

## TA Key Need:

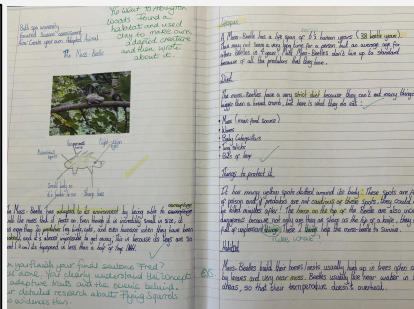
Continue to take part in up-to-date CPD related to Science teaching

**Progress:** Staff are regularly sign-posted to Science CPDL opportunities and the impact of any training is monitored. CT's (inc new teacher) booked on Science CPD sessions via PSQM and STEM Learning as well as the SL. Teachers are encouraged to share the impact on their learning and how benefits the children; this is monitored.



This course supported our school development priority around writing and also builds upon outdoor cross-curricular learning at Abington Woods- this course will support us in maximising these opportunities. One of which is on the left when children created a woodland creature in clay at Abington Woods, then then wrote about its adaptations

CPDL is monitored by SL which ensures coverage and impact on their teaching is measured and effective



**Impact:** 100% Positive pupil voice feedback about teacher knowledge and use of resources to engage their learning. 100% teachers regularly engage in updated CPD opportunities. Ofsted commented on teacher subject knowledge - focussed around adapting the Science curriculum for pupils with SEND and / or in receipt of Pupil Premium.

6/2/24	STEM Learning - Engaging Science for KS2 CPD with Mrs. [Name]	CT - C4*	CT will work alongside SL to audit the Science books we have for EYF5-Y6. Alongside SL and representatives from each year group, new science books to be ordered. This will increase the children's opportunities to work scientifically using secondary resources.	Diary date with SL. Audit Science books in library / classrooms. Share resources with staff
27/2/24	PSQM Unpacking the National Curriculum Scientifically	CT - C4	Very useful sign posting to additional new resources from RSC. Recap about Enquiry Types (already well embedded at GAPS), PLAN / TAPS / PSTT resources (already using). CT confident that school using most up to date assessment tools which mirror current practice and greater depth understanding	CT to share useful links / resources with SL including ones relevant for EYF5. CT to explore Royal Society of Chemistry Steps into Science resources further and re-read ASE Primary Science Skills & How to Teach them, plus PSTT Enquiry Skills Guide. CT to consider coverage of disciplinary skills taught over the year and any adjustments needed. CT to look for opportunities to develop estimation skills and selection of correct measurement tools with C4 in Summer Term.
Date	Activity	Who was involved	A sentence or two to explain the IMPACT	What will you do as a result?
7/3/24	PSQM Unpacking the National Curriculum Scientifically	CT - C2	Very useful course for the C2 Teacher (C2T) who is new to the school. Excellent sign posting to the resources from RSC, including demonstration videos. Course included getting participants to undertake experiments with simple resources to explore the elements of working scientifically. Recap about the 5 Enquiry Types (already well embedded at GAPS), PLAN / TAPS / PSTT resources. Good references made to latest research, including EEF Improving Primary Science - 6 Key Recommendations and Ofsted findings. Recommended 10 Key Issues Report on <a href="https://www.sciencecrossdisciplinarity.co.uk">https://www.sciencecrossdisciplinarity.co.uk</a>	C2T to share useful links / resources with staff. C2T to explore Royal Society of Chemistry Steps into Science resources further and read ASE Primary Science Skills & How to Teach them, plus PSTT Enquiry Skills Guide. C2T to reflect on Science Types of Enquiry taught over the year in C2 and make adjustments as necessary. C2T to watch demonstration videos and ensure that there is an appropriate balance of pupil and teacher questions, to avoid what the course referred to as 'lessons which were formulaic and lacked authenticity'.

During the 2023/24 PSQM journey, staff offered to complete their individual entry into the School Development Log, measuring the impact of their learning and any next steps planned.

### SUBJECT LEADER AND CPDL LOG

SL Action	Monitoring	Communication SLT	SL CPD	Staff CPD	
Date	PSQM	Who?	Action	Impact	Next Steps
01.12.22	Post	SL	evaluating skills	useful specific ideas for Y6 Materials, Lifecycles, Y6 Evolution topics	toed newt and Ikttaalik
28.2.23	Post	SL	Ogden Trust Autumn Meeting	See Minutes	Spring Meeting.
25.4.23	Post	SL	End of KS2 SLP Moderation in Science		Bring along Science Books June 6 for moderation - borderline
28.4.23	Post	SL	Primary Science Network Meeting	Updates	Staff Meeting CPD Follow up May
			Meeting LVC contact re Ogden Trust	Shared Action Plan.	To liaise with LVC re transition activities
10.5.23	Post	SL	Science CPDL - all staff	Shared new resources with staff	
17.5.23	Post	CT	ES - CPD - Plants and the Environment		

**Our next steps:** Create Google Form to address any new potential skills gaps - research CPD locally to address this and /or have 1:1 sessions with SL; encourage staff to attend in person CPD as opposed to online going forward.

**TB Key Need:**  
Continue to ensure that staff are aware of new initiatives and curriculum updates are cascaded

**Progress:** Termly sessions by SL timetabled to ensure regularly sharing of information from Science Network Meetings, SL CPDL, initiatives from PSQM journey, Government Curriculum updates and what Teaching Good Science looks like. Facilitated sharing of our own best practice across the school.



Staff confidently use online tools such as Explorify to enhance the children's learning. In this example Explorify is used to check understanding and misconceptions at the start of lessons.

Science on a Page encapsulates at a glance new initiatives and current good practices

Pupil comments transcribed by TA in EYFS to inform next steps and address gaps and misunderstandings.

**Pupils will leave Great Abington Primary:**

- Secondary transfer - curious, with the skills and knowledge to be effective scientists with an understanding of the world
- with a current knowledge of the possibilities for careers in science, as a result of our community links and connection with national agencies

**Enquiry:** The children learn the subject-specific disciplinary knowledge of science. They use this to answer enquiry questions set as well as asking many of their own. Different enquiry types are planned, monitored and shared to ensure coverage.

**Subject specific vocabulary:**

- Identify, stretch, contribute, recap and encourage children to independently use and apply key scientific words for each topic
- Word-rich learning environments
- Shared lexicon with parents

**Assessment of learning:**

- Progression of skills supporting a consistent approach to teacher assessment
- Primary Science Curriculum Progression (PST) informs prior and post learning objectives
- End of topic assessments - PLAN (ASL) moderated exemplars used to ensure quality of judgements
- Termly summative assessment

**Curriculum on a Page**

**Science**

21st Century Scientists

**Vision for Science:** Creating 21st Century Scientists by ensuring our pupils are challenged, curious and confident learners; able to overcome challenges through resilience, a school principles aligned with School Values.

**Our approach:**

- Taught through rigorous, engaging Science units, where appropriate linked to other subjects / topics
- Year 9 visit to the Royal Institution for the Environment
- Draws on National Curriculum and Early Learning Goals experiences
- Weekly Science lessons in all classes

**Substantive knowledge:**

2004 - 2020

KS1: Animals (inc Humans) / Materials / Seasonal changes / Plants

KS2: Living things & habitats / Light / Rocks / Forces / Animals (inc Humans) / Plants

KS3: Living things & habitats / Earth & Space / Forces / Materials (inc Humans)

KS4: Evolution & Inheritance / Living things & habitats / Animals (inc Humans) / Electricity / Light

**Monitoring**

- Sharing of good practice - focused on Principles in Action and Enquiry Types
- Termly monitoring discussions

**Partnerships and enrichment opportunities**

- Membership of ASL
- Explorify, Reachout CIP, PST, CLEAPs, Great Science Share/Skills
- Lead school in the Cambridge Oglethorpe Trust Partnership
- Subscription to magazine e.g. BBC Wildlife
- External specialists e.g. Department of Engineering/ Launchpod / Barnard's Inn Science Trust
- Visitors sharing their expertise e.g. Museum/Launchpod
- Workshops e.g. Cambridge Science Centre
- Loan boxes e.g. Museum of Zoology, City Museum
- High quality non-fiction books linked to each topic
- Wider school environment e.g. Outdoor Learning Area/ Algonzo Woods Pump Track
- Science Capital is a priority in school activities



**Impact:** 100% teachers confident in teaching science and sharing their good practice. 100% teachers aware of current online resources and support material to deliver exciting lessons. 100% teachers understand the term Science Capital and its importance for children's learning - staff survey (Oct 2023)

Subject Leader delivers timetabled, termly Science CPD to all staff groups, sharing knowledge gained through Science Network Meetings, updates through memberships, subscription services, social media, colleagues and STEM. For example our lead outdoor growing Teaching Assistant now teaches elements of the Science curriculum to class groups as part of our curriculum offer

Our next steps: Continue to regularly share with staff new resources, websites and good practice including building a relationship with feeder Secondary School. This work will focus on skills and knowledge progression into Key Stage 3 ensuring that we develop the critical thinking skills required for the GCSE curriculum pathway

**Explorify - Odd One Out Komodo Dragon Duck Lion - March 6, 2024**

Iris: "I think the duck because it's the only one that can go in water, and it has a beak."

Noah: "The Komodo dragon because it's the only one that's got a disguise. It can disguise itself as a log. (What do you call it?) Camouflage"

Grace: "The lion because it's got a mane"

Giulio: "The Komodo dragon because it's the only one without fur or feathers"

William: "The dragon is a reptile"

Zac: "The duck because it's the only one without any sharp claws" (What does it have instead) "Flippers." (Do you know what it's called?) "Waddle" (Good idea).

Helped by Noah: - "webbing". (Webbed feet).

Eleni: "A goose has webbed feet. You need webbed feet for swimming"

Charlie: "The duck because it's the only one that's not dangerous." (In what way are the others dangerous) "The lion might hunt food to eat and the dragon might scratch."

Discussion around predators, carnivores and herbivores.

Affie: "Isaac has a Komodo dragon". (Probably a bearded dragon).

Kian: "The lion because it's the only one with fur around its face." (What do you call it) "mane".



**TC Key Need:**

Signpost staff to new resources, maintain the Science cupboard and purchase additional as needed for Outdoor Learning

**Progress:** Resources being purchased for the development of the Growing Area, outdoor learning provision and STEAM area. Class and general resources audited updated as required.

Quality resources supplied by The Ogden Trust enable pupils to become Electrical Engineers; investigating why circuits may have failed and what needs to be changed for a successful outcome. Staff and Community volunteers working collaboratively to ensure resources match needs of the growing area and the Science curriculum. Contributory factor in outstanding personal development judgement (Ofsted 24) and in achieving Level RHS Garden Award 24

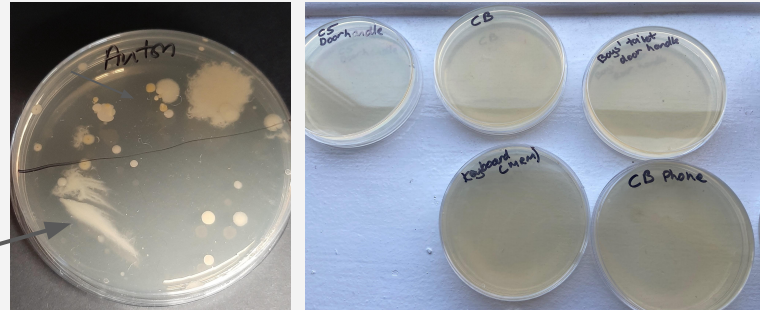


**Impact:** 100% teachers confident in teaching science with quality, updated resources and sharing their good practice both indoor and outdoor. 100% of staff signed up and using CLEAPSS guidance for H&S and included within Governor monitoring programme.



Using BBC Microbits pupils asked How does the type of surface affect the surface temperature? Comparative and fair testing investigation.

Using donations from the local scientific community, resources are supplied to enhance the children's learning. Using agar plates, children were able to use scientific methods, usually found in a laboratory, to measure the bacteria on themselves and around the school. Handling the plates and avoiding cross-contamination deepened their learning about science in real life.



**Our next steps:** Continue to regularly share with staff new resources, websites and exemplars of what good science teaching looks like using sophisticated resources