



## Reviewer's feedback

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School: **14425 Bruche Primary School**

Science Leader at school: **Gemma Callaghan and Alysha Wilkinson**

PSQM Hub Leader: **Neil Phillipson**

Quality Mark submitted: **PSQM**

Reviewer: **Naomi Hiscock and Tara Lievesley**



Criteria	Indicator	Observations
SL1	There is a clear vision for the teaching and learning of science	Prior to starting your PSQM, science had not been effectively led so there had been no focus on development. Creating your principles was your first step towards defining as a school what you wanted the science teaching and learning to be like. This has given the structure for appropriate planning and monitoring. Don't forget to review these at the start of the next academic year (whenever that is). You may wish to talk to the pupils about the impact of the principles and see if they have suggestions for developing them further.
SL2	There is a shared understanding of the importance and value of science	It is great that your pupils now get two hours of science teaching each week. Changing the timetable for science I am sure has made a big difference on the quality of learning for your pupils. It also means that science is now always visible in your school, not just during one term. The displays, science reading books, newsletters, big books have all increased the profile of science with pupils and parents.
SL3	There are appropriate and active goals for developing science	Your SLT are now giving more support to the development of science, through monitoring science themselves alongside the other core subjects, giving you time to monitor and more importantly time to feedback to the staff. I hope that in the future you may be able to have one or two science specific targets on the school development plan.
SL4	There is a commitment to the professional development of subject leadership in science	You have embraced CPD, attending two subject leader networks, carrying out your own reading and online training and seeking out additional support from your SIP. This has given you the knowledge and confidence required to support teachers to implement changes. I hope that you are able to continue attending the subject leader meetings in the future.

SL5	There are monitoring processes to inform the development of science teaching and learning	<p>The subject is much better monitored now as it is being carried out consistently by one or two people who have a more in-depth knowledge of the subject. You have been able to follow up on development points. You have also begun to use pupil voice to inform your opinions of science. This is important as the children are often very insightful and honest. I would have liked to see more specific evidence of the impact of the monitoring on the teaching and learning, some examples of how teachers have adapted their practice in light of this would have been useful monitoring in the portfolio.</p> <p>This links with the criterion below on CPD, but how you adapted the action plans in light of what you saw, perhaps as an example in the reflection, or an example of a next step you set, would have helped give us a flavour of the impact you were having and the direction your journey in developing science was taking.</p>
T1	There is engagement with professional development to improve science teaching and learning	<p>Staff have been provided with a good range of CPD through whole school training, support with planning and the individual use of Reach Out CPD. It is really positive that the school has invested in this time and funding for science and also spread it over more than one year. I hope when life goes back to normal you are able to continue with this plan. Whilst there has been good investment in CPD I would have liked to see more evidence of the impact of the CPD on teacher's planning.</p> <p>I noted in the reflection for T2 that concept cartoons have been well received by the children (Pupil voice) and also the staff. Also that using Explorify has been incorporated into lessons and that it is impacting on the ability of children to articulate. It would have been helpful perhaps to see some of this in action in the Portfolio as evidence.</p>
T2	There is a range of effective strategies for teaching and learning science which challenge and support the learning needs of all children	<p>During the year you have introduced the staff to some useful strategies and resources – Explorify, concept cartoons, PLAN - which they have embraced. The knowledge organisers have worked well to support children to better retain knowledge. It is less clear that outdoor learning has been embedded. I think this is an area that you perhaps need to continue to develop particularly as it is one of your principles. I would suggest that years 1 – 4 should be going out regularly, at least once a half term, to support them with the national curriculum statements about plants, living things in their habitats and seasonal change. There is no evidence in the submission to show how pupils are challenged and supported in science. I think it is important that you reflect on this aspect as a next step.</p> <p>Whilst there is no direct evidence of challenge or support, this may be a next step now you have a wider range of effective teaching strategies on how you support those children who have issues, for example with the 'stickiness' of science vocab. I would have liked some indication of what these activities are as this sounds like a good move to embed learning.</p>

T3	There is range of up-to-date, quality resources for teaching and learning science which are used regularly and safely	The resources have been tidied and are now more accessible to teachers. The resources purchased for use by children outside during lunchtimes have been a success, well done. It is not clear what other resources have been purchased to support the teaching and learning of science and the impact these have had and from the evidence in the portfolio it is difficult to see the impact of the use of ICT. I would advise you to direct staff to the CLEAPSS website rather than printing documents. This will ensure that they have the most up to date version.
L1	There is a shared understanding of the purpose and process of science enquiry	<p>Teachers are aware of the types of enquiry and the evidence in the portfolio shows that these are now taking place across the school. I would have liked to see more evidence to show the impact of teaching the working scientifically skills. Are teachers planning consistently to teach the workings scientifically skills? You may find it useful to share the TAPS focussed assessment tasks or also to look at the PLAN working scientifically grids. Now that you have the enquiry types embedded you can move on to thinking about the working scientifically skills.</p> <p><i>It is interesting that in your Principles you say that you will see all your good science in whole investigations... be careful not to cram too much into learning. Your approach to focus on conclusions only to aid the articulation you had already benefited on from Explorify is a good way to help develop this skill. Perhaps using science data in maths lessons for analysis or (you mention non-chron reports) using science as the focus in English may help with the cross curricular links, if you are not already doing this (rather than bringing other subject into science, take science to them).</i></p>
L2	There is a shared understanding of the purposes of science assessment and current best practice	<p>You have developed teachers' confidence in science assessment by introducing them to the PLAN resources which have given them a clearer understanding of what meeting the objectives will look like. The resources have also given teachers a heads up on the likely misconceptions, enabling them to pre-empt these. I would like to have seen how your formative assessment feeds into your summative assessment. Does your tracking system give you and the next teachers the necessary information? Is it now accurate across the school? Have you been able to carry out monitoring to ensure this?</p> <p><i>It interesting you have TAPS mentioned in your portfolio but not in the reflection? You have made some really positive starts here, with the introduction of ASE PLAN and it appears that your staff are more confident in assessment. The benefit is also noted with misconceptions being addressed. How do you address assessment for WS?</i></p>
L3	There is a commitment to developing all children's science capital	Teachers are now familiar with science capital and how to plan activities to develop this. You have encouraged teachers to consider how to link the science teaching to the local area and have introduced the use of Picture News to develop discussion around current issues. Perhaps you could next work on how teachers put their science lessons into a context relevant to

		the pupils so that they see science linked to their everyday lives.
<b>WO1</b>	There are appropriate links between science and other learning	Now that science is taught on a weekly basis it is possible to make links to other subjects. There have been some successful projects that have engaged the children in cross curricular projects. Do take time to reflect on the impact of this change of approach. Has science writing improved as a result of being recorded in English books? Are children applying their science knowledge in broader contexts?
<b>WO2</b>	There are appropriate links with families, other schools, communities and outside organisations to enrich science learning	Children are now engaging in science with their families at home through the introduction of science home activities. The parents are also kept informed about science learning through assemblies and the sharing of the Big Book. The children are engaging in current new stories of issues through the use of Picture News and the work with Chester Zoo. I hope you are able to make further links with organisations in the local area.
<b>Final Questions</b>		The timetabling of science into one term and the devolved leadership in the past has meant that science had not really developed much prior to starting the PSQM. The adaptation of the model in September has allowed you to implement new strategies across the school. There is now a more sequential approach to teaching science which means that children are retaining their knowledge more.

<b>Overall comment</b>	<p><b>There has been a big change in the approach to science. As a result, science is now taught weekly and is managed by a subject leader. This has enabled science to be developed through CPD and monitoring. Enquiry work is now happening more consistently across the school, teachers are more aware of the progression of knowledge and children are better retaining what they learn. Well done on everything you have achieved this year.</b></p> <p><b>Whilst you tell us much of what you have done (which is a lot in a short time) your reflections sometimes need to be reread to tease out the impact. I believe that you know what has changed, but for the reviewer this needs to be made clear, and if not in the reflection, then in the portfolio.</b></p> <p><b>Your staff appear to have gained in confidence in knowing the ARE for subject knowledge and the challenge now is to extend this to WS skills. You have introduced new ideas and approaches to teaching which you say that staff are using and that children are benefiting from. It would have been useful to have seen perhaps a summary of a staff and pupil voice before and after the PSQM process to help with the impact.</b></p>
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	<p>Your portfolio provides the next steps, be careful that they aren't all about monitoring... you need to have something to monitor; something you have set in motion and a change to look for impact on. Think carefully about working scientifically skills in terms of how you will teach these and develop them and how you will incorporate these into assessment practices in the future.</p> <p>It only leaves me to wish you well on your continued development on science and to congratulate you on achieving PSQM.</p>
<p><b>This submission just meets the criteria for PSQM</b></p>	<p><i>N. Hiscock</i></p> <p><b>26/5/20</b></p>  <p><b>Tara Lievesley. Senior Regional Hub Leader. May 2020</b></p> <p><b>Many congratulations to you all and in particular to Gemma and Alysha. You have established a momentum for science and as you continue to embed and develop good practice, it will continue to go from strength to strength. Primary Science Quality Mark is a significant achievement and should be widely celebrated. Well done!</b></p>  <p><b>Helen Sizer</b> <b>Deputy Director: Primary Science Quality Mark</b></p>