



Reviewer's feedback

School: 4393 St Peter's C of E Primary School

Science Leader at school: Kerry Quant

PSQM Hub Leader: Yvonne Caples

Quality Mark submitted: **PSQM GILT**

Reviewer: **Phil Watkins**

Criteria	Indicator	Observations
SL1	There is a clear vision for the teaching and learning of science	Your principles were created collaboratively with staff and used pupil voice effectively to guide direction. This built on pre-PSQM principles and vision. It is good to read how closely your SLT are supporting you and it is great that you have blended these principles coherently with wider school intent. SLT have also supported you over the year to monitor progress on this vision. Having a handbook for each year group that included your vision is good practice to support consistency and provide reference for new staff or those moving year group. Principles are displays around the school, in classrooms and on the school website. Teachers are clearly using them to plan as evidenced in the changes that have happened this year. You were unable to review due to COVID but you have this in your plan and I like the intention to use a pupil focus group to support this process.
SL2	There is a shared understanding of the importance and value of science	You had a strong profile already for science when beginning the PSQM process as it is valued as core curriculum, enrichment is common with science week centre-stage and parents are kept informed of developments through the website. You have built on these firm foundations during very difficult times this year. SLT have strongly supported you this year through mentoring, training time and budget. Science is important and valued in your school. There is much more focus on child-centred learning through interactive display, enquiry and question driven learning. Your WOW starters and Big Questions (Explorify) have engaged and stretched the learning of all your learners. This was supported well during lockdown through weekly activities encouraging outdoor learning (exploring, investigating such as egg-drop and bridge building), competitions and rewards for independent work. Outdoor learning was identified by pupils as a need. This has greatly improved the value for family learning across your community. Some

		enrichment activities had to be cancelled but you still supported developments through some trips (e.g. museum, zoo), STEM visitors (e.g. electrician, electric cars, band) and signposting online opportunities. It is great to read that you intend to start a STEM club involving parents.
SL3	There are appropriate and active goals for developing science	Science is important and valued in your school. You started with a culture of science planning being integral to whole school intent with regular SLT support and a science governor. You have a robust action plan that clearly reflects whole school priorities and have acted on governor advice to widen your profile (improved website). Your handbook this year has been a useful tool to not only drive whole ambition (e.g., principles, monitoring) but have allowed key messages to be targeted appropriately to each year group. This is good practice and should be developed. Could you develop a handbook for parents to improve family learning and science capital? Monitoring was regular (when possible) and clearly focussed on priorities for development. This supported progress, particularly around science vocabulary and enquiry development.
SL4	There is a commitment to the professional development of subject leadership in science	Your CPD this year has mainly involved utilising PSQM sessions, resources and spotlight sessions and have resulted in some activity (e.g., own EYFS investigation) and resources (e.g., Explorify, ASE guides) being used back in school. Reach Out CPD courses (e.g., enquiry, feedback) have also been used to support strategy for school developments. You have disseminated ideas and shared practice well in meetings. You could widen your training through external support and networking next year as restrictions ease. You have also been supported well by your SLT, particularly with monitoring, to develop specific leadership skills. You have also led a lot of staff CPD through meetings. I would suggest that you further support staff more directly through planning and in their classrooms to build your leadership skills further.
SL5	There are monitoring processes to inform the development of science teaching and learning	You have been supported well to increase your opportunities (now half-termly out of lockdown) for monitoring and planning for regular improvement cycle. The range of strategies have also increased to include climate walks, book scrutinies and pupil/staff voice. You adapted monitoring well over lockdown to include pupil engagement and photo evidence. Your handbooks emphasised expectations, but did they also include milestone expectations on a timeline for key changes over the year? This can support more formative monitoring strategies. Monitoring was school wide and examples (e.g., vocabulary development and pupil equipment choice) included feedback, followed by reactive actions (e.g., provided vocabulary lists and range of equipment available with follow up CPD). Successful developments include the use of vocabulary on displays and in work and the use of displays to include enquiry types. Perhaps being more involved in lessons (e.g., learning walks) next year may allow you to see strategies in action to evaluate effectiveness more.
T1	There is engagement with professional development to improve science	Science has been a regular feature of staff meetings and you developed and extended this strength further this year. You shared ideas (e.g., Explorify, vocabulary posters, Switched On Science, Ogden Trust materials/enquiry types, CLEAPSS guidance, space/yr5) that led to successful evidenced developments (e.g. use of Big Questions to support depth/WOW starters, increased use of enquiry types, use of target

	teaching and learning	vocabulary). You developed new approaches (e.g., Chris Quigley resources/depth, questions box/LKS2, weather system/KS1, enquiry types) and extended existing ones (e.g. WOW starters, cross-curricular working/ICT/PHSE) with whole staff and subject/phase leads. This support was also enhanced through an expectation to use Reach Out CPD with evidence impact (e.g., WS/enquiry). Improvements have been added to planning documents. Individual staff (NQTs) were supported directly by you on coverage delivery, and I would suggest that this tailored support is developed across your year groups in future.
T2	There is a range of effective strategies for teaching and learning science which challenge and support the learning needs of all children	Again, you have built on teacher strengths and variety of approach and extended key priorities, such as enquiry-led learning, outdoor learning, family learning and the use of more interactive display (also supported vocabulary use), this year. WOW starters and resources to support depth and challenge (e.g., Big Questions, learning walls) have been continued. Key areas of success have been family learning, supported through lockdown (investigations, sharing & celebrating success, directed website use), challenge (expected vocabulary use, Big Questions, WOW starters, adapted planning) and outdoor learning (family learning, outdoor grounds box with new equipment). Cross-curricular working and improved enquiry have also developed (see below). It is clear you are more able to support all abilities with a greater variety of approach and challenge.
T3	There is range of up-to-date, quality resources for teaching and learning science which are used regularly and safely	Resources have been audited, organised and availability disseminated to all (e.g., NQTs). New equipment has been purchased (includes rechargeable torches to fit with Eco-School) to replace and extend (e.g., outdoor equipment) the good variety available and to fit with planning needs. I really like your idea to purchase science whiteboards and creating a box of useful equipment to support learning outside. You have used CLEAPSS website and resources (Be Safe in Science) to support safety. Could you extend your links to your secondary school to not only share equipment but also develop safe equipment use in school? Throughout lockdown, experience has been gained in using online resources (e.g., Reach Out CPD, Explorify, Ogden Trust) and useful teaching tools (e.g., Wildlife Trust, Geological Society, etc) to support both staff development and family learning. It is great to also see that you are beginning to use texts within science lessons (e.g., Jack and the Beanstalk/plants). Please do buy more data loggers and remember to train your staff fully on their use and the opportunities they create.
L1	There is a shared understanding of the purpose and process of science enquiry	This aspect was a key priority for development this year. You have extended on some strength by adding strategies that encourage children to ask questions (e.g., Explorify, working walls, a culture of exploration) and support more independent investigation (e.g., Ogden Trust materials on enquiry types, example investigation, training through staff CPD, Reach Out CPD). All have impacted upon greater teacher and pupil confidence in using strategies. The children are also using more methods for capturing process such as the use of iPads and floorbooks. There is a greater awareness and use of the five enquiry types. Home learning has supported not only the scope of investigation but also the range of evidence gathering. However, it is not completely clear in your evidence how you are developing Working Scientifically (WS) skills in pupils as they

		go through the school. Without these, pupils will not find it easy to work more independently. This may be a crucial area of development next year.
L2	There is a shared understanding of the purposes of science assessment and current best practice	The school uses Switched-On Science assessment, Chris Quigley resources for depth and a new tracking tool (Educater) to support assessment in science. Pupils are increasingly recording progress in a variety of ways (e.g., in books, floorbooks and through photographs on iPads) and these are all being used in teacher judgements and has supported assessment of reluctant writers. Teacher handbooks include assessment and skill progression guides. However, there is little evidence to support formative assessment strategies are in place other than the assumption that teachers are following the scheme guidance and included tasks. Have you reviewed other assessment options (e.g., TAPS, PLAN, STS Science, CIEC, etc) to perhaps mix your strategies for better outcomes?
L3	There is a commitment to developing all children's science capital	Science capital is recognised and has been supported through previous links with Wildlife Trust and through parental STEM role models. Due to COVID, the Trust sent resource materials to use but the school continued to use STEM parents (e.g., genetics, electric cars) to support greater awareness and links to curriculum. Many new planned activities, including Science Week, were cancelled due to COVID. However, new capital activities were supported despite restrictions. It would have been useful to hear to effect these had on pupils' attitudes in your evidence. Big changes to create more child-centred learning with increased ownership and responsibility have impacted on science capital. Pupil success was celebrated in assemblies, on display, through awards and on the school website. Online website signposting was used within more investigatory family learning to encourage capital. Pupils identified that they wanted to know more about science in the news. As a result, reports and global issues were placed on the science display board and were used in class discussions/assemblies across the school. This was welcomed by children (voice evidence) and was continued through creative activities in lockdown.
WO1	There are appropriate links between science and other learning	Cross-curricular working was already a strength across school and links to topics already established. Examples of links evidenced this year include maths (graphs), literacy (vocabulary lists, story starters), history/DT (materials), PHSE/PE (healthy eating) and ICT (habitats). The new Health Education curriculum and vocabulary use involved discussions across school that supported science to be at the heart of whole school developments. Your new scheme also identifies cross-curricular links that could be exploited next year.
WO2	There are appropriate links with families, other schools, communities and outside organisations to enrich	A big development (unexpected, enforced) has been the growth of family learning. You have supported creative and effective investigatory activities/challenges (including those from Wildlife Trust), research, outdoor learning and links to websites (including Big Science Share links to scientists) to extend learning and science awareness. This work has been celebrated in class through certificates and on the website. Parents have also been used as STEM role models to good effect. It is great to see your plans to build on and extend this aspect next year that include a family learning STEM clubs (including the science governor) and

	science learning	continued parent role models. Hopefully, you can reignite your links to the Big Science Share, Wildlife Trust and other STEM organisations and companies next year as planned. Are you looking to develop links with your secondary school and with other primary schools through cluster networks?
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Overall comment	Well done. A great effort in difficult times. There is much to be proud of in this submission with significant evidence of effort, resourcefulness and creativity in increasing the quality of provision. Children are learning more effectively in science and this is an achievement.
This submission meets the criteria for PSQM Gilt	<p>Phil Watkins 26.03.2021</p> <p>Many congratulations to everyone at St Peter's, especially Kerry, on all that has been achieved. This is well deserved.</p> <p>Ed Walsh</p> <p>Senior Regional Hub Leader</p> <p>5/4/21</p>