

School: 117386 Barley (VA) Church of England First School

Science Leader: Carol Porter

PSQM Hub Leader: Emma Pughe

Curriculum Design: Reviewer feedback on how the science curriculum engages, inspires and challenges all children

The impact of effective leadership on the development of practice across the school

Strengths, notable points and areas for further consideration that are evident in the submission

It is impossible to comment on just one area of strength in terms of the aspects of leaderships (SSLs). In this case they are all strengths and what makes this submission even better is the way that they link together. The Science Leader has committed a huge amount of her own time to learning about best practice in primary science education. This has been driven by needs identified through monitoring activities and where relevant this has been disseminated to colleagues.

Professional relationships with others across the whole school community, some of which took time to develop, have also contributed to the success of the PSQM in raising the profile of science and the quality of the science curriculum for the benefit of all pupils. It is yet another strength that the Science Leader has identified building stronger relationships with parents as a challenge for the future.

The impact of the development undertaken on children's learning

Strengths, notable points and areas for further consideration that are evident in the submission

It is great to read that the range of adaptive strategies has enabled children to develop their innate curiosity and that teachers are adapting schemes of work to better meet the needs of learners in their classes. Children are now writing less and arguably learning more, with attainment data showing progress. Pupils are also interested in learning about careers that involve science and sharing their aspirations. The bar chart on slide 8 shows how pupils are not only learning science but their attitudes to science are also changing as they increasingly see the relevance of the subject to their lives.

The PLAN matrices have been helpful in ensuring progression in both procedural and content knowledge.

While links with other subject areas are in their infancy, the purchase of new library books is a great start and there is evidence of links with maths. How wonderful that the children wrote to the King and received such a lovely response!

Relevance of next steps identified to support ongoing development and sustain change

Suitability as evident in the submission, along with recommendations for future professional learning and sector engagement

All three objectives are relevant and appropriate.
As you revisit the primary science capital teaching approach, I would encourage you to consider the small tweaks to lessons that might also enable children to link science to their lives. This can be done alongside your work to create more links to scientists.
As you develop the teaching of scientific skills, please consider using the PSTT symbols for the different skills. <https://pstt.org.uk/resources/enquiry-skills/> . The images may help some children (and teachers!). It is good that you are intending to have many opportunities for pupils to use their developing working scientifically skills.
As you develop cross-curricular links you may find this document helpful. <https://www.primary-science.co.uk/product-page/links-and-discrepancies-between-maths-and-science>. A meeting with the maths lead might identify where skills in maths have not been taught before those skills are required in science. You can then address the issues identified and ensure children learn better in both subjects and can transfer their learning between the two subjects.

Teaching and Learning: Reviewer feedback on how teaching enables all children to learn science content and procedural knowledge

The impact of effective leadership on the development of practice across the school

Strengths, notable points and areas for further consideration that are evident in the submission

Monitoring has identified some clear areas for improvement. For example, a reduction in the number of worksheets being used. Alternative approaches were trialled and recording in a variety of ways was found to be more conducive to learning, while at the same time improving presentation. The fact that teachers and children were able to discuss the science curriculum with the SEA is impressive.
The support of the SLT and governors has been instrumental to the success of the PSQM and to developing a strong and confident science leader. The attendance at a wide range of CPD opportunities has also strengthened the knowledge of the science leader and that knowledge has informed developments and will no doubt continue to do so in the future.

The impact of the development undertaken on children's learning

Strengths, notable points and areas for further consideration that are evident in the submission

The science leader demonstrates a good understanding of areas where development has happened, practice has been strengthened, and where further development is still a priority.
Explorify has made a huge difference to children's ability to express their ideas and resources to support the use of scientific vocabulary have also helped.
There are some lovely examples of children's questions on slide 10 and I wish I could have seen the year 2 child's presentation about the zoo!
Spending a whole lesson making a display is a brilliant idea! The involvement of the children in talking about this and being involved in how it looks must have been a great learning opportunity. It is lovely to see that adaptive approaches to learning are being showcased in newsletters, and I hope there was one that shared the water cycle display.
The children really did not like worksheets and much prefer the more creative approaches to recording. More discussion also allows teachers more opportunities to identify gaps in learning and misconceptions. There are plans in place to further develop assessment practices.

Relevance of next steps identified to support ongoing development and sustain change

Suitability as evident in the submission, along with recommendations for future professional learning and sector engagement

All three future development priorities are entirely appropriate and follow on very logically from what have been identified as strengths and areas for further development.

In building the ability of children to ask scientific questions you may find the resources on the Great Science Share website useful. You may also find some of the resources in the VLE resource library related to TLA helpful.

Current thinking on teaching procedural knowledge is to focus on one skill in each lesson. The TAPS focused assessment tasks <https://pstt.org.uk/unique-resources/taps/> can be really useful in then assessing that single skill.

Given the school focus on discussion and oracy, I would be encouraging teachers to use these discussions for formative assessment as well as what is recorded in books. TAPS recommends using a wide range of evidence for summative assessment, including evidence from formative assessment. The TAPS resources on the PSQM VLE may well be informative.

PSQM Year Highlights

The overall impact and influence on others resulting from the PSQM year

This has been an amazing year for Barley and especially for Carol who has instigated and observed so many positive changes. This small community has come together to make science teaching and learning a priority and all the children are seeing the benefit.

Validation of the Primary Science Quality Mark

Congratulations to you all on achieving the Primary Science Quality Mark. The school community is developing effective practice in providing an inspiring science education.



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