SL: A To regularly meet with staff and children to update and share visions after SL's training.



SL: B There is strategic support for subject leadership which is well established and reciprocal

Before PSQM, subject leader time was given on a weekly basis.

After PSQMQ, if there was any extra workload, if requested, SLT will try their best to find cover so I can have additional time out to keep up with the workload.

The impact of additional time meant I could work on targets effectively and give ECT's or new teachers time to support them.

F	A rya's Menu States Correls with humans
F	dough balls with pipe on log
F	Maints Chick and forth held
1	Chisto pasta with gardie bread and grift my Chisto pasta with tomatos on top.
F	Duck
-	Twite Fruitte with ice - coean Frich fruid with ice - coean Chocelite provide with custant
	Diality Maaga Jure Field water Vanilia millethale Delectors menul
1	NS-Why do we need proben
1	We need poster because we will and thing multille and have good geowthe
1	

Less worksheets used

Next steps to challenge

Before PSQM, subject leader did not get to meet with SLT and found it difficult to share suggestions to raise the profile of science. This was mainly achieved through emails which talk longer to process.

During PSQM, we have arrange regular meetings to discuss science across the school.

Regular meetings with SLT has given me the opportunity to regular share my ideas for science. This has helped raise the profile of science at Edison. We are now growing our own vegetables, taking part in 'The Great British Spring Clean'. SLT can see the impact these initiatives are having on our school community.

I prefer asking the children to present their findings from their investigations through write ups rather than sticking pictures of investigations. It was a waste of paper and didn't show what the child had learnt. Teacher, year 4.

Pre PSQM During PSQM Impact

Working scientifically aims displayed across all classroom to refer to



'This CPD really helped me understand how to adapt snap science planning to make it more manageable to teach. I feel more confident adapting the lessons to support my SEN pupils.' ECT year 5.

below with the second s

Time given to support ECTs with planning

sL: c There is a rigorous monitoring and improvement cycle using evidence and views from all stakeholders and sources to shape development in science.

We would carry out Science book looks on a termly basis and give feedback to the teachers feedback but there was no planned support after to address and targets.

After PSQM, we now have the science surgery time for teachers to visit if they would like to discuss their targets or we have arranged for ECT's to observe subject leader's lesson.

'These Science surgeries are helpful; I find it easier to ask questions on a 1:1 basis rather than in front of everyone' ECT year 2

During PSQM

Pre PSQM

Before PSQM pupils' attainment levels were added onto 'Insight'. This was a useful tool to get an overall view of the data. However, the data was not being used for anything after.

During PSQM, we introduced retrieval style questions. The impact of this was to provide pupils with the opportunity to retrieve information they have learnt about from previous years/lessons. This is a great way to recap knowledge and support closing gaps in learning. Afternoon interventions also have science links incorporated.

Fig 14m. 8 2024

Before PSQM, I could see through science observations that science was not talk consistently across the school. New teachers were unsure of expectations.

During PSQM, the introduction of the crib sheet and staff CPD has supported the consistency of how science is taught as the expectations are clear.

> These pre assessment tasks are a great way to see the gaps in learning and support my planning and teaching. Teacher Y3.

Science data from insight is great to see gaps in learning. We can then implement them into our interventions where relevant. Teacher Year 4

13%							
Below		Just Below		Expected / Just Above	Expected	No data	
Barnwal, Siya	Below	Ahmed, Quinatul Ain	Just Seitre	All, Azan	Expected	Sharma, Purajit	(None)
Beniako, Ephraim-Isaac	Below	Chawla, Ayaan Vir	Just Below	Bansal, Anahat	Expected		
Chadda, Inayya	Below	Karimi, Maryam	Just Below	Basheer, Hena	Expected		
Kaur, Rivayat	Below	Rupra, Kater	Just Below	Ethatti, Saminah	Just Above Expected		
		Saint, Veer	Just Below	Ehullar, Angad	Expected		
		Toora-Joseph, Nylah	Just Below	Fernandes, Jazlyn	Expected		
		Vinotit, Niver	Just Below	Gill, Arvin	Expected		
				Havryliuk, Khrystyna	Expected		
				Hussain, Hashim	Expected		
				Jassal, Arya	Expected		
				Khan, Hamdan	Expected		
				Kot, Timoley	Expected		
				Kundal, Rajveer	Expected		
				Luca, Olivia	Expected		

V3 Curie

Science - Main 31 publis - Aveta

Impact

Intional curriculum links dentity that aremais, including humans, med he right types and amount of nutrition, and	Working scientifically links: identifying differences, semilarities or changes related to sample scientific cleas and processe
And they cannot make their own food, they get natifican from what they eat carning intenties: Accessity food and understand a balanced diet	Success eriflerite • I can suit food in different ways. • I know the maps food groups that we need and can plan a baterind der. • I can explain the effects of not having a
Scientific enquiry type: Geouping and classifying	Lear explain the effects of not having a balanced diet.
Lesson 2 1. What do humans need	Quiz 1
1. What do humans need that apply.	C W SLIVING
a) Food /	
b) Water v	
d) Air (oxygen)	
e) Sleep / /	th as a form of survival
2. Humans need warm	
(True) /0	r false
3 Humans are animal	s that can survive using
their instincts.	
True	or (jalse)
4. If you were on a d	leserted island, what fruit or humans? Circle one
a) Banarias b) Coconuts	

Pre assessment strategies

Evolutio

	Inheritance ent for learning	- Internet
Drow a reard map. W scholary test H in to	tat to provide an or www.rbiog.gastien? on hus life on Earls website and downlike re time, and what are the factors that compliant the rebotiance and variation of traits is long- quarters?	List hards
Provinge Generation Tensing	Hy understrading at a C. advanting guession 200 Hock at Unskin how - Congoel as work like Jitter and Inverse I lates gitteraria as the second and second age. It also been use lines 9. Brency Hold (10) if with a marking	glas Not plase pase pase pen rub leat
8-1	nor knowledge of this topic.	Ns The mate
taligentation broad	add). No waves to the oversetting question over time, used when one the factors that non of press is living organisms?	

we love will at parents

Book look shows HA pupils consistently being stretched and challenged.

Teaching A Key need: Provide CPD for staff and support teachers in teaching and delivering



T: A There is provision and signposting of a sustained programme of internal or external professional development and support with which staff engage.



T:B Teachers use and evaluate a developing and extending range of evidence-based strategies to challenge and support the learning needs of all children.



T:B Teachers use and evaluate a developing and extending range of evidence-based strategies to challenge and support the learning needs of all children.



TA: C Resources are systematically audited and acquired (purchased or borrowed/sourced from outside agencies) so that children can regularly and safely use a wide range of appropriate practical and digital resources, information texts and the outdoor environment.



T:C Key need: To audit more closely looking at each piece of equipment and replacing damaged ones.



I prefer ordering stock in advance, it means I need to make sure I am more organised and prepared for the lesson and saves me time searching for stock myself. YR2 teacher



Science stock organised and accessible

I like that I don't always have to write in science, I like the experiments but found the writing hard. Gluing and sticking my answers was much better for me.' Year 2

We use more resources in Science now, the lessons are much more fun! I also I ke collecting it from the science room and returning it to the science room. Year 4, science ambassador

I love our new Science books, I can learn lots of new facts and they are so interesting. YR3

Practical lesson include resources to answer questions

Harshy 7" December 2023 Edito & Anata Lia Lia Lia partis d'aprindriden Marine Mari	How to grav polaton in " lange Backs lang " Blocks
A mean and	- Light (and) Nather (Ian to do A). - Die south of the a long here - The standy of the hord of the south to make space - The is phate to the solution which you good marked a gradient in the solution which you good - Grane Har phates with soil and yoully god the south dama
-	Chalcon Sprack - Child - Children and Explore Sprack - Child - Children and Tables I. I dealered my scarce opening advantation

Range of resources being used in investigation





Year 3- bridge building using upcycled materials



Order request Description with website line 1 Plant pots - https://www.hope-education.co.uk/product/science/environmental-science/field-studies/plant-pots-75mm-pack-of-10/he1007223 HOPE Central area to request science resources

I look forward to the science news in assemblies! I like keeping up to date with how science could change our future. YR5



Year 4- Thames quality visit – Using local resources

Year 4- states of matter practical



L: A : Children develop independence in the full range of enquiry types, using scientific enquiry skills appropriately to answer scientific questions about the world around them.

Y4– grouping and classifying



Y4- comparative and fair testing of the quality of the River Thames.

When we started PSQM, pupils and teachers were aware of the five types of enquiry and had a good understanding but were not confident referring to them within lessons and linking tasks to the enquiry.

Y1- observation of environment over time.



During PSQM gilt, I have noticed that the science surgeries, CPD and child friendly posters displayed in the classroom have made it quicker and easier for teachers and pupils to become confident learners and know when and how they are implementing this into their lessons.

From the pupil voice and observations, I can see that the impact of the CPD and posters have led to pupils talking about scientific enquiry skills and linking it in other lessons more confidently.



Y6 – Pattern seeking Electricity

Y3 – using secondary resources to research



And make and many second seco	2 – ident	ifying, class grouping.	sifying and
	- way co	and setses	e you spore are
Are some person kept rubicy the Materials with abrick The some person kept rubicy the some person kept rubicy the Materials with abrick The some person kept rubicy the some person kept rubicy the Materials with abrick The some person kept rubicy	Notal plastic rabric Wood Penim rubber		
Note y data of the register of effects on the register of effects of the register of the registe	The S	ent a fair me person	Kept rubbing the
Process Property Complete Comple			
Conduction bases Healers - Start - Copping	an of adjoint and the second s	An and A data and a da	Example 1 Example 2 Example 3 rence and lays Gelf alde Sold Appropriately rence and lays Gelf alde Sold Bible Social / Dar Handle Hild, -molified Hild, -molified Bible Social / Dar Handle Hild, -molified Hild, -molified Bible Social / Dar Handle Hild, -molified Hild, -molified Bible Social / Dar Handle Hild, -molified Hild, -molified Bible Social / Dar Handle Hild, - Mill, -
	1.00% /b	pieves, Lateratures Candudes	Screw. Bills Copper
Y4 – identifying, classifying and grouping.	Y4 -		



L: A

L: B There is a school-wide commitment to continually improving assessment practice and processes for formative, summative and statutory assessment, through regular evaluation which ensures that they reflect the shared understanding of the purposes of assessment in science and current best practice.

Before PSQM, teachers and pupils were using Explorify, concept cartoons, random name selector, mini plenaries etc to formatively assess the pupils. This was working well for most pupils, but this would not always work without lower attaining pupils. They were relying on teacher support.

During PSQM, we introduced Kagan cooperative learning. Kagan Cooperative Learning provides structured support, peer assistance, and opportunities for active participation.

Our lower attaining pupils are now working collaboratively with their partners to magpie idea, ask questions and get support, helping them feel like more confident learners. Lower attaining pupils are now contributing more in class discussions allowing teachers to assess their progress and understanding of the topic. The kno the ch Y3 - Kagan cooperative 'Find someone who'



The knowledge organisers are great for the children to refer to so they can answer many of their own questions. T4 Before PSQM, we used Insight to record summative data. This data was then used to plan interventions with English, maths and science as a focus. This worked well for out lower attaining pupils and the gaps in learning were closed. However, there was no additional planning to challenge and stretch the pupil working at or above age-related expectations.

'I love doing the Kagan activities, I get a movement break and it a better way to learn rather than sitting at my desk.'Y3

	Lesson 2	
1. Tick the	the correct answer	: The word dark mean
b) com	k room. plete absence of liv i with some light	ghe /
2. A wi	ndow is a source	of light.
	True or	false /
3. Tick <u>1</u> light. a) mirro b) cand c) Sun	τ le√	re a natural source of
4. Fire is	a natural source	of light.
a) The m b) The m	True / jor the correct answer woon is a natural woon is an artificie oon is not a light	er. light source. 11 light source.
	4/5	

During PSQM, we introduced retrieval style questions at the start of every lesson bases on previous data. These questions can be based on any science topic from any year group they have been in.

Retrieval questions at the start of each lesson help pupils revisit and retain previous topics, aiding memory and comprehension.

> 'The retrieval questions are great way for all ability pupils to revisit previous topics. They find it more challenging than expected sometimes. .'Y5 teacher

Pre PSQM During PSQM Impact

WO: A : Whole-school planning links science to other areas of learning, including English and mathematics, and to whole-school initiatives.



L: C : The whole-school community supports and promotes initiatives that encourage all children to think that science is relevant and important to their lives, now and in the future.

Before PSQM, many of the science workshop, visits or extra-curricular activities link to science were organised by the science lead.

During PSQM, teachers are organising trips, workshops or visitors arriving without subject leader support. They are thinking about interactive and creative ways of teaching science practically and linking it to real life context.

By planning more science related trips and workshops it helps to expand children's understanding, engagement, and practical application of scientific concepts through hands-on experiences and interactive learning environments.



L:A Key need: To empower both teachers and pupils to become more confident in knowing what the skills are, how they can be applied and their wider use in cross curricular work.



Y3 – Resources left for pupils to explore and answer questions





EYFS – Gardening and eating what's grown





Year 5 – general knowledge science





During PSQM Impact **Pre PSQM**

Before PSQM, we planned Science as a stand-alone subject. We planned to teach Science for a minimum of 2 hours a week with a practical aspect included. However, this was not always taught consistently across the school. Teachers were not supported regularly enough, and this caused inconsistences.

During PSQM, we wanted to raise the profile of science in our school and now plan our subjects around our science topics. Book looks and observations are organised on a termly basis to monitor the standard of science being taught across the school and support is given to teachers that need it. Teachers can visit the 'Science surgery' or email the subjevt leader to observe a lesson or discuss targets on a 1:1 basis.

Pupils now have more opportunity to develop their critical thinking, problem-solving, and inquiry skills. Linking science across the curriculum promotes a deeper understanding of scientific concepts and their real-world applications. The standard of teaching and learning of science across the school has improved and teachers are feeling more confident planning and delivering higher quality lessons.

Before PSQM, we planned three trips a year for each year group, none of these trips needed to link to science.

During PSQM, we have arranged at least one school trip a year, for each year group, with a direct link to their science topic.

By organising Science trips, pupils are getting the opportunity to build on their science capital. The trips enhance pupils' engagement, offering hands-on experiences, sparking curiosity, and reinforcing classroom learning. They also gain the opportunity to develop a deeper understanding of scientific concepts through real-world exploration.

Pre PSQM During PSQM Impact

Year 5 – melting points link to maths

WO: B: There is regular and purposeful involvement in a range of initiatives supported by other organisations and topical science activities, both in school and with their families.



WO: B: There is regular and purposeful involvement in a range of initiatives supported by other organisations and topical science activities, both in school and with their families.





Hounslow Urban farm visit for all year groups– Links to animals including humans topic

I loved Science week! We got to learn about different scientists and do lots of investigations!' YR2 pupil



Year 1 - Visit to Kew gardens – Links to 'Plants' topic.



Local secondary school visit for science workshop



Science week poster competition – 'Time' theme



Whole school science fair

WO:B Key need: To introduce a school-based, pupil run 'eco refill shop'





Exiting news! The Eco refill shop is reopening on Wednesday 28th February 2024, 3:15-4pm. As your child is an essential part of the Eco team, we would like to request a later pick-up time of 4:15pm to ensure they have adequate time to participate in handling setup, sales, and packing away.

Please let us know if there are any issues or concerns with this adjusted pick-up time. We appreciate your understanding and support in making the Eco Refill Shop a success.

