Evidence Slides PSQM

Aston Rowant Primary School: A VE school of 100 pupils, tucked away in a small village, with mixed-age year groups and a high SEN proportion, especially in UKS2.

Hedgehog Class: Early Years/Reception
Squirrel Class: Years 1&2
Fox Class: years 3 & 4
Owl Class years 5 & 6

Subject leader is Andy Manning, Class teacher of Owl Class, who is also ICT Lead.

PSQM
Primary Science Quality Mark

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Our Vision and Principles for Aston Rowant School 2025/26

Pupil Voice:

I like them all, it really links to our growth but there's one part about sharing roles and equipment fairly; I think its clearer to just say we share equipment because I find it harder to share a role.

Year 5 Boy

They are really good and I can tell they are linked to our school values, but I do think the last bit of 2 is a bit wordy for younger children.

Year 6 Girl

Staff Voice:

I love how you have linked the statements to our values. However, I do think nos 1& 6 are quite similar.

Y3/4 Teacher

Think is really helpful so we know, as adults, what to look for to tell is science is going well, even if it isn't going into the books

HLTA

SLT Voice:

Children actively think of their own questions, identifying avenues for exploration

This ranks first because it captures the heart of our vision 'Growing Together and Enjoying Fulness of Life'

-Asking questions

-Being curious and showing wonder

-Identifying what they want to find out

-Exploring a breadth of ideas and possibilities

Children take opportunities to discuss and debate their thinking

This second because the discussion and debate show that pupils are GROWING by:

-Making sense of evidence

-Justifying ideas

-Explaining cause and effect

All of the statements matter, but these two fit the culture and ethos of Aston Rowant Primary School the best.

Headteacher

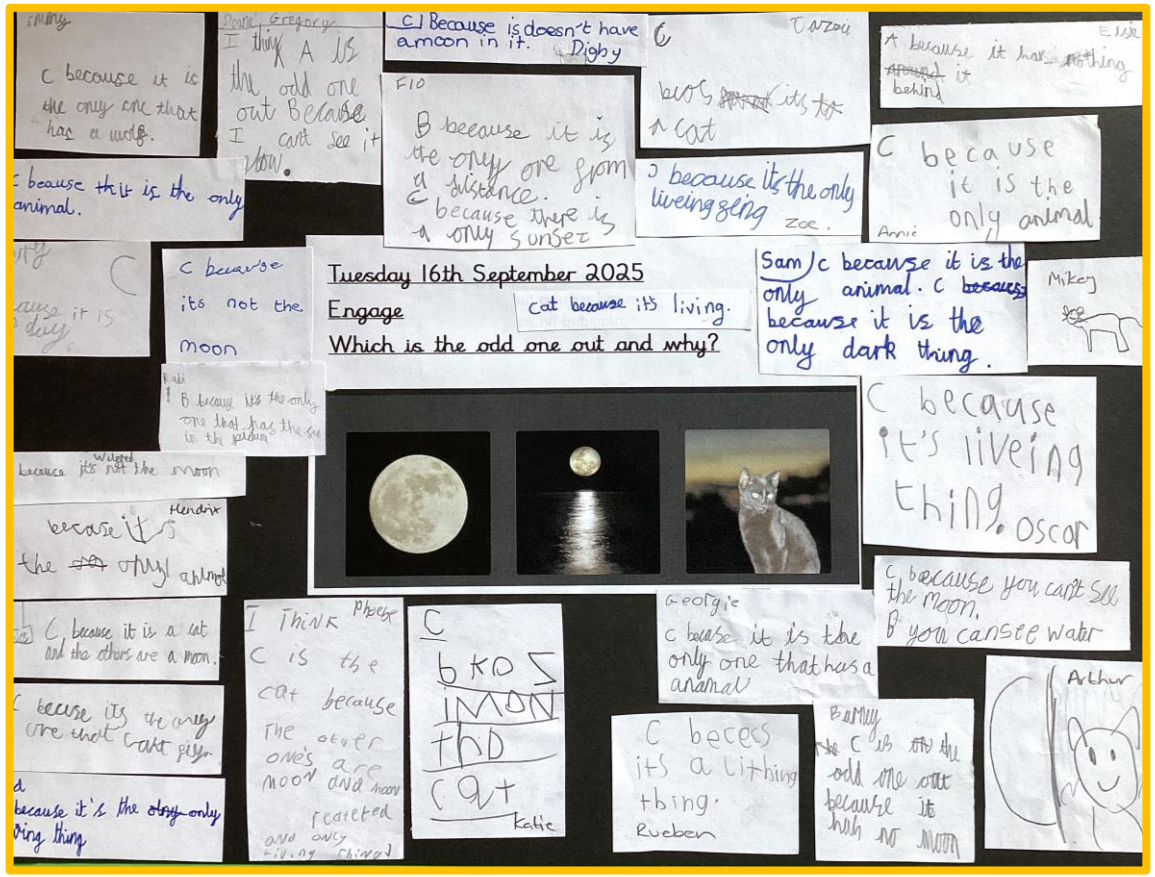
Science is working when:

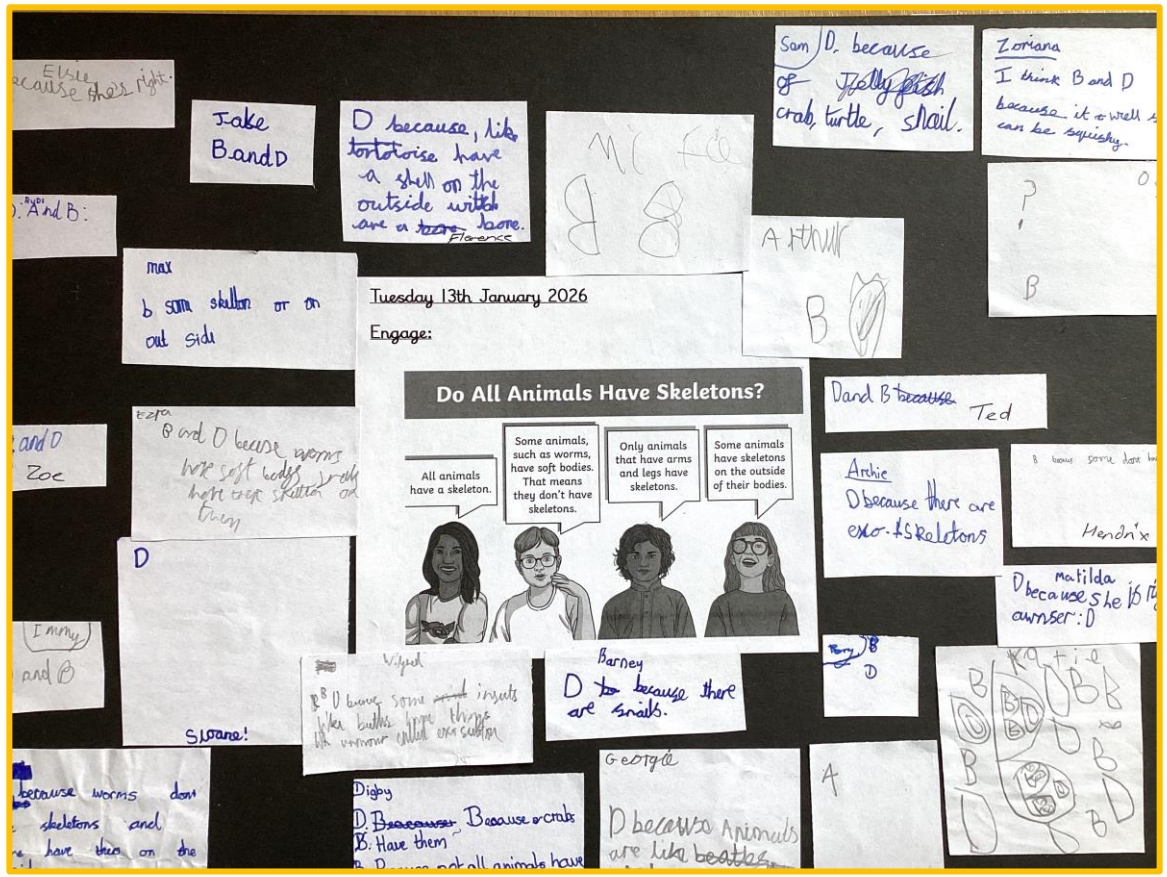
1. Children are excited to learn and investigate.
2. The children actively think of their own questions, trusting their own understanding identifying avenues for exploration.
3. They are actively listening to each other's ideas and assisting one another to draw a conclusion.
4. Children work together in harmony and share roles and equipment fairly.
5. They take opportunities to reflect, discuss and debate their thinking, hearing one another's ideas equally.
6. Children value and show gratitude for guidance and questioning, recognising these as opportunities to deepen understanding and improve their scientific thinking.

Growing together, rooted in God, enjoying fullness of life. (Colossians 2:1-7)

Impact: The new, revised Vision Statement retains the clear links to the school values of Wonder, Trust, Outreach, Harmony, Resilience and Gratitude, whilst the rewording makes clearer distinction between the points 1&2 . The central idea of what we want to see in class when talking about Science remains undiluted, and is now clearer for leadership, staff and visitors to understand what we hope to see modelled in our school.

SLIDE 3 - CDA – The science curriculum engages, inspires and challenges all children by promoting inclusion and equity





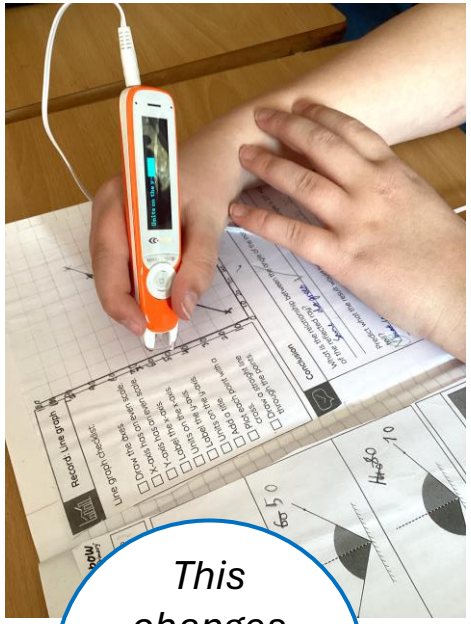
What: KS1 & LKS2 use Explorify as their 'Engage' activity – this can be a verbal observation, written or drawn, enabling children of all abilities to be included and creating that 'whole class moment' of wonder.

Impact: All children are able to access and share ideas and opinions within our lessons: and this is captured in the floor books by support adults using scribing or 'word buttons' to record their voice for later.

SLIDE 4 - CDA – The science curriculum engages, inspires and challenges all children by promoting inclusion and equity

What: Our aim, post audit, was to develop science capital for all pupils ,and how both disadvantaged and G&T pupils can see Science is an inclusive topic. We managed this via all teachers adapting the curriculum for SEND, PP and other disadvantaged pupils, making an almost bespoke science curriculum at our school. You are not likely to see a lesson delivered straight from the scheme – we know our children-their strengths and their barriers.

Keen children at Science Week 2026



This changes everything! Y6 boy, SEND

As a school, we continue to adapt for inclusion by empowering all staff to continue to adapt and alter learning schemes to be inclusive for all pupils. (and providing banks of resources for them to do so). Recent work this year without SENDCO has led to purchasing of word pens to assist lower ability readers to access text independently , and more CPD sessions with our SENDCO will be provided in 2016 Summer Term 1 with focus on inclusion ahead of Ofsted window opening soon.

5. **Science celebration**

   Discussion about what we want it to look like – Science Fair to share ideas – presenters to be decided by the school (winners of presentations).

   Winners to be decided by the end of Term 4 and Science Fair to be held in Term 5.

   Budget for this to be explored – suggestion of bringing in the planetarium for the morning and other Science related activities with the Science Fair in the afternoon.

   Do we want an overall winner, or should it be a celebration of learning?

   Barley Hill suggestion – Science Week will be comprised of predict, plan, test, present (presenting will be done by year groups visiting each other (potentially within key stages) and then have voting within the key stage and three lots of winners will be chosen to represent the school at the Science Fair.

6. **Science CPD – A CPD from Science Oxford were discussed.** We can will look at TCTS 1- 3. Pending approval from heads. https://scienceoxford.com/schools/primary-schools/cpd-primary/

With other HUB leaders, the subject leader has been developing Science share at Barley Hill , which has evolved for a Science Share for disadvantaged pupils to ensure that Science is inclusive to all- each school will focus on inviting Pupil Premium, EAL, low attendance or otherwise affected children .

Impact:. *By deciding to focus our attention to the inclusion of Pupil Premium, EAL, or other children for the forthcoming Thame Partnership Science Share, we have ensured 'disadvantaged' pupils have a chance to share their Science passion in a non-competitive environment-just for sharing their love of learning.*

SLIDE 5 - CDB – The science curriculum engages, inspires and challenges all children through planned progression in content and procedural knowledge

What- We undertook a Vocab audit twice this year to gauge the development of the project to increase confidence in accurate and effective scientific language- here are samples of KS1, LKS2, and UKS2- survey 1 performed on Oct 2026 and Survey 2 performed in late January 2026. gender and category of child are listed for clarity-

	SS (F) Oct 2025	SS Jan 2026 **survey 2**	CHB (m) Oct 2025	CHB 2026 **survey 2**	ED (F) Oct 2026	ED Jan 2026 **survey 2**
vocab used	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**
desciduous tree	n	n	n	n	n	n
evergreen tree	y	y	y	y	y	y
season	n	n	y	y	n	
weather	y	y	y	y	y	y
egg	y	y	y	y	y	y
health	n	y	y	y	n	y
hygeine	n	n	n	n	n	n
life cycle	y	y	y	y	n	Y
pupa		y	y	y	n	y
spawn		y	n	n	n	
survive	y	y	y	y	n	y
teenager	n	y	y	y	n	y
toddler	y	y	y	y	n	y
Tadpole	y	y	y	y	n	y
bulb	n	y	y	y	n	
evergreen tree	y	y	y	y	n	
deciduos	n	y	y	y	n	
diagram	n	y	n	n	n	
fruit	y	y	y	y	y	y
flower	y	y	y	y	y	y
garden plants	y	y	y	y	y	y
group	n	y	y	y	n	n
growth	y	y	y	y	y	y
leaf	y	y	y	y	y	

Key Stage 1 children understandably made the most growth- Child ED (Y2) was able to improve their vocabulary understanding by an additional six words, whilst child SS (Y2/SEN) recalled an additional two words over the A/W-Spring term audit. Interestingly, the word 'hygiene' remained unclear throughout, and will need to be addressed by LKs2.

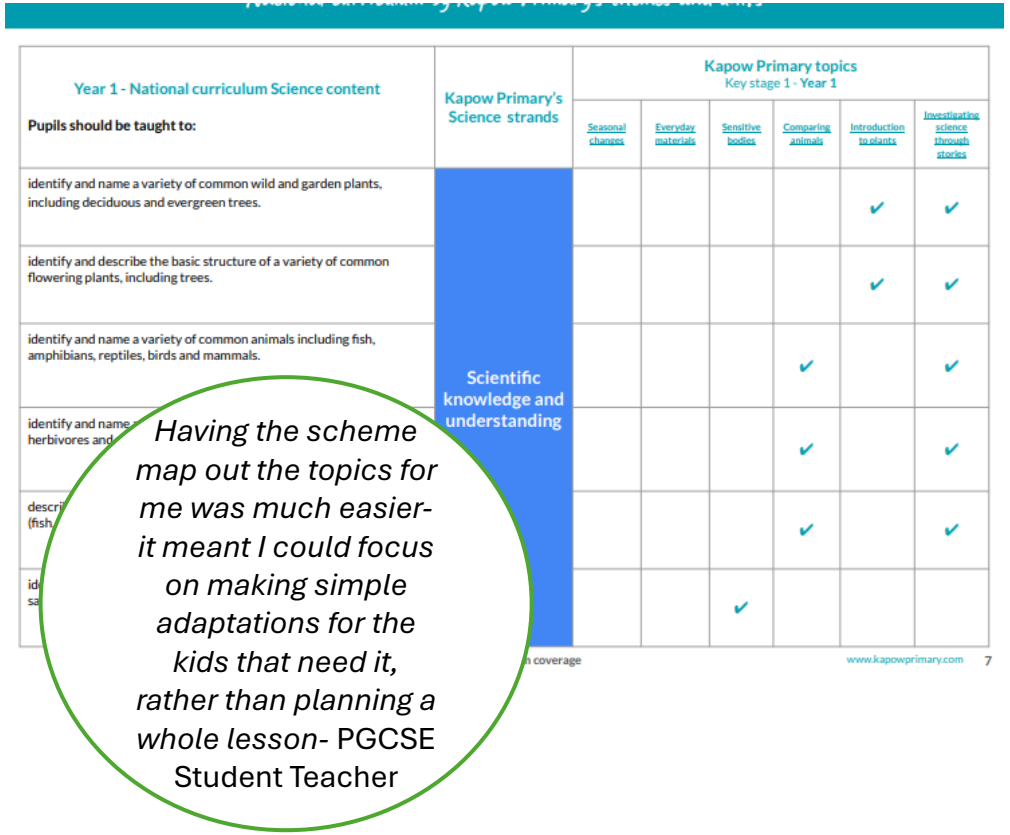
	AW (M) Nov 2025	AW (M) Jan 2026 **survey 2**	SG (F) Oct 2026	SG (F(Jan 2026 **Survey 2**	ER (M) Oct 2025	ER (M) Jan 2025 **Survey 2**
vocab used	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**	**able to define y/n**
bar chart	y	y	n	y	n	y
conclusion	y	y	y	y	n	y
crystal	n	y	y	y	y	y
diagram (KS1)	y	y	y	y	y	y
fossil	y	y	n	y	y	y
grain	y	y	n	y	n	n
group (KS1)	y	y	y	y	y	y
hard	y	y	y	y	y	y
hardness	n	y	n	y	n	y
observe (KS1)	y	y	n	y	y	y
predict (KS1)	y	y	y	y	y	y
record	y	y	y	y	n	y
research (KS1)	y	y	y	y	y	y
rock	y	y	y	y	y	y
sediment	n	y	n	y	n	y
sedimentary rock	n	y	n	y	n	y
sedimentation	n	y	n	y	n	y
soft	y	y	y	y	y	y
soil	y	y	y	y	y	y

Lower KS2 survey highlighted a good progression of prior knowledge- see the KS1 word 'group' being recognised- possibly due to KS1 Math and ICT focus on grouping and sorting images or data. Some new terminology introduced for the specific unit was not recognised in survey 1, but was recognised by survey 2, with exception of the work 'grain'.

Impact: We will continue to monitor and assess vocabulary use and teaching methods by introducing the GSS and similar activities to younger pupils to strengthen Science across the school, and we will subscribe to Wigits to adapt knowledge-grid targets for non-readers from Summer 2026

SLIDE 6 - CDB – The science curriculum engages, inspires and challenges all children through planned progression in content and procedural knowledge

What: the school invested in the new scheme Kapow for Science and foundation subjects, because of its attractive spiral mapping of the learning journey, which build explicitly on prior learning, and has been mapped against current curriculum statements by the Subject Lead to ensure fidelity. The nature of this scheme allowed the school to reassemble to topics to sit within out school calendar and include particular units within certain whole-school topics: for example, *Reproduction*' and *'Life cycles and* is taught in the Autumn Winter whole-school topic of '*What Makes Me, Me*?'



Year 1 - National curriculum Science content **Pupils should be taught to:**	Kapow Primary's Science strands	Kapow Primary topics Key stage 1 - Year 1 Seasonal changes	Everyday materials	Sensitive bodies	Comparing animals	Introduction to plants	Investigating science through stories
identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	Scientific knowledge and understanding					✔	✔
identify and describe the basic structure of a variety of common flowering plants, including trees.						✔	✔
identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.					✔		✔
identify and name herbivores and					✔		✔
descri (fish					✔		✔
id sa				✔			

www.kapowprimary.com 7

Having the scheme map out the topics for me was much easier- it meant I could focus on making simple adaptations for the kids that need it, rather than planning a whole lesson- PGCSE Student Teacher

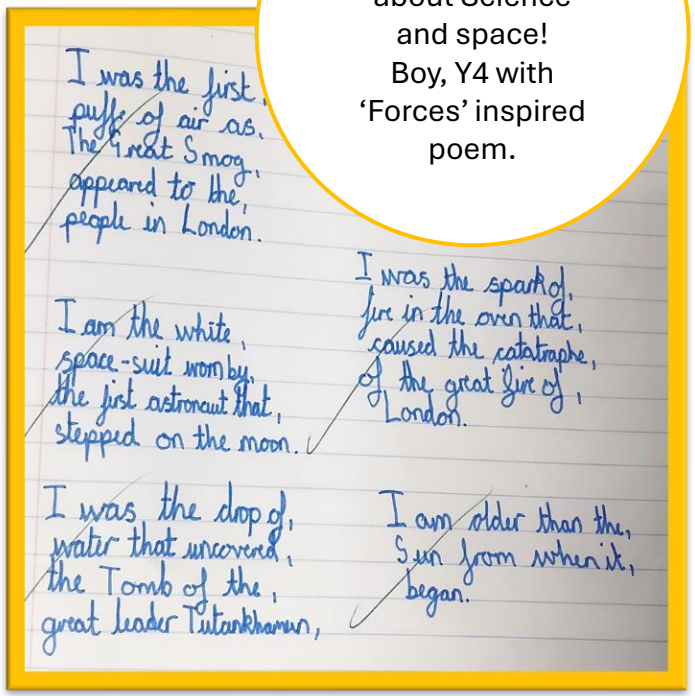
Impact: having the framework of Kapow ensures fidelity of language across all the year groups- something which tallies with our Vocab Audits aims, as well as ensuring teachers are confident in exactly what to teach in a certain lesson. However, our staff are not tied to this- they are encouraged to step away and include their own adaptations, experiments, practicals or otherwise- the greatest resource we have to inspire children is our teaching staff.

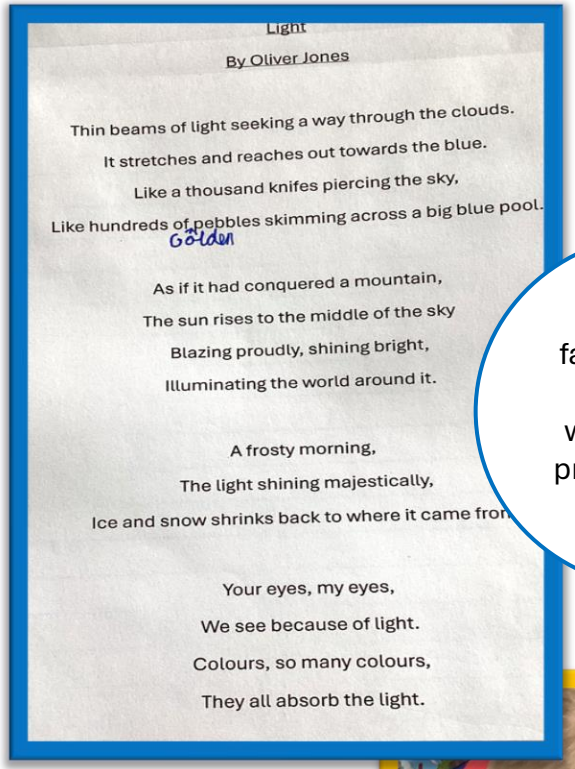
Donated to the school from a family within the school community, this microscope will be used to enhance the KS2 curriculum as the development of the natural world and the human body via donated slides.

SLIDE 7 - CDC - Teaching enables all children to learn science content and procedural knowledge by planning and sharing contexts and skills with other curriculum areas

What: In Literacy, pupils from Upper and Lower KS2 were challenged to create science topic inspired poems for an interschool Poetry Slam – we reached the finals!

I didn't know we could write poems about Science and space! Boy, Y4 with 'Forces' inspired poem.




Light

By Oliver Jones

Thin beams of light seeking a way through the clouds.
It stretches and reaches out towards the blue.
Like a thousand knifes piercing the sky,
Like hundreds of pebbles skimming across a big blue pool.

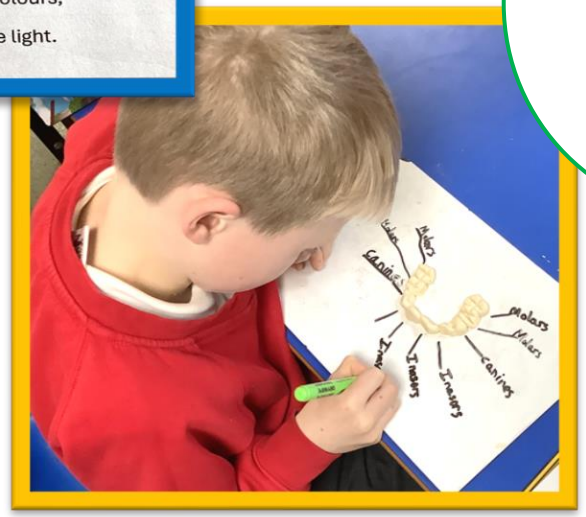
As if it had conquered a mountain,
The sun rises to the middle of the sky
Blazing proudly, shining bright,
Illuminating the world around it.

A frosty morning,
The light shining majestically,
Ice and snow shrinks back to where it came fro

Your eyes, my eyes,
We see because of light.
Colours, so many colours,
They all absorb the light.

'This is my favourite poem I've ever written- I'm so proud of it' Boy, Yr 6

Fox Class blended DT & Art skills and Science to build teeth suitable for an omnivore

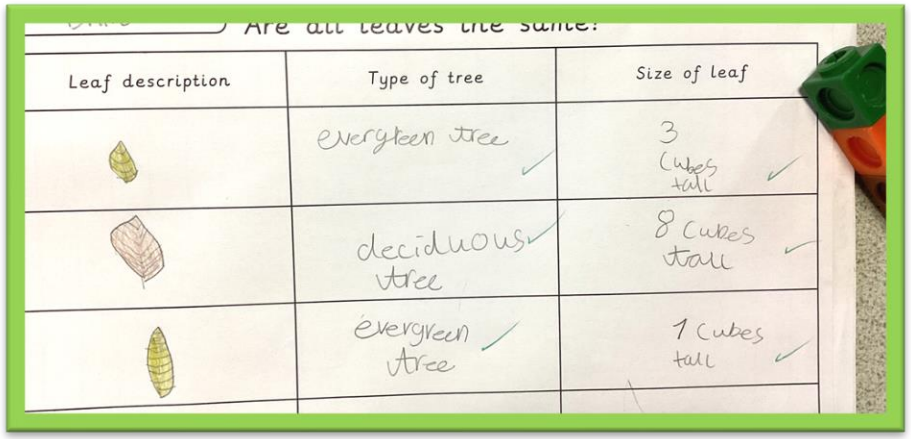


KS1 linked our Forest Friday sessions and Plants reproduction to propagate seeds in their class.

My seed didn't grow but not everything works in Science. We need to find out what happened now Boy, Y2

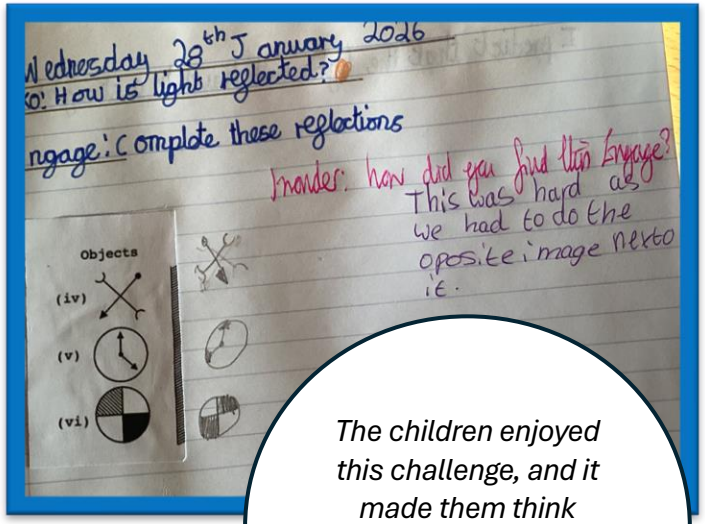
Impact: including procedural knowledge skills with other topics creates resonant ''Wow' moments with the children that help to embed these ideas and enrich their learning in an inclusive way

SLIDE 8 - CDC - Teaching enables all children to learn science content and procedural knowledge by planning and sharing contexts and skills with other curriculum areas

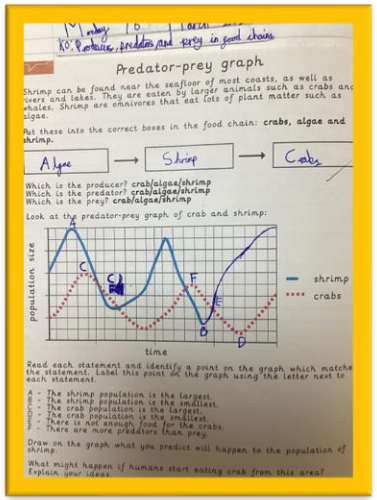


KS1 have been using maths link cubes to investigate scale of natural objects.

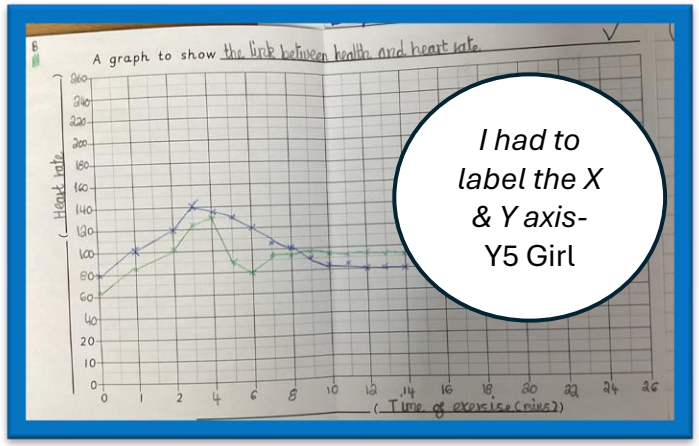
Maths is frequently included in our UKS2 classes- using division skills to find the mean average, or using non-verbal reasoning or lateral puzzles to stretch and challenge pupils



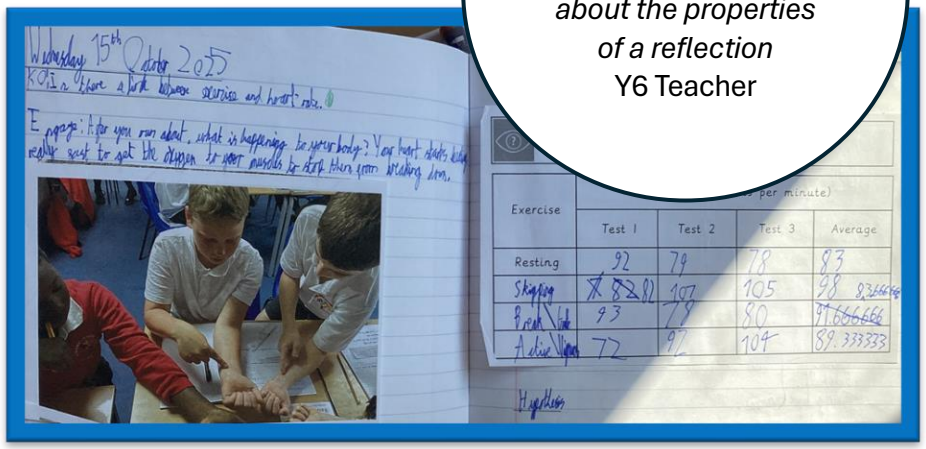
The children enjoyed this challenge, and it made them think about the properties of a reflection
Y6 Teacher



LKS2 pupils start to use line graphs to interpret data sets (left image), before plotting them in UKS2 to support their findings (right)



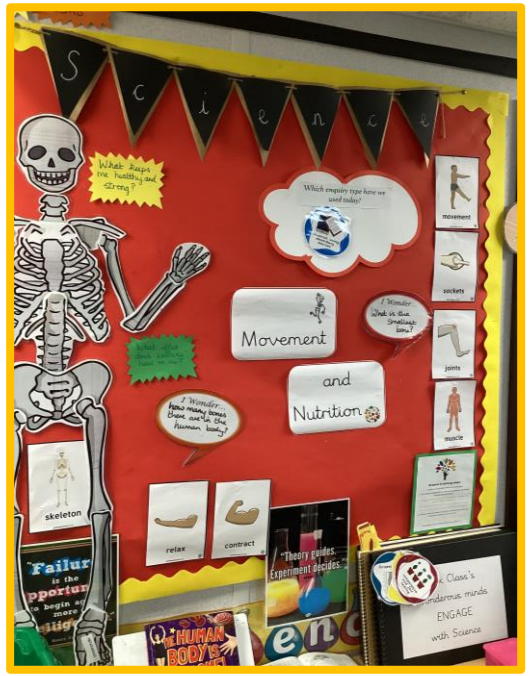
I had to label the X & Y axis-
Y5 Girl



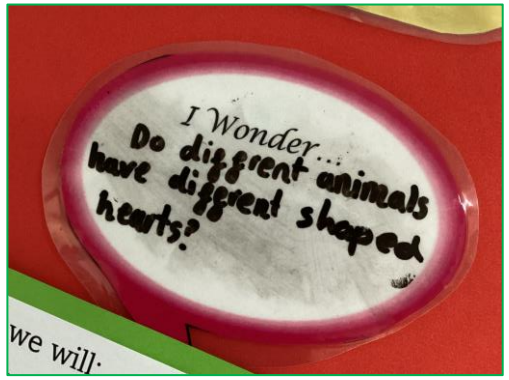
What: Maths has strong links with Science: and our lessons include a range of challenges to embed these skills: whether it is finding the mean average as we record results, plotting graphs, or even looking at non-verbal reasoning problems- for example before we think about reflection.

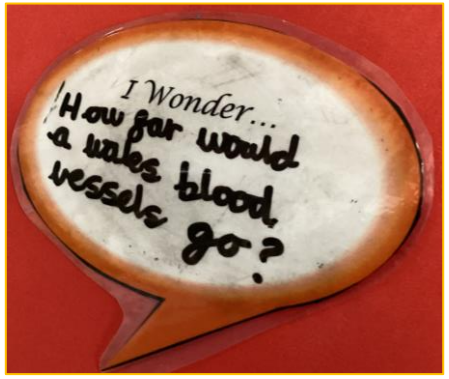
We will continue to build on our expansion of Science into other curriculums , including World Book Day 2026, poetry, Art and DT .

SLIDE 9: TLA - Teaching enables all children to learn science content and procedural knowledge by encouraging them to ask questions and express ideas

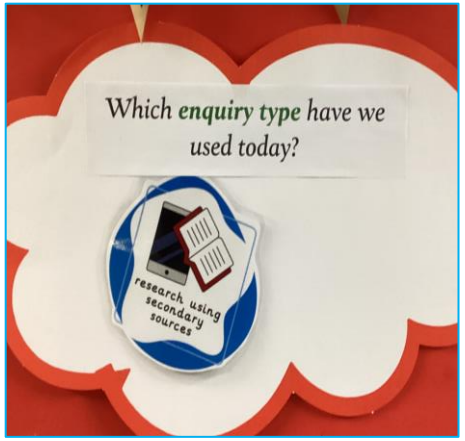


I wonder questions- these form the backbone of our teaching practise- we want all children to be curious, to ask questions that we can't answer- and then investigate them together! Around our Science Displays you will find 'I wonder' bubbles that feature children's real-life questions. We also include these on the starting KWL grid to record everyone's ideas.





Introduced this year is the focus on Enquiry Types (or '*Super Science Skills*' in KS1) to encourage children to think about which procedural skills are being used and later on, which could be used to solve pupil's 'I wonder' questions. (available in LKS2 upwards)



For the 2025 Big Science Share, several Y4 children created their own investigation into minibeasts and habitats and presented their findings at Science Oxford- complete with a PowerPoint presentation! There was minimal adult involvement- each aspect was chosen by the children, using their understanding of what the procedure should be (Class Teacher assembled their activities into the presentation video). The impact this created was a real buzz around 'the special Science project' in that term, and these children (a mix of G&T, and PP) were able to explain their investigation in depth to adults and other children alike.

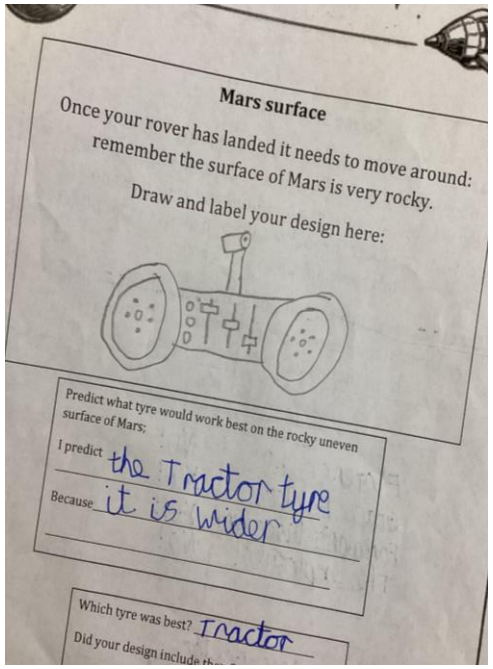
SLIDE 10: TLA - Teaching enables all children to learn science content and procedural knowledge by encouraging them to ask questions and express ideas

Our own School enrichment weeks combine fun and exploration with further development of core scientific working: 2025's Enrichment week saw the pupils looking for patterns in repeated results, whilst this years Mars themed 'Curiosity' event focused on predictions and conclusions, against a back-drop of colonising Mars.

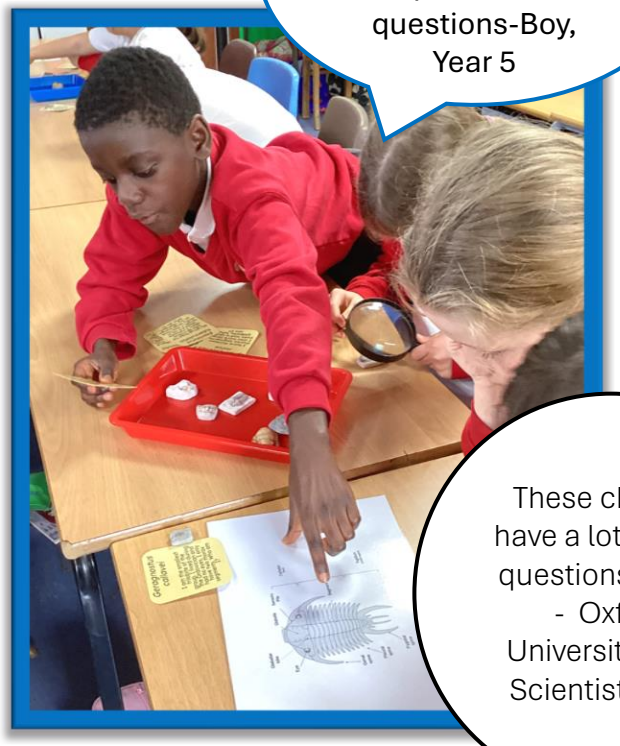
We checked which space soil samples were okay to grow plants in using acid Girl, Year 5*

*Lemon juice- Subject Lead

(Y2 girl) did her own experiment straight away! Parent voice



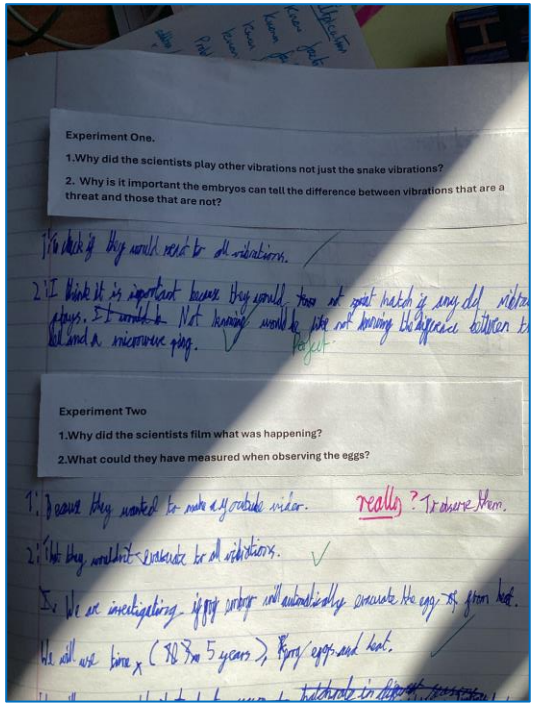
We have to think like scientists and use evidence to help us answer questions-Boy, Year 5

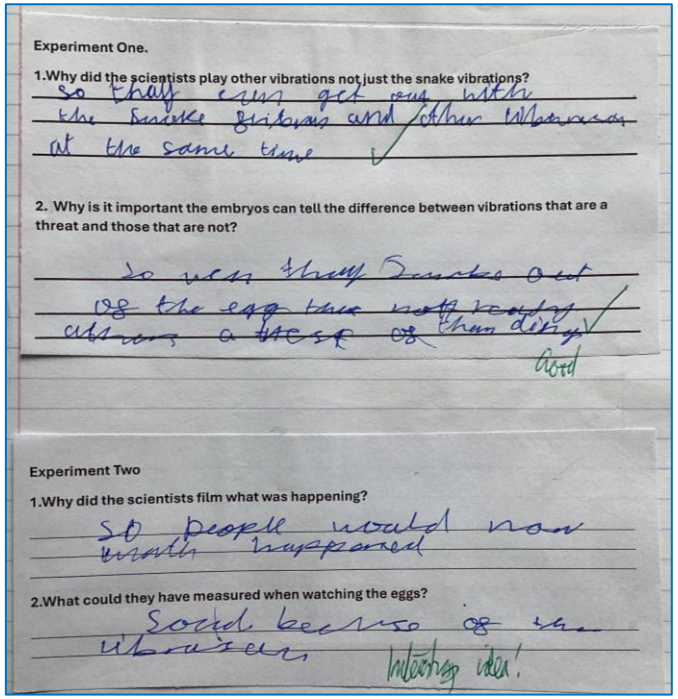


These children have a lot of great questions- Wow! - Oxford University Earth Scientist visitor

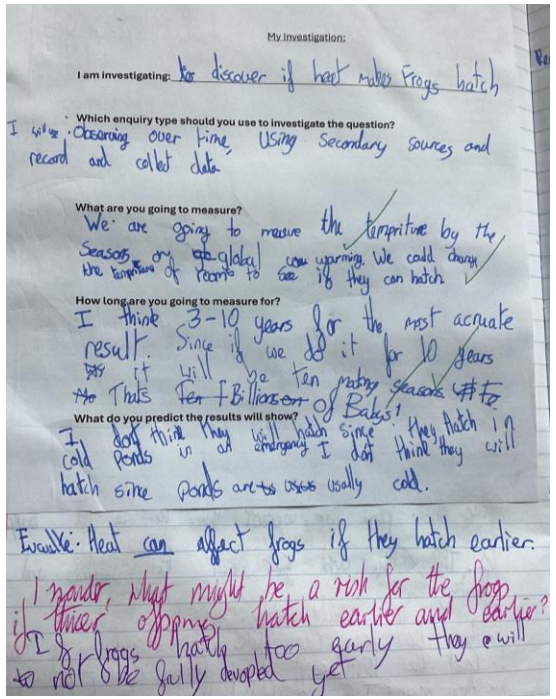
***Impact:**. Our enrichment weeks have boosted the profile of science Iwithin our school community- leading to a bit more investment in the topic and its capital. Immediately after BSW ,several children in KS1 bought in their own investigative projects and received Headteacher awards, highlighting the increased enthusiasm.*

SLIDE 11 - TLB - Teaching enables all children to learn science content and procedural knowledge by using approaches and resources that enable lesson outcomes to be met

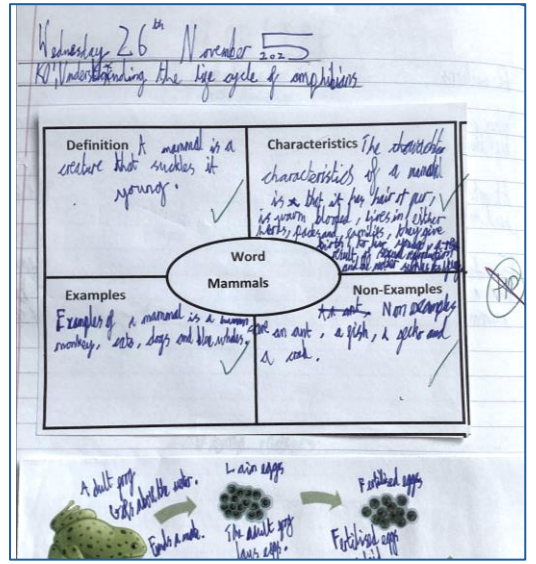


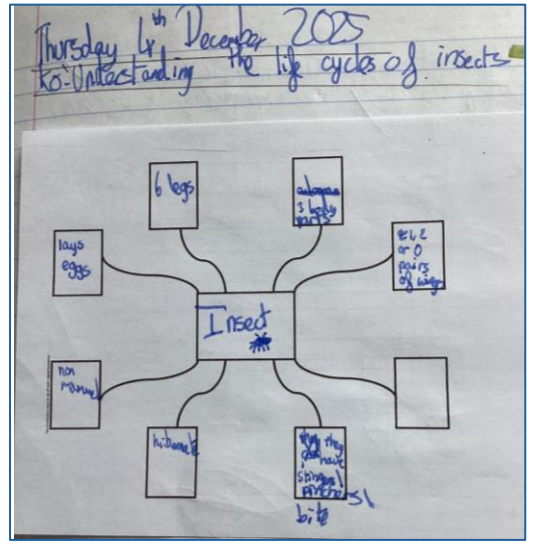


A side-by-side comparison of how teachers can adapt the lesson for pupils' abilities: printed writing frames help manage the amount of writing needed, minimising working memory drain. Other children will also record the questions from aural sources.



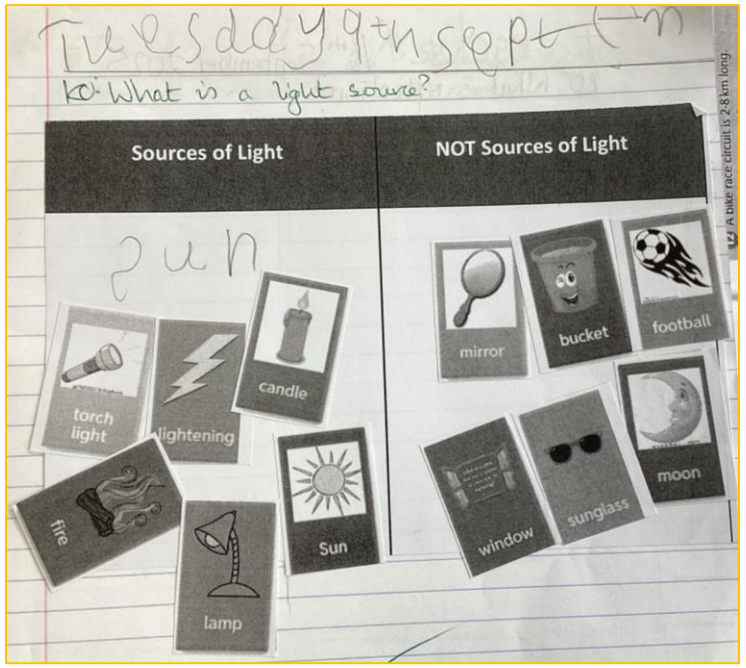
Simple writing frames structured in the same pattern help pupils understand each procedure and reduce cognitive overload.



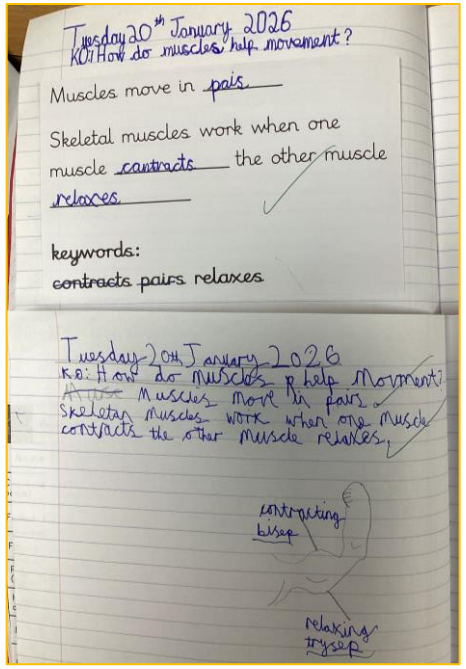


Impact: *Using Fayer models, insect diagrams and Venn diagrams are all visual ways to present a child's learning or understanding but reduces the pressure to explain everything in one block of text. We have found this is the most effective way to support children and ensure that they are able to access the learning goal, rather than be bogged down in handwriting.*

SLIDE 12 - TLB - Teaching enables all children to learn science content and procedural knowledge by using approaches and resources that enable lesson outcomes to be met.

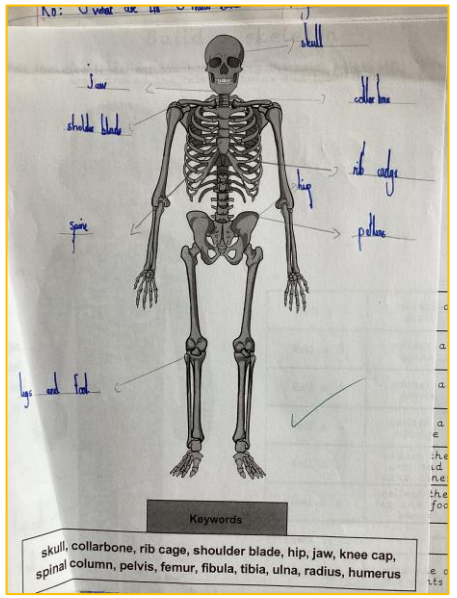


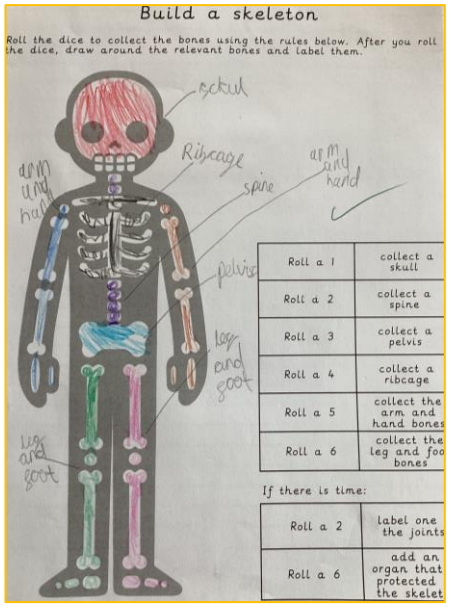
Class teacher and subject lead design this bespoke task for a SEN pupil who reads at a year one level - by removing all text bar simple word sounds, and including visuals, the child can access the same topic as his peers



All of our practical work is assessed for safety:

CLEAPSS primary

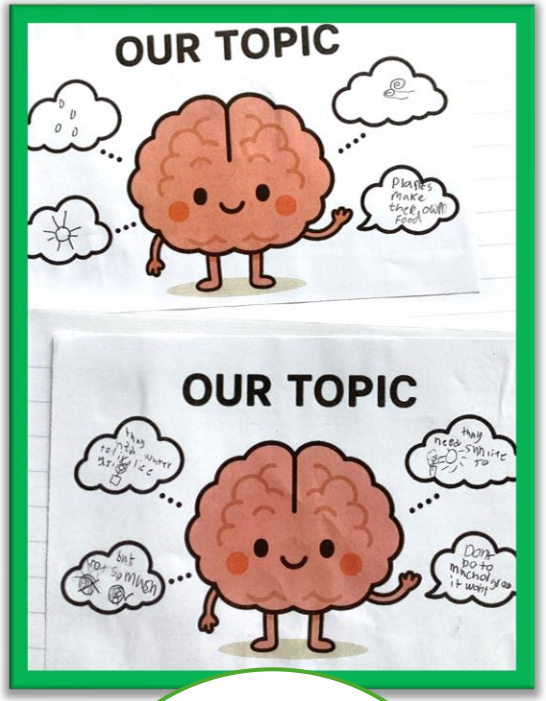


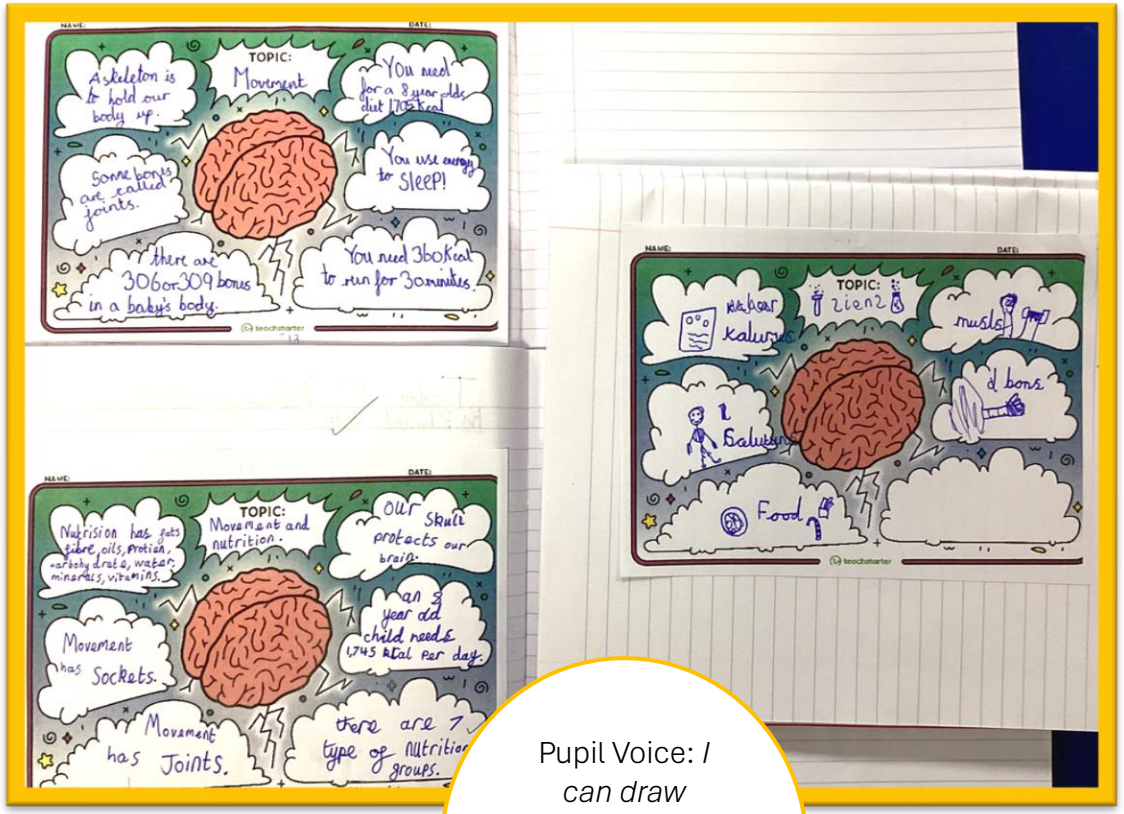


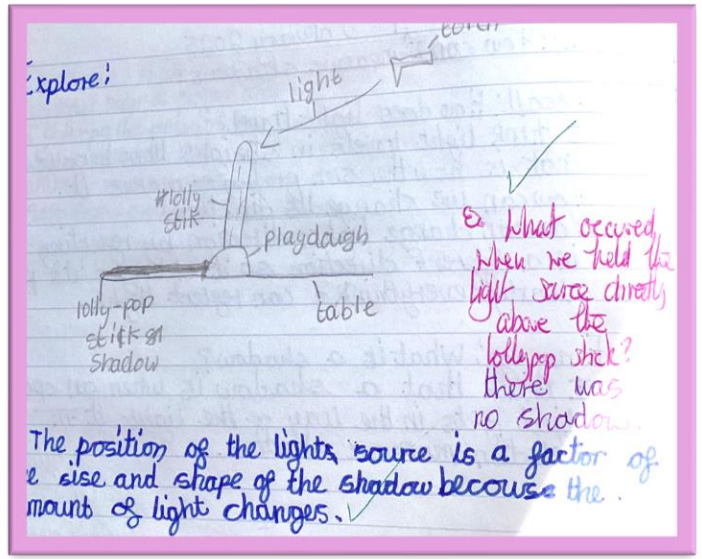
More direct comparisons between adapted work: a word bank is provided for the 'working at' child to select specific vocab from, whilst the 'working towards' pupil earns bones and builds the skeleton piece by piece in a race with a peer. Other supports include Cloze procedures- word fill texts in adapted sentences that may or may not have word bank to draw form depending on that child's ability level, here compared to an independently written paragraph using a word bank.

Impact: we have found that the love of Science and enthusiasm is growing stronger and stronger in each class- the children do not see the barriers that rigid scientific procedure can sometimes put in place, as our staff provide excellent adaptation and encourage the learning to be recorded in alternative means. Many children will say that Science is their favourite topic!

Slide 14- TLC Teaching enables all children to learn science content and procedural knowledge informed by formative and summative assessment







Yr 2 Teacher Voice: *this has been useful to see what knowledge sticks, and see where we need to recap*

Pupil Voice: *I can draw cartons to show I understand stuff*
Boy, Y4

Our marking scheme includes 'Pink for think'- this is not to highlight errors- we use this to draw out learning, help children identify misconceptions, or build upon ideas for children that have quickly mastered the topic and are ready for more. This is one way that we can provide stretch for G&T pupils.

Impact: subject lead has introduced 'brain dump' sheets adapted for KS1 and KS2- they allow children to record their knowledge in pictorial or written format, an are used at the start and end of a topic-helping teachers to form summative assessments of the children's substantive knowledge, as well as a valuable pupil voice resource.

SLIDE 13 - TLC - Teaching enables all children to learn science content and procedural knowledge informed by formative and summative assessment

What: Teachers share an online document for all foundation subjects- the ready-to-progress statements –based on substantive learning aims- from the National Curriculum are listed against each topic to assist us to identify who is met/not met (or who is working at the expected level) under the current framework: for example *'I can describe the movement of the Moon relative to the Earth'.* Teachers us this expected level to gauge if a child is working at, below or ahead of the expected level. This is only used as a guideline to be combined with teacher assessments based on working *with* the child. Termly 'Pupil Progress' meetings are held together as we update profiles on O-Track based on accrued evidence. Each topic is finished with a quiz, and a 2-page spread to create a poster all about that topic allowing staff to assess progress here too.

An extract of a Science Governor s report based on a year 5/6 lesson observation that happens three times a year.

Book Look Tracker		Subject: Science	Subject Leader: A Manning	Date: Wednesday, 5th March 2025
Focus	**Hedgehog (reception)**	**Squirrel**	**Fox**	**Owl**
Attainment *(Overall standards of current work, linked to students' targets)*	Books not seen, will arrange a learning walk for BSW 25 & Summer Term 25	Good: children seem engaged by lesson and have recorded their ideas clearly, with differing levels of ability.	Good: well-planned out lessons, with clear objectives for each ability group activity.	Good: a wide variety of ability means recorded knowledge is varied. Some children's books are quite messy, with images or diagrams stuck in upside down.
Evidence of adaptaion	Books not seen	More lessons shown this term, which shows that Science is routinely taught and practised by this developing cohort. Clear Consistent use of 'pink for think' questions to draw out individual ideas from year groups.	One task per class, with use of differentiated task sheets for skills groups. Did not see much evidence of 'Pink for Think' marking used to draw out thinking or clarify points, although this is likely being done verbally.	One task per class, mixed groups used and differentiated evaluate questions for pupils to select how best they can express their understanding of the lesson. Adapted tasks in use: cloze procedures, word banks, altered Knowledge Objective to. I wonder/pink for think questions for individuals to cement learning/ clarify points/extend ideas for Greater Depth.

Aston Rowant CE Primary School – Governor Visit Report (Final draft.. 3/23)

Name: Zoe Batt **Area of Responsibility: Science**	**Governor Learning Walks – Curriculum/ SDP**
Date of visit:	22/05/2025
Focus of visit:	Quality of education – Curriculum. I was aiming to understand how science is planned and carried out across the school SDP focus- Short term plans focus on lessons that are knowledge-rich and builds skills. Plans show how lesson plans deepen pupil knowledge and extend vocabulary and include varied recap and retrieval opportunities Lesson observations show: • careful task design, variation and scaffolding • teacher modelling built around clear success criteria. • pupil knowledge deepens and extends vocabulary. • varied and enjoyable recap and retrieval opportunities
Classes/staff visited:	Mr Manning Owl Class
Summary of activities eg observing classes, talking to staff and pupils, looking at resources, etc. I visited Mr Manning teaching a science class on forces to year 5 and 6. I also had a chance to speak to pupils about science and observe them carrying out an experiment.	
What I have learned as a result of my visit:	

classroom. It showed resourcefulness and teamwork. They were also able to successfully record their results and evaluate the task. Their understanding of why the different things went different lengths was good but the focus was more on carrying out theexperiment and they were able to show an understanding of variables etc

At the end Mr Manning gave them a question to answer and encouraged them to write something in their books for him to read when he marked about what they had learnt or been inspired by which I loved.

Christian values observed during my visit: (Please make any examples *specific*)

Gratitude	
Resilience	The students identified they were using resilience because they weren't giving up if the experiments didn't work
Outreach	
Wonder	Watching the students carry out an experiment and the wonder they were showing finding different things to ping across the floor was lovely to see
Trust	The students showed trust in Mr Mannings method but then were able to question it and improve it
Harmony	The students worked in small teams showing harmony and trying to improve the method together.

Safeguarding

General statements (please delete as appropriate):

- I was required to sign in and was asked for photo ID
- I was given a visitor badge and required to wear it in a given lanyard
- Children are polite and courteous to each other and/or behaviour is quickly challenged by staff if not.
- Classrooms and play areas appear to be clear of trip hazards and generally tidy, in a good state of repair.
-

Positive comments about the focus

I was able to speak to students about science, and they positively identified how the task was

Part of a Book look report, from last year, across all three classes

Impact: The subject lead for Science uses a fixed monitoring and evaluation format that is mirrored school-wide; consisting of pupil voice, books looks, learning walks and lesson observations. This maintains high levels of consistent language, fair assessment, and chances to share adaptative ideas with one another- our range of experience across the teaching staff, combined with our deep understanding of our pupils' needs and abilities, creates a well-honed and accurate snapshot of our children here.