

SMALL SAMPLE OF COLTON'S SCIENCE JOURNEY



PSQM- Colton Primary SLA. Beginning to see vision in principle.

Pre-PSQM Impact Next steps



We foster inquisitive scientists.

EYFS

I now know what science is at Colton. With one click of the website I can read the vision. I feel that Class Dojo is full of science. Year 2 and 3 parent.

Staff and children have collaborated to create a science vision and principles we believe in.

KS1

As a student teacher I feel like you can feel the vision of science through school. The children LOVE science now. KS2 student teacher.

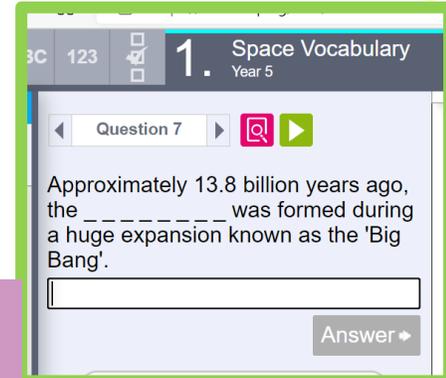
We always ask questions about science and our teacher answers them. I love it we learn about our body.-Ks1 child

LKS2

The BEST thing about Explorify is we just chat about science and I love science and you can never get it wrong because you can just prove it with your knowledge. KS2 child.

UKS2

I love when we use the tablets in science, our teachers sets us mini quizzes to see what vocabulary we know as scientists- KS2 child.



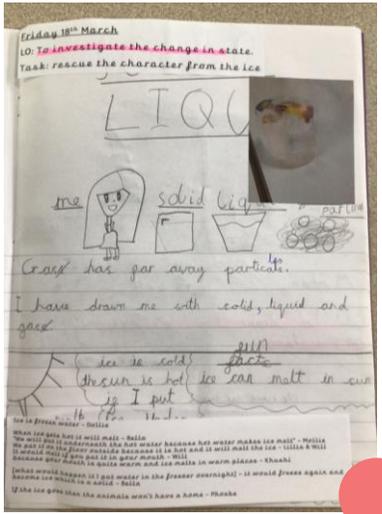
Vision is clear in lessons. The children's learning is based on their interests and have an input on the investigations chosen in class to match National Curriculum.



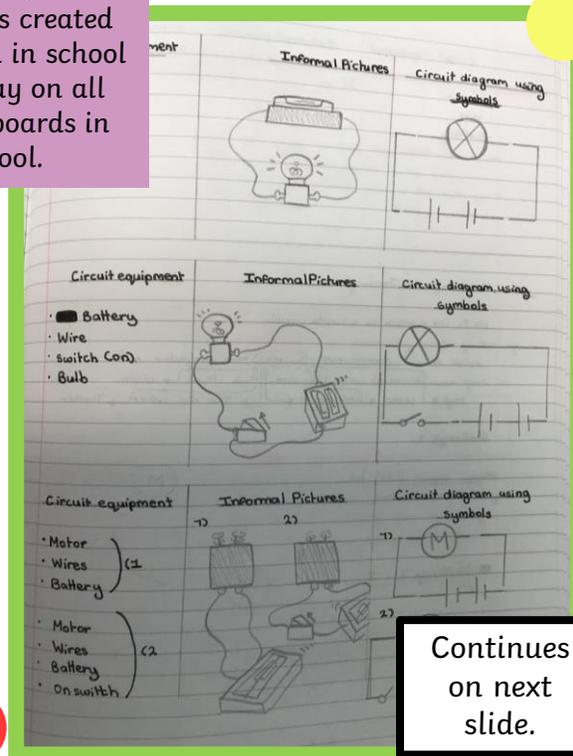
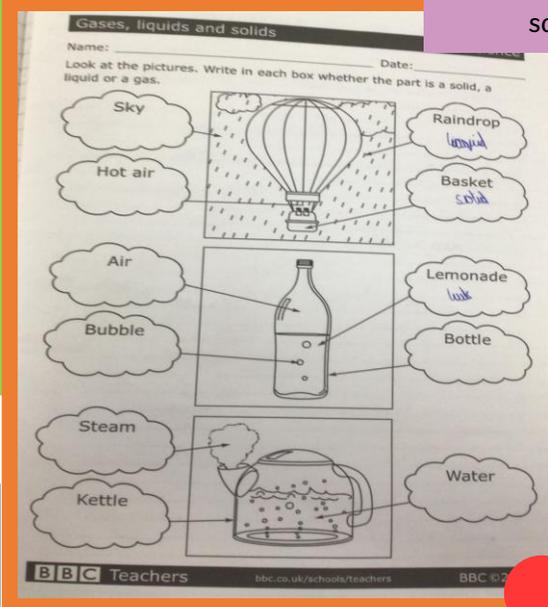
We have a range of opportunities to question, explore and investigate

Colton Primary school did not have a science vision.

Next, I would like to create a child version of the principles created by a child in school to display on all science boards in school.



Vision is clear in lessons. The children's learning is based on their interests and have an input on the investigations chosen in class to match National Curriculum.



Continues on next slide.

Tb and Lb- Introducing effective assessment for learning.

Snap Science has given me the structure and confidence I have needed to find the enjoyment in teaching science again. KS1 teacher.

Now, we have the I-pads I feel like a scientist as I can share my knowledge by talking into my presentations as I am not a very good writer. Year 4 child

Fit for purpose (explorify).

Olivia - "If you use a chocolate teapot and you put hot water in it, it would start melting."

Bella - "If you drop glass or drop it, it will break. A normal hammer won't break when you use it."

Oscar - "If you needed to smash a rock and you use a glass hammer, the glass hammer will fall to pieces."

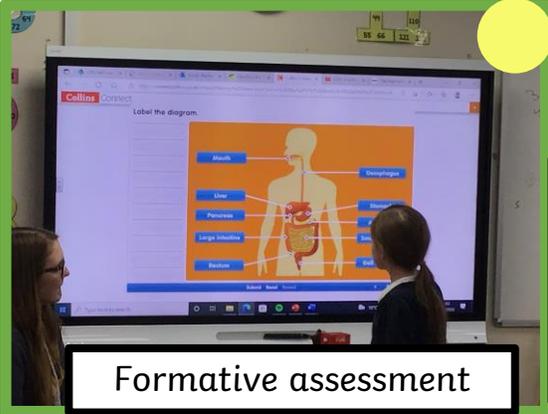
Khushi - "If you wore the wooden shoe, it wouldn't be comfy like normal shoe as it is hard, they are comfortable and soft inside."

Ayub - "If you use a chocolate teapot, the handle will fall off if you pick it up because chocolate can break easily, it isn't very strong."

"What if all your clothes were shiny?"

Oliver - "If you wore shiny clothes, they would shine in people's eyes and they would be blinded."

Explorify has revolutionised my teaching. My children could do it all day, they love it! The way they articulate their understanding makes me so proud. Every child can access it on their own level. As a teacher it is a fun way to see if they clearly understand. KS1 teacher.



Formative assessment

Staff have been introduced to and trained to use technology to formatively assess children. Then adapt their planning to allow all children to access science.

ODD ONE OUT

Autumn leaves



Formative assessment

SL is going to introduce TAP assessment as an assessment tool for enquiry skills.

Fit for purpose?

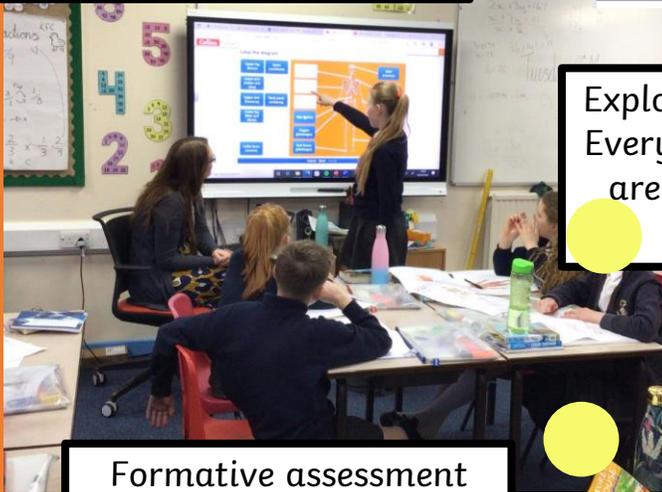


Save Mark as done?

Classroom view

Formative assessment

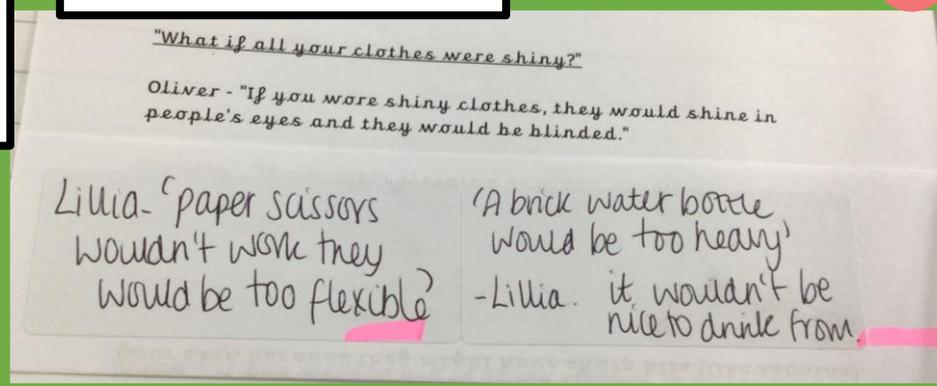
Pre, PSQM we didn't use low-risk quizzes or class discussion to assess the children. We would just read their science write ups and make a judgement.



Formative assessment

Explorify has evolved talk around science. Every child can articulate themselves and are doing it with a smile on their face. Ks2 teaching assistant

Reception have really enjoyed starting their Explorify journey. They love coming up with their own opinions. EYFS teacher.



Getting started with outdoor learning SLa, Ta, Tb, Tc , La and Lc

Pre-PSQM, learning was done mainly in the classroom. Very heavily depended on power points and worksheets.



Year 1 doing an observational wild flower hunt.



Now I have access to the PLAN assessment documents I can replica good lessons that are active and engaging. KS1 teacher.

Year	1	Topic	Animals, including humans
Focus of assessment (National Curriculum statements)			
<ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 			
Description of activity			
The children were asked to explore the plants outside using their senses, other than taste.			
Activity		Reason for outdoor learning	
 <p>Sage is soft when you stroke it with your fingers.</p>		 <p>Rosemary smells nice.</p>	
 <p>Bark of the tree is rough when I touch it with my hand.</p>		<p>This school has a good range of plants in the grounds, including a herb garden.</p>	
Impact			
<p>This provided a range of so the children were familiar with could name, e.g. lavender but also new smells.</p> <p>They made links between and other experiences of s different contexts e.g. sha</p>			



SL developed staff through PLAN looking at outdoor additional learning opportunities.

Nursery, have been developing the allotment area. Growing herbs and vegetables.

Science is more fun now as teachers ask us what we would like to learn. KS2 pupil.

My child looks forward to outdoor learning every week. It is all they talk about. Parent voice



Share 'Teaching Primary Science Outdoors' with GO

Snap science was purchased which was more in line with our science vision and principles.



We were looking for science using our senses.



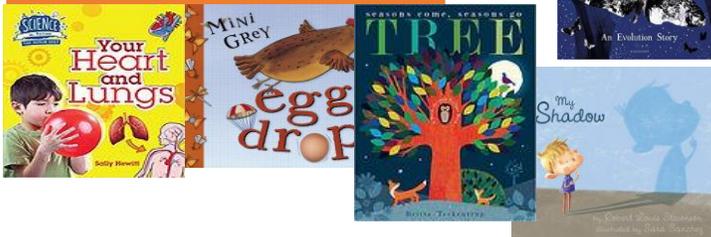
I think this is waterproof because the plastic doesn't let the water in - child with SEN

Opportunities to go outside to teach science is planned into the medium term plans. So children have explicit opportunities to learn outdoors.



Woa. We are continuing to improve our science links with reading.

Woa-Before PSQM, there were KS2 Reading Curriculum links with most Science topics. This introduced children to key vocabulary, scientists and science outside the classroom.



Whole class reading has been a key factor in increasing children's scientific vocabulary. It is really useful for children's retention to pre-teach the vocabulary that the children then use confidentially within science lessons.

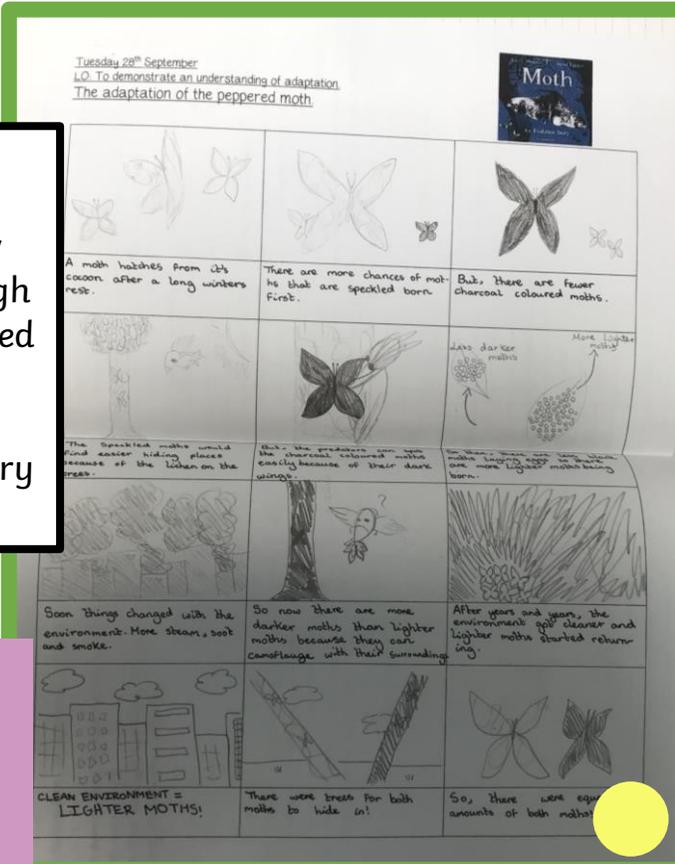
Vocabulary Check

- Now he's **lauded** by **environmentalists**
- he then built a **rudimentary** wooden tower
- equally **innovative** and **inventive** people
- Water **distillation** process



devised **ingenious** (clever) ways to lift water from rivers and wells for **irrigation**

Moth book inspired story board to show evolution through moths. This linked with Year 6 Industrial Revolution history topic.



Next steps, to develop strong links with maths to develop statistic skills.



Children have hundreds of science books at the tip of their fingertips through the app EPIC! Children in Year 3 and 4 all have ipads and are being exposed to real life science.

I love non-fiction, it is great to learn facts. KS2 child.



Increased science capital, reluctant readers showing interest in reading science books for pleasure.

'Tilting at windmills: the boy who harnessed the wind'

Malawian teenager William Kamkwamba built a generator out of a bicycle and tractor fan. Now he's lauded by environmentalists. - John Vidal Sat 3 Oct 2009



Back in 2001 William Kamkwamba was a semi-educated 14-year-old Malawian who had been forced to drop out of secondary school when, during a terrible drought, his parents could no longer pay for him to go. This week, he has been in California and Chicago on a whirlwind book tour, hailed as a "genius" and appeared on TV chat shows. He has been the toast of international technology conferences, lauded by Al Gore and environmentalists and shared a stage with Bono and Google co-founder Larry Page. He has written a book about his life, with journalist Bryan Mealer. He returned to school because his family could no longer afford to keep him at home. He read up on his science, found a DIY guide to building a windmill, and started trying to build it. Using a tractor fan, shock

Understanding about real life science in the world that is relatable.

Web – We are improving our local links with scientist through events.

Pre-PSQM, we rarely got in visitors to enrich the science curriculum.

Leeds Beekeepers' Association came into school. Through this children observed a real hive, created a bee garden and a bee hotel.

Children really enjoyed seeing the bees. They couldn't believe the amount. KS2 teacher.



Children researched bee friendly flowers and created designs for our bee garden. Then the children created the garden.



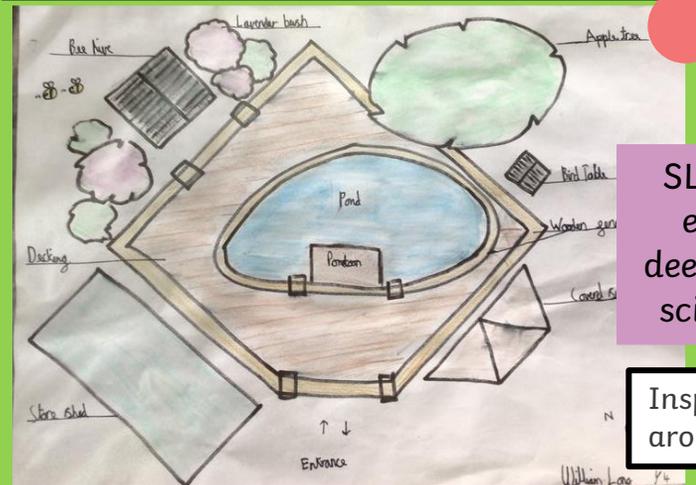
Flowers for bees!

Children developed their observational skills through a real-life bee hive. Children were emersed in high-level scientific vocabulary from a passionate scientists.



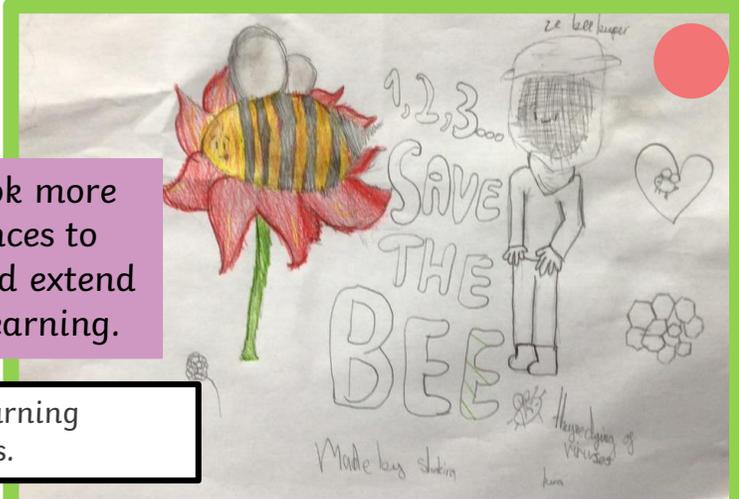
Inspired provision to create their own bees.

Children entered a competition to create the new bee garden in school. Most children entered the competition and then the children created the bee garden.



Each year group worked on their own layer of the bee hotel. This created another science environment in our school for future observational learning.

SL to book more experiences to deepen and extend science learning.



Inspired learning around bees.

Wob and LC –Countryside Days
 Improving children’s opportunities
 to extend their learning in
 alternative settings and increase
 science capital



Countryside Days offers Key Stage Two children the opportunity to experience all aspects of food, farming, the countryside and healthy living. The day involved a variety of workshops and arena displays including rural crafts, birds of prey, farm animals, the legendary Sheep Show, pond dipping and many more.



Countryside Day: Tuesday 14th June 2022

Timetable - GROUP 2

10.00	Rapeseed- from field to fork	Red zone	Hall 1- R42
10.40	Can you Rethink Food and be a responsible consumer and producer?	Red zone	Hall 1- R56
11.20	Farm animal arena	Purple zone	Outside
12.40	Classification and identification	Blue zone	Hall 1- B10
1.20	Free		
2.00	Sheep Show	Outside	



The children learned about Yorkshire agriculture and how food arrives on the plate.



I had the best day,
 I just loved
 learning about the
 animals and all
 the food! Who
 knew Yorkshire
 was so great- KS2
 child



SL to assist to book more visits outside of school to deepen and extend science learning.

SL would like to make stronger links to the local secondary school.

The children were emersed in Yorkshire agriculture, I believe it really increased their science capital today. KS2 teacher

