understanding of children's overall knowledge and understanding of a topic; to identify preconceptions in order to address them; and to assess learning in order to inform teaching and planning. For further formative assessment ideas, see the TAPs Pyramid and PLAN Assessment 'Examples of Work'.

Lc	Initiatives that encourage all children to think that science is relevant and important to their lives, now and in the future, are supported and promoted.	It is good to see children being exposed to a range of scientists and science-based careers through visits, assemblies and texts. It would be interesting to see how many children now think that they could be a scientist. It would have been useful to read more about lesson adaptations in the reflection/core documents – how staff were trained/supported, how confident staff feel in their understanding of the approach and changes in children's engagement – as it is very much about inclusion and opportunities for all children regardless of gender or background within normal, everyday science lessons. Explorify's 'Have You Ever...?' is a great way to make sure every child can contribute and 'be the expert' in lessons.
WIDER OPPORTUNITES AIM: Science has been enriched. Children's experiences of science are enriched.		
WOa	Curriculum planning links science to other areas of learning.	As a result of the school's PSQM journey, links between maths and English have been strengthened, and links between other subjects, art, P.E., and DT, have been forged. The portfolio shows a range of evidence of cross-curricular work across the school and children's quotes show that this work has helped deepen their science knowledge and skills and apply these in new contexts. There are plans to further build upon these links over the next academic year. It will be useful for the maths and science SLs to ensure timings and expectations in both subjects align, e.g. when are children expected to be able to draw a line graph or find the average?, as recommended by the recent Ofsted Science Subject Report – Finding the Optimum.
WOb	There is participation in some external initiatives, topical science events and family learning.	The SL has created a broad calendar of events which includes family activities, a science club, visitors, visits and participation in events such as British Science Week. Family learning seems to have really benefited from PSQM actions, with parents being invited in for celebrations and sharing science home learning tasks and competitions. Talking about science at home helps to improve children's science capital. And it is good to read parents were asked for feedback on the home learning tasks being sent home and this was acted upon. There are post-PSQM actions in place to extend opportunities for parental involvement. It would be good to see plans to take advantage of links with neighbouring secondary schools too – as suggested in the justification.

Final Questions – comment	You have approached the PSQM journey in a very sensible way - building on prior knowledge and understanding in small steps that were realistic, manageable and targeted. Although the steps were small, the impact has been great – the profile of science raised, teacher knowledge and confidence improved and children experiencing higher quality teaching and learning experiences. Well done.
Additional Points	It was sometimes difficult to confidently assess there was enough evidence to support the reflections as entries were missing from the SDL (e.g., there was only one entry recorded for 'Scientist of the Month', two for the Crest Science Club and one visit to the community garden, as well as a missing staff meeting on cross curricular work.)

Overall comment	Thank you for the submission. I have really enjoyed reading through the documents and seeing how different elements have been developed. It is clear that this has been a very successful year for the staff and children at St. Michael at Bowes C of E Junior School. I hope you felt a great sense of achievement when reflecting and putting together all the evidence showing what has been accomplished throughout the PSQM journey. I am delighted to confirm that this submission meets the criteria for PSQM. I have every confidence that the science provision at St. Michael at Bowes C of E Junior School will continue to go from strength-to strength, and I look forward to seeing the re-accreditation for PSQM Gilt in a few years time!
	Reviewer's signature 

Congratulations to you all on achieving the Primary Science Quality Mark.
We wish you every success as you continue to develop science in your school.