

Review feedback (R23 Spring)

School: 161447594 Ellington Primary School

Science Leader at school: Dan McConville

PSQM Hub Leader: Phil Watkins

Quality Mark submitted: **PSQM**

Reviewer: Kate Sutton

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.	From evidence within your whole submission, it is clear that the Ellington Primary School community has a clear vision for science. Principles have impacted on teaching, learning and the whole ethos of science at school. All stakeholders were consulted when the V&P were created and key information is visible on the website, around school and in planning documents (Portfolio, SDL). The hard work, of the SL in particular, has had a huge impact and it will now be important to embed that going forwards.
SLb	Strategic support for subject leadership is provided and includes: <ul style="list-style-type: none"> Focussed CPD for subject leader Regular release time Resources to facilitate development in science. 	After having several SLs over recent years, PSQM has been a driver for a complete revamp and focus on science and has raised its profile to where it should be (Portfolio). The value now placed on science can be seen all over school- in corridors, in pupil work and also in pupil and staff attitude. It is clear that the focus placed on science has resulted in partnerships including that with STEM Learning solutions and schools within your network meetings (SDL). This is evident in various ways including Twitter posts which were utilised to share the pupil learning journey (AtRP). Release time was really important as your school cleared the decks and rebuilt science thoughtfully from the ground up (AtRP). Again, it will be important for this to be monitored and nurtured to ensure progression going forward.
SLc	There is a monitoring cycle, including pupil voice, that informs actions taken and the development of science.	Science has been rigorously monitored- including supporting staff to understand and feel comfortable with the monitoring process; this ensures it is fully embraced and useful. A wide range of evidence has been gathered, scrutinised and evaluated to form a clear view of teaching and learning in science and to inform actions. A proforma has been created so staff could be confident with their monitoring procedure (Portfolio). Pupil voice has been listened to (Portfolio, SDL) and science targets appear within the Subject Development Plan, highlighting the importance of the subject in school. Through monitoring and feedback, the SL is so

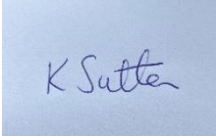
		much better placed to know science in school (Final Qs). Well done- this has been a big challenge which the school have risen to. Going forward, embedding this process will ensure successful progression continues.
TEACHING AIM: Science teaching has been strengthened and developed. Subject leadership 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 to identify a range of CPD for staff needs. The subject leader has been proactive in leading CPD for the whole staff during this year which has led to a vast improvement in staff pedagogy (Portfolio). Mentoring has had an impact on their practice as seen by pupil progress and engagement (AtRP, Portfolio). White Rose science planning has been utilised to support less experienced teachers which has addressed inconsistencies and misconceptions and therefore enhanced their pedagogy. Conceptual models for teaching (Portfolio) has been an excellent way to develop teaching and learning (Portfolio, AtRP). Confidence in teaching has supported the use of equipment within lessons, in a hands-on way for pupils, which has engaged pupils scientifically (portfolio).
Tb	Teachers are supported to use a range of effective strategies for teaching science which challenge and support the learning needs of all children.	It is clear from many strategies which have been carefully implemented that children are engaging in science and teachers understand knowledge levels of individuals. Staff are using formative assessment strategies more widely so understanding starting and end point knowledge. Successful strategies introduced include Lock it in tasks, a focus on scientific vocabulary (including displays right through school), adaptive teaching across the school, and designation of key scientists to all classes, as well as summative tasks. These are all supporting pupil learning and teacher understanding of knowledge gained. Challenge and support can subsequently be targeted much more effectively as the school continues its science journey beyond PSQM.
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 staff team have been working hard to provide hands-on learning for pupils. The equipment has been reviewed and organised (Portfolio). Links with your feeder high school are being developed (so equipment may be loaned) and an inventory has ensured equipment needed can be ordered going forward. This should include data loggers. IT equipment such as laser pointers have been acquired to support teaching of light in Y6. The school is taking part in the National Education nature park and Climate Action Award. Working outdoors is a key feature of science at Ellington Park. The school is working with the tree council. The outdoor area is being developed to incorporate a forest in the long term- this will work towards meeting fieldwork and biodiversity targets which have been set, to benefit the environment and pupil understanding of it. Outdoor learning is engaging- children are envisaging future careers in this area as a result (Final Qs). CLEAPSS membership, to ensure safety considerations, is also an absolute must to ensure safety in all areas of science teaching and learning.
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 clear from the portfolio (slide 11) that children's innate scientific curiosity is being well supported through the introduction of enquiry type knowledge. After staff CPD to introduce the important science concepts, children are increasingly developing enquiry and working scientifically skills. An assembly cascaded this information (SDL). Teachers have developed an understanding of these, evident in their use within lessons- and

		continued development of this area of science is a target going forwards.
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.	Teacher judgement- including Y6- is drawn in part from various formative assessment (see Tb) undertaken in class and other strategies implemented (see Portfolio slide 12). Summative assessments- White Rose- and low stakes quizzes are used to support pupils to internalise learning. Development of further assessment strategies, and standard files as exemplars, are targets going forwards. PLAN resources are an excellent example of exemplar activities which could be used to support this area of science.
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.	Children are clearly developing their science capital through incentives such as 'Draw a Scientist' (Portfolio slide 13). It is interesting to see how outdoor learning implemented is also developing children's science capital. The SL researched regarding biodiversity and how best to support pupil knowledge in this area- vital to all pupils' futures. The Eco council is successful and children feel consulted/ have developed ownership. Careers day and Science week were very successful- also engaging parents. Well done on this. The science ethos and attitude in school has really developed.

WIDER OPPORTUNITIES AIM: Science has been enriched.
Children's experiences of science are enriched.

WOa	Curriculum planning links science to other areas of learning.	The links between science and other subjects can be seen although this area is in development (Portfolio). Collaborative work between the SL and staff has laid the foundations for future development going forward. Mapping curriculum links and planning for these within the enrichment map ensures this will be progressing into the next academic year.
WOb	There is participation in some external initiatives, topical science events and family learning.	Parents have clearly become more involved in children's science learning at Ellington Primary School, as seen after the trip to Northumberland Museum when parents were invited into school. There are exciting plans ongoing, building links with the Lego League. NUSTEM Careers education, with whom the school are developing links, are one of the most prominent Careers Education organisations in the country- well done. Forestry workshops, use of Picture News and visits to the secondary school- to develop transition links- as well as the Fortnightly Science newsletter are all excellent wider opportunities in place (AtRP). In addition, the partnership with Port of Blythe Energy Centre is also a very exciting opportunity for pupils. Parents were also in school during Science/Careers week to work on Boulby Mine resources- a great link made (Final Qs highlight). Congratulations- this is a really strong area of development which is of great benefit for all of the pupils as they develop and grow.

Final Questions – comment	Going forward- building stronger links to high school will support transition and a deeper understanding and engagement with science for pupils.
Additional Points	Ensuring all your hard work is capitalised upon, to ensure Science evolves, will really help Ellington Primary to reap the rewards of all the staff effort during this process.

Overall comment	I am so happy that you are all excited about science at Ellington Primary and that you have all developed as science teachers, having worked incredibly hard- particularly the Subject Lead. Well done. It has been a real pleasure to review this submission and see how your school has evolved so dramatically throughout your PSQM journey. Your children are being provided some amazing opportunities which should really help them to develop a science mindset and understand that science is for all of them. Congratulations.
	 Kate Sutton

**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.**

