

PSQM ACTION TO REFLECTION PLANNER

School: Ysgol yr Holl Saint - All Saints' Primary School, Gresford

SCIENCE SUBJECT LEADERSHIP: PSQM		
<u>RELEVANT INITIAL SELF-ASSESSMENT STATEMENTS:</u> Which of these are current strengths? What evidence do you have? You will need to include this in your final submission. Which are key needs for development? These will be the areas to address in your action plan.		RAG rating
A.	The vision for science is clear and established; teachers use it to inform science teaching and learning.	
	The science vision is evident e.g. on the school website, policy documents, displays in classrooms and communal /public spaces.	
	Staff and pupil have agreed a set of principles for good science teaching and learning.	
B.	Science is recognised as a core subject of similar status to English and mathematics.	
	There is an adequate annual budget for science.	
	There are targets for science on the school development plan.	
	The science leadership meets regularly with the SLT to discuss science development plan progress.	
	The science leadership is allocated release time to carry out the role.	
	The science leadership regularly engages with science professional development activity.	
	The science leadership participates in a local science network meeting.	
C.	A range of approaches is used termly for monitoring science teaching and learning, e.g. scrutiny of work and planning, lesson observations, learning walks, team teaching.	
	Pupil are given opportunities to talk about their science teaching and learning experiences e.g. pupil voice, surveys, science council.	
	Feedback from monitoring of science is used effectively to inform development.	
	The teaching and learning of science has improved over the last three years.	

AIMS:

Science subject leadership is strengthened and developed through:

- A. the creation and implementation of a clear vision for science;
- B. strategic support enabling improvement to take place;
- C. an effective monitoring and improvement cycle that informs development in science.

PSQM CRITERIA:

Science is valued and improved through the development of effective processes for subject leadership:

- A. There is a clear vision for science, created and implemented by teachers and pupil, through principles for teaching and learning.
- B. Strategic support for subject leadership is provided and includes:
 - Focussed CPD for subject leader
 - Regular release time
 - Resources to facilitate development in science.
- C. There is a monitoring cycle, including pupil voice, that informs actions taken and the development of science.

SUBJECT LEADERSHIP NEEDS ANALYSIS and ASSOCIATED ACTIONS:

						Progress Review	
Key identified development need: (Based on self-assessment and the PSQM criteria. Add rows as required)	Action(s) to address this specific need: (You may add further actions as the year progresses)	Who? (not just the SL)	When? (month or half term)	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers) and likely sources of evidence (e.g. Vision and Principles statement, Science Development Log, monitoring data, teacher planning and evaluation, pupil outcomes)		RAG rating after training 5	FINAL RAG rating
1. We need to add a vision statement to the website to inform parents and the wider community of our science philosophy.	Write the vision statement with the head, senior leadership team, staff and pupils. This will then be published on the website and shared with the staff.	SLT HT SL	November half term	The school will have a clear ethos on the science subject in school and the way we value science. It will explain the methods we use to teach and inform the wider school community of our approach. Engaging staff and pupils will help the vision to be understood and trusted.			
2. Meet with the SLT to discuss science in the SDP and how we can implement the changes. This will give the subject leader a clear understanding of the actions that need	Meet with the SLT. Come up with a timetable of when we need to carry out subject specific targets. These will be measurable and reflected upon during the school year to keep on target. Time will be given where needed for the SL and other staff to complete the work needed to meet the development plan.	SL SLT HT	Ongoing over the year	The school will have moved forwards to develop science in the ways identified in the school development plan			

to be taken for the development of the subject						
3. To build time to observe lessons and planning. We will use this to promote good practise.	Use this opportunity to talk to the pupils to find out the prior learning, look in books to identify what the pupil have already done. This process will be used to share good practice in teaching and learning and identify areas of development within the subject areas. We will be focussing on the ways pupils learn best and evidence of learning by doing, in line with our vision	SLT HT	Termly throughout the year	We will use the information from these sessions to address the science staff meetings, we will praise the good work and introduce ideas for the staff to further develop the scientific enquiry with the pupil. This will be measured by further learning walks and informal discussions with pupils.		
4.						

SUBJECT LEADERSHIP REFLECTION: (towards the END of your PSQM journey)

What was the **IMPACT** of your SCIENCE SUBJECT-LEADERSHIP actions on:

- you as a leader of science?
- your colleagues as science educators?
- the pupil as young scientists?
- other members of the school community?

4 or 5 sentences max per action and including references to your core documents, e.g. (slide 4, Science Development Log)

Since starting the PSQM I have actively sought out training and participated on 3 courses so far with more booked in (slide 1). I have used ideas from the courses and delivered staff meetings assisting with teachers planning and teaching of science (slide 1). We have worked hard to promote science in the school and taken on a huge task of promoting outdoor learning, developing the outdoor areas, planting trees and ordering a poly tunnel for classes to use to grow plants, fruits and vegetables. This has improved pupil wellbeing and given them practical opportunities to learn in Science and immerse themselves in the outdoors. (slide 3)

Staff have also had the opportunities to go on courses and take part in CPD (slide 1), many staff have used the Out Reach CPD over the course of the year and continue to use this before they teach a new science area to help them. They have become much more confident in teaching science and this is evident in the lessons and activities that have been observed. Staff comments have become much more positive about the teaching of science and have aired this in the questionnaire they have filled out (slide 2). The impact of increased professional learning has been increased staff knowledge and understanding of Science education which has in turn impacted on the quality of the work produced by the children in their science lessons. (slide 3)

The children are keen to participate in the science lessons, they enjoy lots of hands-on opportunities to investigate and experiment. They have become increasingly systematic in their science working and more methodical in their approach to investigations. The children have voiced that they have found science much more interesting this year and enjoy the subject (slide 2). The surveys on slide 2 also highlight the areas they have enjoyed most of all and things that they think have gone well. This demonstrates that the work has had a positive impact on pupils' enjoyment in Science lessons and in their feelings about Science.

The display in the hall of the school shows the links the school has with past pupils and parents that have a job in science (slide 1). We will be asking them to come into the school when they are able to talk with the children in years 5 and 6 about the jobs they do so children can link science to the real world further. We have also had the local Techniquist in via video link (slide 3) to a variety of classes delivering lessons on extreme Earth, ONS and Summer Science. We are developing links with Chester zoo and are planning visits next year when we are able to, to link with topics coming up about habitats. These links and displays have raised the prominence of Science in the school which shows to the pupils the importance we place on good quality science education, and the opportunities that this can lead to.

Overall Impact – staff have been upskilled and their confidence in teaching Science has increased. The Subject Leader has raised the vision of Science across the school which has in turn led to an increase in the standard of Science teaching and learning observed during book scrutinies, listening to learner activities and lesson observations. Links between Science and the Humanities have strengthened, which ensure that when topic based approaches are employed the standards of both subjects remain high.

Recommended word count – 500 words

POST-PSQM SUBJECT LEADERSHIP NEEDS and ACTIONS: (After writing your reflection)						(left blank)	
Ongoing/future development need: (Based on your reflection. Add rows as required)	Action(s) to address this specific need:	Who?	When?	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers)			
1. To provide further opportunities to develop staff needs in science	Look for a variety of courses from a range of providers and offer them out to the staff based on their individual needs.	SMT CC	Autumn 1 st	This will enhance the good practice of the staff in their teaching. It will help to inspire children and motivate them in this area.			
2. To give the children more opportunity to see science happening in everyday life by visiting local areas and factories.	To build up a closer working relationship with the local nature park, Chester Zoo and factories such as Wockhart. We also anticipate having a science careers day later next year when we are allowed visitors to the school	Class teachers	Throughout the year	This will promote science and the need to learn about the world around us, it will put the teaching of science into a context for the children which is extremely important.			
3. To focus on observing teaching in science and undertake more learning walks	To gain a better understanding of what and how teachers are teaching science across the school and what the children are learning.	SMT CC	Once a half term	This will give us a good understanding of what is being covered over the year and ensure we are covering all the enquiry types. It will also assist in recognising the areas that we need to focus on for staff training, development and CPD. All this will be used to enhance the development of science going forward.			

SCIENCE TEACHING: PSQM

RELEVANT INITIAL SELF-ASSESSMENT STATEMENTS:

Which of these are current strengths? What evidence do you have? You will need to include this in your final submission.

Which are key needs for development? These will be the areas to address in your action plan.

RAG
rating

A.	Science staff meetings are timetabled regularly.	
	The science subject leader/science leadership team regularly provide and/or facilitate professional learning for others, including NQTs e.g. team teaching, co-planning, in-house CPD.	
B.	A range of new teaching strategies for science has been introduced and evaluated in the last year.	
	Staff have recently attended external training on science pedagogy.	
	Teachers plan and teach inclusive lessons where all learners are appropriately supported and challenged.	
C.	There are sufficient science resources which are used effectively, regularly audited, maintained and replenished.	
	Pupil have regular and easy access to quality science texts that are modern, relevant and age appropriate.	
	Legal requirements for working safely in practical subjects are met and understood by all staff and pupil.	
	Pupil across the school experience science taught outdoors.	
	Pupil across the school regularly take part in science field work.	

AIMS:

Science teaching is strengthened and developed through:

- A. engagement with professional development;
- B. use of a range of effective teaching and learning strategies;
- C. regular and safe use of up-to-date quality resources.

PSQM CRITERIA:

Subject leadership responds to development needs in science teaching:

- A. There is provision and signposting of relevant internal or external professional development and support with which staff engage.
- B. Teachers are supported to use a range of effective strategies for teaching science which challenge and support the learning needs of all pupil.
- C. Resources are audited annually, well-organised and accessible, so that pupil can regularly and safely use appropriate practical and digital resources, information texts and the outdoor environment.

<u>TEACHING NEEDS ANALYSIS and ASSOCIATED ACTIONS:</u>					Progress Review	
Key identified development need: (Based on self-assessment and the PSQM criteria. Add rows as required)	Action(s) to address this specific need: (You may add further actions as the year progresses)	Who? (not just the SL)	When? (month or half term)	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers) and likely sources of evidence (e.g. Vision and Principles statement, Science Development Log, monitoring data, teacher planning and evaluation, pupil outcomes)	RAG rating after training 5	FINAL RAG rating
1. To regularly plan staff meeting time (half termly) to promote the teaching and identify areas that we need to target from the monitoring and discussions with pupil	Staff meeting will be delivered half termly to the staff, initially focussing on the PSQM journey. Then we will use the information from book scrutiny and monitoring of the subject to inform the future staff meeting agendas. This will become the target for future monitoring to see if that aspect has improved and identify the next area for the staff meeting.	Subject leader Head teacher All teaching staff	Ongoing half termly	This will help the staff to become more confident in the teaching of science. We will see an improvement in the planning, teaching and learning of the pupils and staff. They will hopefully begin to enhance the teaching in a variety of ways to encourage the pupil to ask questions and find out ways to answer them themselves.		
2. To offer CPD opportunities for the staff.	Staff to be informed to sign up for the outreach CPD and then they are to be given time to complete the CPD for the topic area they are going to be teaching next. This will hopefully help them to feel more confident in the science aspect they are focussing on with the pupils.	All teaching staff	Throughout the year at the start of the new topics	Staff will become more confident in the science behind the topic they are teaching, it will provide some good ideas as starting points for the pupil's learning and will help them to become more confident in the understanding too. This meets the targets set out in the School Development Plan.		

3. To undertake an audit of the science equipment in school and then order stock needed. This will include the need for good quality texts that are modern and age appropriate	The science stock area will be audited and logged. It will then be shared with the SL and any missing stock will be replenished or replaced (budget depending). This will help in developing the teaching of science throughout the school. The non-fiction aspect of the library is in the process of being upgraded. Included in this area will be more modern and relevant science books. The school has set aside £1500 a year library book replacement and have applied grants to further enhance this.	Science lead English lead Head teacher	Spring 1 st half term	The stock will be replenished to assist with the hands on teaching and learning of our pupils, in line with the school vision and principles. An audit will be available for all staff and added to where needed and possible. We will have books that are more up to date and help pupil to understand more about the scientific work, including books about modern scientists promoting the industry. This will encourage the pupil to find out more and learn about science jobs in the community.		
4. To promote and progress the outdoor learning of the pupils in science	There has already been huge changes in the outdoor classroom area and this will continue to change and be used more often. We are beginning the journey of a more outdoors education across all subjects including science. We are hoping to employ a forest school teacher to take all classes out, this will initially be with foundation phase to start with.	Head teacher All staff	Ongoing- Forest School Leader from Autumn 2021.	The pupils will be provided with enhanced learning opportunities outside of the traditional classroom, this is in line with the school vision and key principles. There will hopefully be an appointment of a forest school leader to support us in this area too. The pupil will be emersed in an outdoor education ethos with a hand on approach to reinforce the classroom activities.		

TEACHING REFLECTION: (towards the END of your PSQM journey)

What was the **IMPACT** of your SCIENCE TEACHING actions on:

- you as a leader of science?
- your colleagues as science educators?
- the pupil as young scientists?
- other members of the school community?

4 or 5 sentences max per action and including references to your core documents, e.g. (slide 4, Science Development Log)

As a leader of science, I have become more empowered through the PSQM. I have worked with staff to create a clear vision for the school (vision and principles doc), identify needs and celebrate the work we already do. I have attended courses and gained some STEM awards for my attendance (slide four). I have assisted staff in developing their own science teaching and helped them access courses (slide 1). Staff are going to observe others teaching next year, once COVID restrictions ease. This has had a positive impact as staff have been upskilled and are supported as they develop themselves as teachers of Science which in turn impacts positively on standards.

Staff have taken part in meetings and have helped write the school aim and vision for science (slide 4), they have found the staff meetings useful and have used some of the resources and ideas (slide 4). It has been difficult to monitor the teaching of science due to COVID, however there is clear evidence of all enquiry types being done by all school year groups (Slide 5). The staff have been given access to some CPD to help them in their subject knowledge as this was an area they felt they needed to improve (slide 4). The impact of this has been a raising of the profile of Science across the school and in ensuring Science is seen as a core subject inline with Maths, English and Welsh. A higher profile means more focus and an increase in standards of Science.

The pupils are taking more ownership of their learning and have designed many of their own investigations through clear discussions (slide 6). They are able to see more of a link in science with everyday life and are becoming more interested in this area. Through the survey it is clear to see the children have found science more engaging and fun this year and enjoy the learning experiences given (slide 4). All children have had an outdoor area to manage and develop, the children have planted a new forest area and developed the forest school classroom (slide 3+5). They have enjoyed the outdoor learning, we have invested in a polytunnel greenhouse to teach whole classes next year (slide 4). Pupil voice was a focus on the School Development Plan this year following our Estyn inspection and the impact of this work has been a raised profile of pupil voice being used to influence learning across the school.

We have had engagement with the school community via emails and Zoom calls, we have been unable to make close links due to restrictions. We have received information from past pupils and family members (slide 10) who work in science and many have offered to come in and talk to the children about their careers when we are able to allow them into school. We have also worked well with our church, using the grounds for field trips, the local nature park, their staff (slide 4) and the pond area nearby. All the children have had the topic our local area to explore and find out about in all learning areas including science, which has helped us greatly. Engaging with the wider community fosters a sense of belonging to pupils, both past and present. This has a positive impact on the reputation of the school in terms of teaching and learning in science and also in supporting the wider community.

Staff confidence in teaching science has increased which means that in turn the quality of teaching and learning in Science has improved further. Pupils have been observed as inquisitive and engaged scientists who work well with members of their community to develop as life-long learners. (slide 4)

Recommended word count – 500 words

POST-PSQM TEACHING NEEDS and ACTIONS: (After writing your reflection)						(left blank)	
Ongoing/future development need: (Based on your reflection. Add rows as required)	Action(s) to address this specific need:	Who?	When?	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers)			
1. To continue to plan for science staff meetings every half term.	To focus on the needs identified from the staff questionnaire and share good practice and ideas	All Staff	Ongoing	This will continue to develop science at a good pace and give staff the chance to further develop their own confidence and skills in the teaching of science			
2. To look for more CPD opportunities for the staff to enhance their teaching.	To find different CPD providers that meet the requirements of the staff, the details will be passed on to the relevant parties.	Subject lead SMT	Ongoing	To empower the staff and give them ideas on ways to further develop their understanding and ideas in the teaching of science. To help children become even more passionate about the subject area.			
3. To continue to monitor the stock for teaching science and order equipment needed.	To assist in the teaching of science, by replacing or ordering new stock.	Subject lead	Autumn	To ensure that we have all the stock required for teaching over the course of the year, renewing purchasing new supplies for all year groups.			
4. To continue to focus on the learning outdoors, making use of the polytunnel greenhouse, outdoor classroom and areas.	To begin to introduce the idea of the greenhouse to the classes at the beginning of the year and to discuss its uses. Gain ideas from the children to grow and produce what they would like to. The other areas staff will have further training and support to help develop themselves in using the outdoors in their everyday teaching	All staff and children	Autumn then ongoing	Children will learn how to grow and produce their own food and plants for the school grounds. They will be learning about the best soils types, feeding, watering and temperature control. The children have made it clear that they love outdoor learning time and we intend for this to have a bigger impact on their experiences as the areas grow and develop			
5. To appoint a forest school teacher	The forest school teacher will be employed to develop the teaching of the outdoors, teachers will be able to shadow the teacher, learning and taking on ideas to use themselves in other lessons	SMT governors	Autumn	Children's learning and understanding of the outdoors will be taught by a fully trained outdoor school teacher, this will enhance the learning of the pupils and assist teachers too.			

SCIENCE LEARNING: PSQM

RELEVANT INITIAL SELF-ASSESSMENT STATEMENTS:

Which of these are current strengths? What evidence do you have? You will need to include this in your final submission.

Which are key needs for development? These will be the areas to address in your action plan.

RAG
rating

A.	Pupil across the school use the full range of enquiry types to answer scientific questions.	
	Pupil across the school use scientific enquiry skills.	
	Pupil across the school plan, carry out and evaluate enquiries independently.	
B.	Teachers regularly use a range of assessment strategies to inform learning in science.	
	There are agreed school processes for making in-school and statutory end-of-key-stage summative assessment judgements.	
	The science leadership is confident that all pupil make progress in science.	
C.	All pupil engage in activities in school to develop their science capital.	
	Parents participate in science activities with pupil in school and at home.	
	Teachers use science in the news and/or the school's locality to engage pupil in science learning.	

AIMS:

Science learning is strengthened and developed through a shared understanding of:

- A. the purposes and process of science enquiry;
- B. the purposes of science assessment and current best practice;
- C. the importance of, and strategies for, developing all pupil's science capital.

PSQM CRITERIA:

Subject leadership develops teachers' practice:

- A. Pupil are taught to use different enquiry types to answer scientific questions about the world around them, through the use of scientific enquiry skills.
- B. 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.
- C. Initiatives that encourage all pupil to think that science is relevant and important to their lives, now and in the future, are supported and promoted.

LEARNING NEEDS ANALYSIS and ASSOCIATED ACTIONS:

Progress
Review

Key identified development need: (Based on self-assessment and the PSQM criteria. Add rows as required)	Action(s) to address this specific need: (You may add further actions as the year progresses)	Who? (not just the SL)	When? (month or half term)	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers) and likely sources of evidence (e.g. Vision and Principles statement, Science Development Log, monitoring data, teacher planning and evaluation, pupil outcomes)	RAG rating after training 5	FINAL RAG rating
1. To develop the pupil's own ideas for enquiry and get them to design their own investigations more frequently.	This will require some staff training and assistance, possibly observing other teachers. All teachers will produce science working walls to assist the pupil in their understanding of how tests are designed and carried out. They will be given opportunities to design their own experiments to test their questions they would like to investigate on a given topic. Evidence of this will be seen on the working walls and in the book scrutiny.	All staff	Spring/ Summer term	The working walls will be evident for all staff, governors and visitors to see. It will show a clear development of skills from the questions of the learners to carrying out of the testing and evaluating. Staff will be given time in staff meetings to discuss how this will be possible when all pupil may have different questions to investigate. This will develop the scientific enquiry of the pupil and help them to become more confident scientists as they progress through the school		
2. To promote science in the pupil's own homes and encourage	The parents will have access to assisting in school (when allowed to again), they will be involved in science trips and educational activities. The school	Parents, teachers	Ongoing science club will	Pupil will take part in science development at home. Activities will be clearly structured and full instructions given to the parents if needed.		

parents to become more involved with science both at home and in school.	provides a science club and is now part of the Crest science award scheme. We will send out science links via the home messaging platforms used and plan for science in home learning if needed again.		commence when allowed	Teachers will be online to support learners throughout the working day. Pupil will have engaged in science learning at home and be asked to provide evidence of this taking place. Evidence to be added to the school teams science folder to share with each other and the governors.		
3. To look at science in the world/news and locality.	We will produce a display of science in the hall for all pupil to see. It will include relevant and up to date information about science. We will also ask our parents if they work in a science field and they would be willing to share, via zoom of on a presentation a little bit about their work and what it entails	Teacher s Science lead, Govern ors, Parents and family membe rs	Summer term	A questionnaire will be sent out to parents asking them for information about their work in science. We will then contact some and ask for information about their job and the work they do. This will be added to the science work to help pupil understand the job opportunities in science. The pupil will be encouraged to look at this as it is planned to be forever changing and it will help them understand science in their locality and around the world.		
4.						

LEARNING REFLECTION: (towards the END of your PSQM journey)

What was the **IMPACT** of your SCIENCE LEARNING actions on:

- you as a leader of science?
- your colleagues as science educators?
- the pupil as young scientists?
- other members of the school community?

4 or 5 sentences max per action and including references to your core documents, e.g. (slide 4, Science Development Log)

The staff have used meeting time to discuss the need for children to develop their own ideas for enquiry. We had started on this journey, but we wanted to do more to promote the children's own thinking and learning. (Slide 9) The children are beginning to discuss their own ideas and with support from the staff they're becoming more proficient in this task and used it to good effect in plant work in year 6 (see slide 8). I am planning some staff meeting time on how we progress this further and become confident leaders to promote this activity type (slide13). This has had a positive impact as pupils are more independent and in turn enquiring as they develop their scientific skills. They have also improved their ability to apply science skills in other contexts which extend the learning further. (slide7)

During the home learning the children were given many opportunities across the year groups to develop their scientific enquiries (slide 11). Some of the examples are shown. We also encouraged the children to participate with family members on a healthy eating and sports day challenge. During the lockdown we promoted science not just through work set, we also included lots of investigation ideas and practical activities on the school website for families. This had a good impact as it helped bridge the gap between home and school and also allowed the continuation of Science related teaching and learning activities during the period of school closure. (slide 11)

This has been a difficult year for the parents to become involved in school-based activities. Next year, we hope to bring parents into school to share in the work and experiences of the children by producing science fairs and showcases. We will also be returning the science clubs where parents are welcome to come and help and support the children. We have engaged virtually using school social media, Zoom and other means to involve parents and carers in the science education of their children to ensure a focus on Science remains. (slide 10)

We have been able to build a display in the school hall for science in the news, I regularly update this with what is in the news (slide 10). Many of these articles get discussed in class and the children have found them useful to aid discussions on topics, Lower Key Stage 2 used the information about the volcano erupting in Saint Vincent and went on to investigate volcanoes. This allows us to promote Science again when we can have whole school services to share news and create a buzz and enthusiasm for Science education across the school.

I am in the process of contacting local businesses in the area for children to go and visit, fitting with the locality and science, I have contacted Wockhart (slide 4) with regards to the children learning about their work in medicine and the development of the COVID vaccine. I am hoping for some online learning working collaboratively with them and maybe a visit in the autumn term. Giving pupils real life opportunities helps in still a love for the subject in them and ensure that they are developing as active and engaged scientists of today and the future.

Recommended word count – 500 words

POST-PSQM LEARNING NEEDS and ACTIONS: (After writing your reflection)						(left blank)
Ongoing/future development need: (Based on your reflection. Add rows as required)	Action(s) to address this specific need:	Who?	When?	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers)		
1. To contact other local companies to help with the teaching of science and the careers science can lead too.	Sending emails to local businesses and people connected with the school.	Staff	Next half term	Pupils will have the chance to see the types of careers that science can lead to. They will be given the opportunity to see science in action by visiting, virtually or otherwise places of interest eg. Wockhart for the COVID vaccine plant.		
2.To update the science wall about the school, community, and world. To promote this further in services and lessons	To continue to make the children more aware of how the science is all around them and all over the world. To make them more globally aware.	All staff	On going	Children will understand what is going on in the world around us and the impacts that may have locally or globally.		
3. To use staff meeting to deliver inset on how to empower children to become independent enquirers.	Staff meeting time to be allocated to deliver inset on developing the children’s enquiring mind.	Science lead All staff	Autumn term	Children will become confident leaders in developing their own questions and being able to carry out the enquiries fully using all the methods and skills learned.		

SCIENCE WIDER OPPORTUNITIES: PSQM

RELEVANT INITIAL SELF-ASSESSMENT STATEMENTS:

Which of these are current strengths? What evidence do you have? You will need to include this in your final submission.

Which are key needs for development? These will be the areas to address in your action plan.

RAG
rating

A.	Literacy and numeracy strategies are embedded in science lessons.	
	Teachers identify and map science skills to a range of other subjects.	
	Science is contextualised within other subjects.	
B.	There are opportunities for pupil across the school to attend science-related clubs.	
	There are regular links with other organisations to enhance/enrich science learning.	
	There are links with local school(s) to support transition in science.	

AIMS:

Science is enriched by:

- A. cross-curricular planning that links science to other areas of learning;
- B. provision of a variety of opportunities that deepen and extend learning.

PSQM CRITERIA:

Pupil's experiences of science are enriched:

- A. Curriculum planning links science to other areas of learning.
- B. There is participation in some external initiatives, topical science events and family learning.

WIDER OPPORTUNITIES NEEDS ANALYSIS and ASSOCIATED ACTIONS:

Progress
Review

Key identified development need: (Based on self-assessment and the PSQM criteria. Add rows as required)	Action(s) to address this specific need: (You may add further actions as the year progresses)	Who? (not just the SL)	When? (month or half term)	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers) and likely sources of evidence (e.g. Vision and Principles statement, Science Development Log, monitoring data, teacher planning and evaluation, pupil outcomes)	RAG rating after training 5	FINAL RAG rating
1. To identify and map science skills in other subject areas.	Staff are undergoing a change in curriculum. We have worked very closely with GwE and Dr Paula Owens (consultant) to develop a curriculum document that explains how we are teaching each topic with the coverage and skills needed in each of the curriculum areas. This is a continuous change due to the pupil being at the centre of their learning. We are adapting and developing it over the course of this year in readiness for the implementation of the new curriculum in 2022	All teaching staff and management		Planning scrutiny will take place to identify any areas for development in this new topic based approach. They will focus on the skills and learning taking place. The planning will show a clear development of skills across the school and hopefully a more independent approach to learning as the pupil move through the school. This is hoped to make the pupil more enthusiastic about their own learning and show in their teacher assessments.		
2. We are planning to continue with the science club as soon as we are allowed to further	To sign up for the crest awards, send out letters to invite pupil to participate in the club. Pupil will be given the chance to complete tasks for the crest awards.	SL		Pupil will gain their crest awards after completing the tasks and investigations set during the science club time. They may then be used as science leaders in school as a further development for the next academic year		

develop and nurture a love for science in our setting						
3. To develop literacy opportunities in science to further embed this subject	SL to attend a course led by Techniquet. The ideas on this course with regards to literacy in science will be disseminated to all staff and added to the science staff notice board. Staff will plan for these opportunities every term.	SL All staff	Spring/summer term	Book scrutiny will identify the use of literacy in science. It is hoped that there will be several opportunities for staff to add literacy to their lessons following the information given to the SL during her course.		
4.						

WIDER OPPORTUNITIES REFLECTION: (towards the END of your PSQM journey)

What was the **IMPACT** of your SCIENCE WIDER OPPORTUNITIES actions on:

- you as a leader of science?
- your colleagues as science educators?
- the pupil as young scientists?
- other members of the school community?

4 or 5 sentences max per action and including references to your core documents, e.g. (slide 4, Science Development Log)

We have begun the transition from the old curriculum to the new and so far the journey has been very successful. The idea of a topic approach that encompasses all areas of the curriculum has really engaged and motivated the children (slide 4). With regards to science we have seen a real change in the attitudes of the children and they are all enjoying science being taught in a context much better (slide 13). The approach immerses them and gives them the chance to ask and answer questions more for themselves, it gives them ownership over their own learning. The most useful resource the staff have found to help with the teaching is the Explore, Engage, Extend document (slide 12), it gives teachers to chance to see what the children already know and understand about the area they are covering. From this they feel confident to teach the area the children need to focus on and asking the children for ways they want to learn. This will lead on to beginning the new curriculum fully next year and the mapping of skills will begin, we have a format that has been designed now and we are ready to start in September 2021. The curriculum reform has given opportunity to ensure Science is at the fore of teaching and learning and that it has a focus on developing solutions to the problems our pupils and planet face. It also ensures compliance with Welsh Government regulations.

Science club has not been able to go ahead this year, however we are hopeful for next year. It will be open to all children once a week. We will have parents invited in to help and get involved in all the activities (slide 12). This club will build on previous years' work and hopefully involve the CREST award which we have signed up to participate in. The children are keen for this club to get started again and enjoy the investigations they do. This indicates a positive attitude to Science across the school and from our pupils.

Subject leader attended the course and using a staff meeting time she was able to disseminate the information to the staff (slide 1 and 4). The staff have been given the opportunity to put this work into their planning and they have produced some excellent work in classes (slide 5-8). The children have enjoyed some of the different activities they have written. The subject leader will continue to develop the use of literacy in science (slide 13) in different ways and also to monitor its use in book scrutinise and learning walks. This demonstrates a commitment to ensuring a focus on Science across the curriculum and way of embedding literacy and numeracy in Science teaching and learning. (slide 13)

Links to local areas and groups is to continue to develop, helping the children see much more of how science fits in to the wider world. We have taken part in online teaching from Technocamps, Royal college, RHS-Grow social, Woodland Trust. Also with the employment of a forest school teacher, we hope to develop much stronger links with the local park trust and surrounding areas. (Slide 12-14)

Recommended word count – 500 words

POST-PSQM WIDER OPPORTUNITIES NEEDS and ACTIONS: (After writing your reflection)					(left blank)	
Ongoing/future development need: (Based on your reflection. Add rows as required)	Action(s) to address this specific need:	Who?	When?	Intended impact of actions (on pupil, staff, SLT/governors, SL or parents/carers)		
1. To monitor the embedding of literacy in science	Learning walks and book scrutinies. Staff meetings to discuss ideas and good practise with regards to this.	SMT Subject leader	Every term	To see evidence of literacy skills being embedded in science. To enhance the work produced by the children and to give it a specific purpose		
2. To begin the mapping of science skills across the start of the new curriculum.	Using the document we have produced to map the range and skills of the children. We will need a recap at the start of the new academic year	Curriculum leader, Subject leader	Autumn 1 st half	To ensure the coverage of the skills for the children. Make sure that we have given the children the opportunity to cover all of these aspects on their learning journey.		
3. To restart the science club following the CREST awards	To make further contact with CREST. To complete a risk assessment for the club	Head teacher Science lead	Autumn	To begin the club again to make the children enthusiastic about science, engaged and want to learn more.		