

St. Gabriel's R.C. Primary School

Key

Action

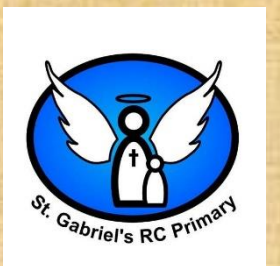
Impact

Next Steps



PSQM Portfolio

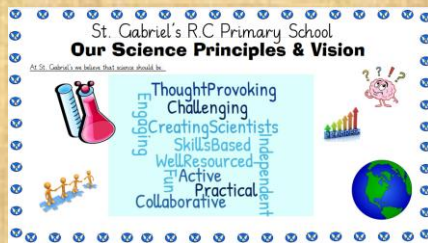
Primary Science Quality Mark



SLa - Vision

"I love that new resource (Twig Reporter) I'm using it already, I've found some videos showing the heart."

Y6 Teacher



See teacher's planning on slide 5 for planned initiatives in action.

St. Gabriel's R.C Primary School Our Science Principles & Vision

a staff team we want to ensure that science is:

- Inclusive and challenging for all learners
- Lessons are well planned to ensure progress and provide thought provoking opportunities.
- We broaden their experiences through hands on, practical approaches and welcome visitors where appropriate.
- Science skills are focussed and worked on with cross-curricular links made to embed these even further.
- Linked to the real world where possible with opportunities to reflect independently and collaboratively.
- Active, engaging and ...FUN!

Our Pupils will be:

- Building on their scientific enquiry skills to be good: observers; researchers; pattern seekers and find solutions to problems.
- Well equipped with their learning behaviours to participate in lessons to the maximum. They will be active, engaged and show resilience. They will have opportunities to be independent and work collaboratively
- Good communicators with high standards of scientific vocabulary used.
- Enthusiastic, curious and see the relevance of science in their lives creating a love of science and feeling INSPIRED!

"I've used VR goggles to get the class engaged in their learning by looking up-close to a heart, lungs and arteries."

(WOa – Cross-Curricular)

Y6 Teacher

Teachers are enthusiastic and passionate to provide the best foundations of shaping our pupils futures.

Outside visitors have been sought in the past but have proven to be reluctant to come in. We need to continue seeking and finding people in our community to develop this further.

We used staff meeting time to create our Visions and Values together as a team. We looked at it from two perspectives, the first is what we want science to look like at St. Gabriel's therefore as the facilitator we need to ensure this is in place. The second view, is that of our children, what we would expect and how they will need to support to become young scientists.

Teachers emphasising these principles to the children are having a positive impact on the children's attitude to learning and enthusiasm for science lessons.

"I like that you get to explain things that you don't know."

Pupil voice, Year 6

We will continue to embed these principles and help children recognise them in themselves and each other.

Creating these as a team has given teachers a sense of collaborative involvement and a sense of ownership.

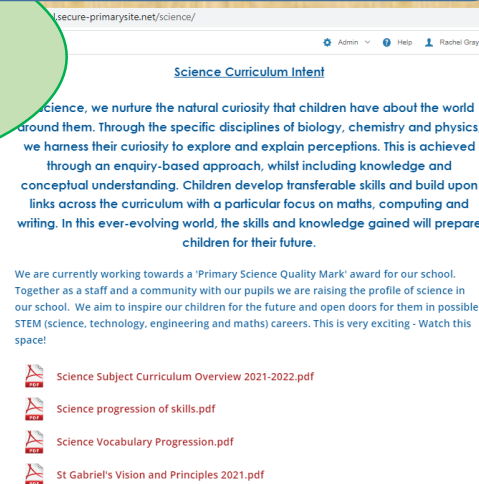
"I like science because you usually do experiments.."

Pupil voice, Year 5

"It is fun!"

Pupil voice, Year 2

This information is shared on our school website.



SLb- Leader Support

An adequate budget allowed for a wide variety of resources to be purchased (Slide 9 TC)

The children are provided with more opportunities to work practically which they enjoy also it is intended that this will help them remember this better.

Ensure that resources stay replenished, up to date and in good condition so that they are available to the children.

Assessment Week

Mon 28/03/2022 to Fri 01/04/2022

St Gabriels RC Office

Y3 - All Pupils (30 pupils)

Year 3 (30 pupils)	Number of Pupils (%) assessed in each Step as at Year 3 Autumn 2			
	1w	2s+	3b	3b+
Science	1 (3.3%)	1 (3.3%)	2 (6.7%)	26 (86.7%)

Teachers assess pupils termly inline with the assessment schedule. This allows them to see gaps and see what scientific skills foci may be needed.

Continue to assess termly and look at how to support those children who are not in line with age-related expectations.

Science Impact days are conducted with the head teacher and subject leader. (left) Is a snippet from an Impact day at the beginning of our PSQM journey.

This is a good opportunity to carry out monitoring and discuss science development plans with SLT and feedback to staff any next steps.

Next steps need to be shared and followed up in a timely manner by the subject leader.

Science is recognised as a core subject and is included in termly assessments just like maths and English.

Subject leader gets release time to engage with professional development activities, training and attend networks with local colleagues. (See development log and slide 6&7 CPD)

A wide range of resources are shared at different meetings. Children's outcomes benefit when these are shared with staff and are included in their lessons.

Explorify is now a well known resource that is used across the school. This sparks curiosity, heightens vocabulary and gives the children opportunities to pose and answer questions.

A year 6 example of an Explorify 'Odd one out' Teacher has scribed the discussion in a floor book which was also a suggestion from a network meeting.

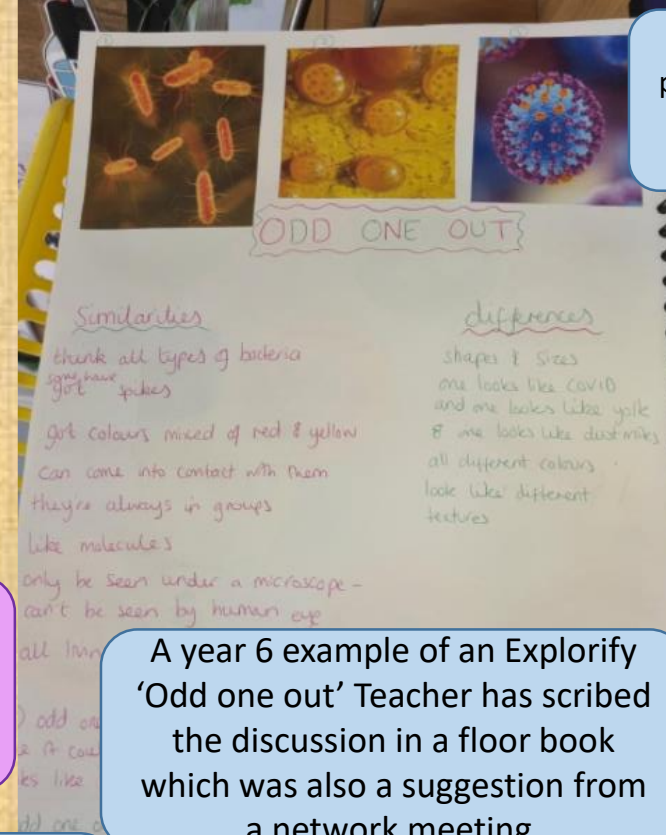
This supports evidence and assessment.(slide 11 LB)

One of the SEERIH network meetings involved training around creating models to support the children. This benefits their understanding.

Subject Leader to continue engaging with CPD and local networks and sharing the useful tools back at school.



Year 3 children are creating models of teeth and their differing types.



Monitoring of Implementation

The Science curriculum is planned with progression in mind across each unit of study for each year group, this allows pupils to revisit and build upon prior knowledge and deepen their understanding. As a result of looking through pupil books, coverage of objectives could be stronger. Most elements have been covered although opportunities to dig deeper have been missed. Expectations of presentation needs to be enhanced and expectations in relation to children being stretched and challenged needs further development. Many tasks are at an age appropriate level, however the starting points of children need to be taken into consideration. There is some evidence for marking to improve, however this needs to be followed up by the children in order for them to make maximum progress.

From lesson visits, pupils show a high engagement within their science lessons, they engage appropriately but need further work in developing scientific vocabulary and discussion/explanations. The children enjoy the opportunity to carry out investigations and have practical lessons, this needs to be balanced throughout the year and for each type of enquiry.

Knowledge organisers have been introduced for Science and each class has a display wall to support the children within their current topic work, these needs to be utilised to enable the children to get the maximum out of them.

SLc - Monitoring

Pupil voice was carried out from sample of different children in each year group. This was completed at the start of our PSQM journey and repeated again in the Spring term 2022.

Monitoring of pupil voice has shown that the vast majority of pupils state that they enjoy science lessons, they understand the relevance science has in their lives and make good use of resources in practical work.

"I like everything."
Year 4 pupil

There are still elements of science which children find tricky and some children feel that they dislike written elements in science. Hopefully with the support about writing things up and focussing on the assessment purpose we will begin to see an impact from this.

There are non-negotiables that need to be included on science walls. An example of a display from Year 1.



Vocabulary and visual prompts support the children during their lessons. Scientific enquiry Logo's being present mean that they are referred to thus children having a better understanding of the enquiry that they are doing. Books and physical resources encourage children to explore ideas further or learn new things from the topic linked texts.

"go on more trips."
Year 3 pupil

Cross-curricular links, pupil voice and staff voice are amongst other monitoring that has occurred. See Development log.

Continue to monitor the impact of science walls and checked that children use them and refer to them.

We need to enhance the curriculum further with wider enrichment opportunities such as visitors and trips to give our children wider science experiences. Plans have been made to have external work shops and make more links with services such as STEM Ambassadors. As these are rolled out we can monitor the impact that they have.

Snippets from subject leader reports which are written following monitoring.

Monitoring and leadership reports supports the subject leader to know the strengths and next steps of the school. These are shared with the senior leadership team.

Ensure that next steps are addressed and followed up in future monitoring.

Strengths

Comment:

Staff have positives attitudes towards science and understand it's importance and relevance in our curriculum. Staff are aware of the cross-curricular links that can be made between science and other subjects. The new resources and initiatives are being used by some staff. All staff have a good level of confidence to teach science and most feel that they have a good subject knowledge.

Area of Development

Comment:

Recording science and supporting children who may not be academic in other areas to access and record science in their own way. Looking at ways to address gaps in children's learning. Although practical work and experiments are a strength for some staff, others feel that they would like more support to make links.

Strengths

- Children enjoy science lessons.
- Teachers are using knowledge organisers
- Displays have been created in each classroom
- Teachers have good subject knowledge
- Trips and visitors are being used to spark children's curiosity and provide them with hands on experiences
- Children have opportunities for outdoor learning within Science

Areas of Development

- Displays to be more established with the minimum expectations for a topic being used from the beginning.
- Marking to improve to be used effectively
- Planning for a deeper level of understanding and use of scientific skills within units of work.
- Teachers to ensure full coverage of national curriculum objectives
- Children taking charge of their own learning in science as they progress through the school.
- Science capital for children

Ta – CPD

"This is really useful and will help me when I'm planning my next unit of work"

Y3 Teacher
(New to school)

Pupils can articulate themselves in a scientific context and the profile of vocabulary has been raised.

Continue to challenge children with high standards of vocabulary and scientific reasoning.

A new planning format was introduced. This included an overview sheet where teachers mapped out the enquiry types that will be covered.

Enquiry Types

Comparative & Fair Testing 	Identifying, classifying & grouping 	Observing overtime 	Pattern Seeking 	Research using a secondary resource 
Does temperature alter the time taken for a solid to melt? Investigating rates of evaporation.	Sorting and identifying properties of solids, liquids, gases.	How does the level of water in a glass change when left near the radiator? How has our idea of absolute zero changed over time?	How does the size of jar effect the time taken for a candle to stop burning?	Experiments of Lavoisier and Priestly. Life of William Thompson (Lord Kelvin)

A higher emphasis on enquiry should impact pupils knowledge and skills giving them better outcomes.

Include planning in monitoring and support new members of staff.

"I found the training very inspiring and it made me excited to plan science again."
Y4 Teacher

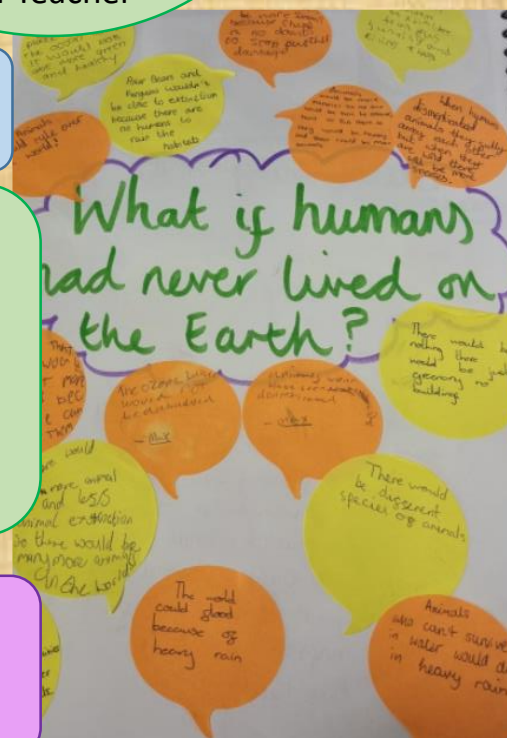
	Date	Objective/Skills	Starter/Talk Opportunities	Explore/Engage/Do
Lesson 4		Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Focus: To investigate an idea about how the human skeleton supports movement.	https://www.twigscience.com/feature/the-problem-with-cow-farts/ (Link to Cop26 and when we looked at carbon footprint) 'Talk/curiosity' starters being used from the training together.	Discuss how the scientific question 'Can people with longer femurs jump further?' might be investigated. Talk through how to plan this investigation, including how to make this a fair test. Ask the children to measure their femurs and to write this measurement down. Model this. Before we begin...Can children explain how to make a test fair? Can they remember this from our light and shadow experiment? Ask the children to record how the investigation will be a fair test. Introduce children to how to safely perform a standing long jump, including landing safely, using the Lesson Presentation. Can children explain how to make a test fair? Children work in groups, sharing their femur measurements and recording this data on the results table. They then go on to carry out the investigation, measuring accurately and recording the lengths of everyone's jumps on the results table. Ask groups to discuss their results table and what conclusions they can draw from their results.
Lesson 5		Focus: To explain how bones and muscles work together to create movement.	https://www.twigscience.com/article/winter-solstice/ (Links to Stonehenge.)	Recap: Using the human skeleton, ask children to try to locate each bone on their own body. Use this to lead on to muscles. Information lesson where we work in pairs and present information learnt to the class: Read and discuss pages 45 to 48 of the Healthy Eating, Bones and Bodies eBook. Children can then discuss whether the actions shown on the Lesson Presentation use voluntary muscles or involuntary muscles. Observe and Explain: Ask children to feel their own biceps working and then ask pairs to explain how these arm muscles work to one another, using the word bank on the Lesson Presentation to help them. Can children observe and describe how muscles work in pairs? Children research the names of well-known muscles in the human body and produce a labelled diagram of these.

This example of planning shows elements of our vision and principles by offering practical work, opportunities to explore, to be collaborative and to develop curiosity to find answers.

Year 6 floor book evidencing science talk and curiosity.

Children get the opportunity to be curious, make predictions and make links to things that they already know. Enthusiasm is raised as pupils enjoy these times.

Ensure that all classes are consistently scheduling this time in the week.



Ta – CPD continued

"I love the prompt for writing up experiments and the scientific enquiry types being linked to key questions to investigate." (Ta-CPD)
Y4 Teacher

For further CPD to staff put into action please also see: Tb – Strategies slide 8;
Lb – Assessment slide 11 and Woa – Wider opportunities slide 13.

Teachers wanted to know the flow and expectations of an experiment. Subject leader gave examples of how to support and challenge each of these steps. It was also explained that children do not need to write up the whole process every time, they can simply complete the assessment focus for the lesson. Y4 example of work following this method below.

Recording Learning – Progression

Drawings/Diagrams

Drawings should increase in fine detail as the years go on. Throughout KS2, children should learn identification keys to help with classifying and identifying, as well as learning to create their own branched key.



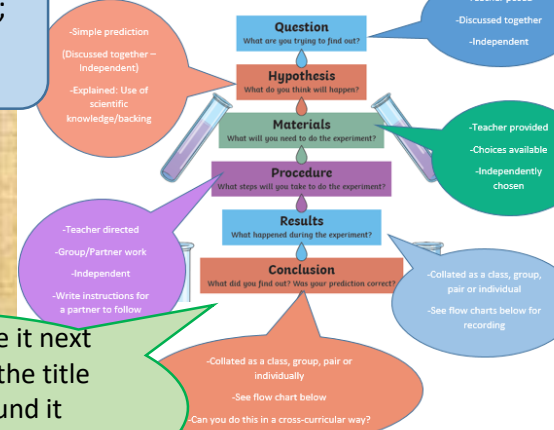
Subject leader created a document to support teachers in how their children should be recording different elements of science in their books. It offers flexibility to meet the needs of all children and supporting/challenging as needed.

The models shared in this crib sheet and training enables teachers to meet all children's needs.

"The children have it next to them and copy the title out. They've found it really useful."
Y4 Teacher

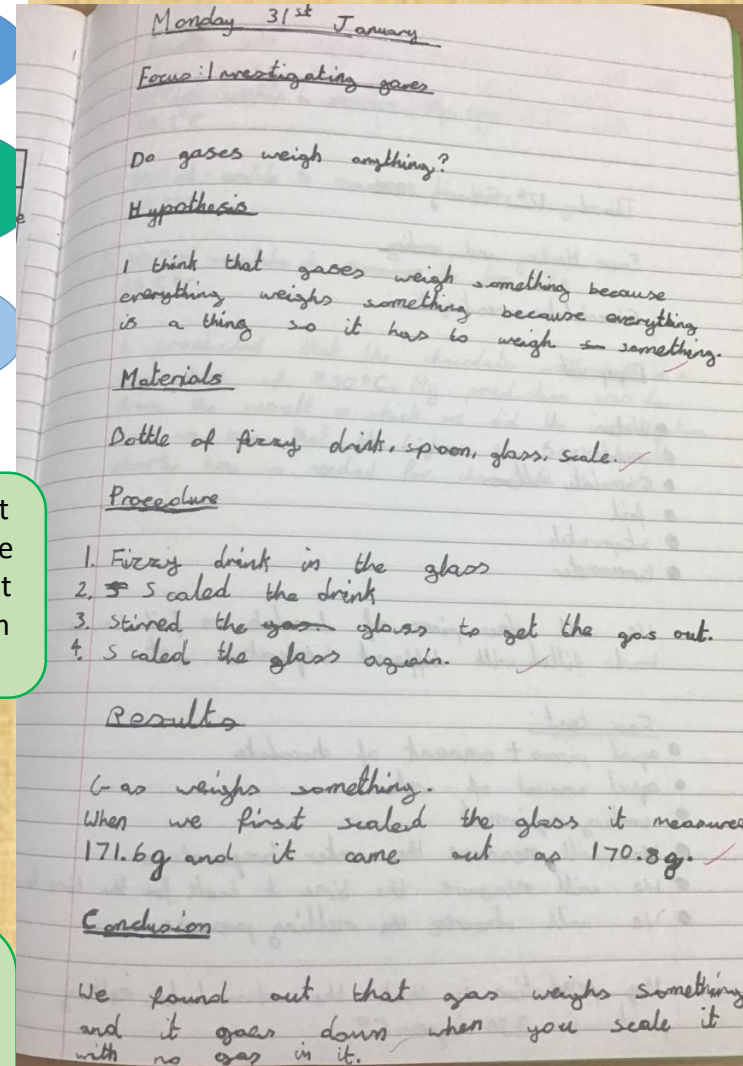
Resources shared through training sessions. An example of Year 1 using Explorify. They have made links and extended their curiosity by searching the internet. This is also shared via our electronic journal to parents Web.

The Scientific Method

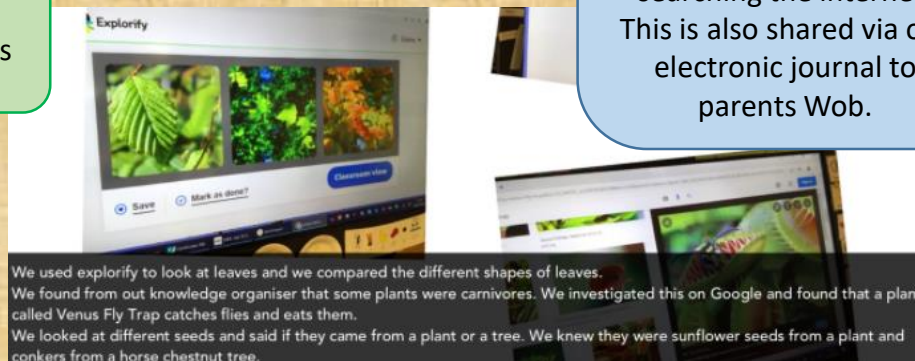


Teachers feel more confident in supporting children to write investigations up and feel that children have benefitted from the structure.

Tools from subject leader training being passed onto the staff team is benefitting the children. The use of our electronic journal shared with parents strengthens their links with their child's science learning.



Monitor the use and impact that this is having. Speak with staff, does it support the assessment focus?



Tb - Strategies

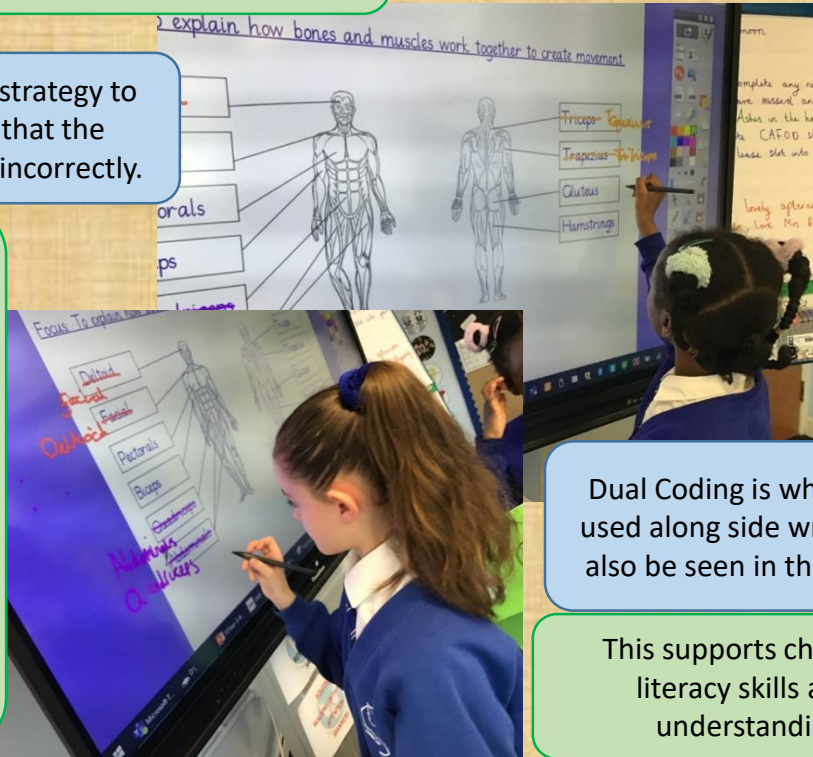


A range of pedagogical strategies to support children knowing more and remembering more have been shared with staff following external training on 'Rosenshine's principles' and Tom Sherrington's 'WalkThrus'. Some of the examples included vocabulary, good examples, quizzing, diagrams, scaffolding etc. These can be used across different subjects, below are some of the science examples used so far.

The strategies should positively impact pupils knowledge and understanding therefore raise pupil outcomes.

Year 3 are using the strategy to relabel a diagram that the teacher has labelled incorrectly.

This makes pupils think carefully and promotes accuracy in knowledge. If an incorrect label is placed in a similar position to where it should be then this could make children think it must be right instead of challenging them.



Dual Coding is when pictures or actions are used along side written vocabulary. This can also be seen in the Year 1 display on slide 5.

This supports children who struggle with literacy skills and also supports the understanding of certain words.

We looked at our knowledge organisers and then found more information from non fiction books.

Other strategies such as modelling and cross-curricular approaches can be seen on those relevant slides. (4,7,13)

We need to continue using these different strategies in a scientific context and children will become more familiar with them. Monitor the use of these and ensure that they become embedded across all year groups.

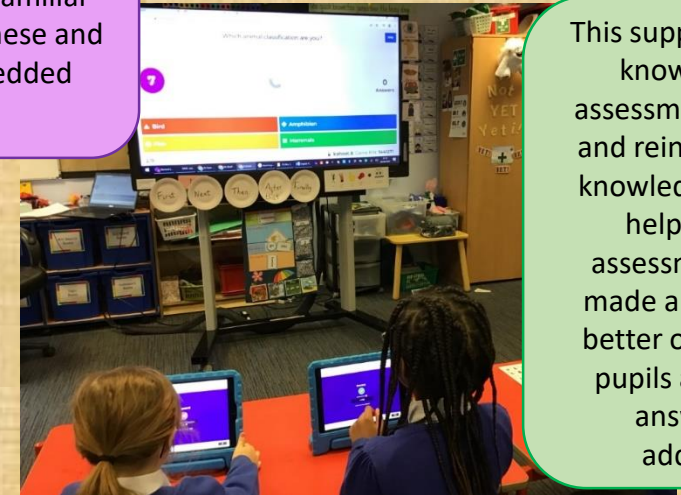


Knowledge organisers are a strategy used to improve vocabulary. Year 1 are using theirs to go over the vocabulary and find it in non-fiction books to find out more information.

Children have a more secure understanding of key facts and vocabulary needed for a unit of study. Hopefully children will become more confident in using these words and offering scientific explanations as they have a better understanding.

Quizzing is quick way to gain children's understanding, this can be within a lesson or for the end of a unit of work. Here Year 1 are using Kahoot to answer quiz questions set by their teacher. Misconceptions can be addressed by offering similar answers in the options for the pupils to choose from. Slide 11

This supports teachers knowledge for assessment (slide 11) and reinforces pupils knowledge. This will help accurate assessments being made and hopefully better outcomes for pupils as incorrect answers are addressed.



Tc - Resources



A wide range of fiction and non-fiction books were purchased linked to each unit of study within Science.

Children have been able to read these books within lessons to gain knowledge or research. They have also been used as reading for pleasure books if the children have wanted to choose. Some books children have been able to relate to or create links as shown in Year 1.



Year 1 children looking through the weather and season books and making links.
"My birthday is in Spring!"
Year 1 pupil

This membership is a good tool to teachers for ideas but for the confidence in carrying things out safely.

We are members of
CLEAPSS

CLEAPSS
Primary

Year 6 children used a light meter effectively and created a video explanation of how it works thus consolidating their knowledge and showing a clear understanding which can be used as an assessment point for the teacher.



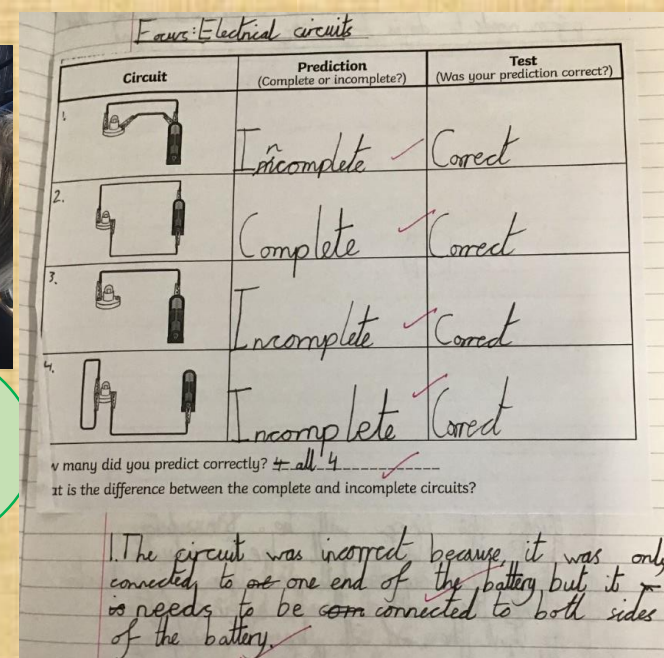
A screen shot from a Y6 video.

New resources, particularly those that support pupils to collect data were purchased.



"When we were learning about bones we learnt milk made our bones strong and in my book it says milk is a good source of calcium for bones!"

Year 3 pupil



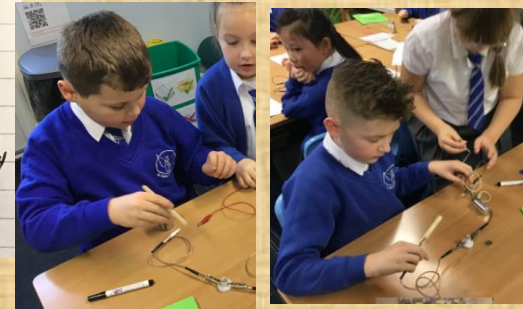
Y4 using the electricity equipment to be able to test difference circuits.

Resources need to be continually checked and replenished as needed. Teachers will continue to use them within practical work and allow pupils to explore and have these experiences.

"It's purpose is to point it towards the light and it will detect how strong the light is. It will tell you based on the scale how strong the light that it is facing is."

Year 6 pupil

We ensured that there was a sufficient number of resources to meet the needs of a class. Some lessons required children to work independently therefore stock and checking the reliability was important.



Year 4 learning about making circuits and how they work. Children have been able to engage in practical lessons and explore their own curiosities independently when needed,

"We used mirrors to refract light and it was really cool."
Year 6 pupil

La – Scientific Enquiry

An example from Y2 and Y4 planning. A new format which included an overview sheet was introduced.

This element has ensured a focus on the enquiry types throughout a unit of work and that they are fully mapped out. By the end of the year children will have had an excellent coverage of all 5 enquiry types.

Children have a much better understanding of the different types of enquiry.

Comparative & Fair Testing	Identifying, classifying & grouping	Observing over time	Pattern Seeking	Research using a secondary resource
				
How teeth can be damaged—immerse egg shell in different liquids.	Sort teeth of herbivores, carnivores and omnivores with reasoning.	Scientific thinking over time: compare how the Romans looked after their teeth with dental hygiene today.	Understand and construct food chains. Identify the pattern within them and the placement of herbivores, carnivores and omnivores within them. Explain this pattern.	Names and functions of main parts of the human digestive system. How the digestive system works. Different types of teeth and their function.
Comparative & Fair Testing	Identifying, classifying & grouping	Observing over time	Pattern Seeking	Research using a secondary resource
				
Do bananas make us run faster?	Which offspring belongs to which animal?	How much food and drink do I have over a week?		What food do you need in a healthy diet and why? What do you need to look after a pet dog/ cat/ lizard and keep it healthy?

In EYFS many opportunities are used and resources are available for children to ponder, ask questions, make observations and look at the world around them.

These skills started at an early age build foundations for what the children will need as they enter into the national curriculum.

“Once I had explained what we were doing today, the children then decided which type of enquiry they thought we would be focusing on. Also, I use the types of enquiry questions on the O:drive to support my planning.” (Ta-CPD) Y2 Teacher

Through further monitoring we can ensure that this is embedded across the year groups and to check that as pupils move into Upper KS2 they have the knowledge to pick and chose which enquiry type will be best.

An example of work from Year 3 and Year 5. When children are building their scientific enquiry skills they must add a circle of colour to make the logos shown on the planning at the top. These are also on display so support the children when referring to them or as they move into Upper KS2 they can look at them and decide which enquiry type would be best.

Friday 19th November 2021
Focus: Notice that light is reflected from surfaces

What materials will you test?
Mirror yellow paper polythene cups
CD bubble wrap

Predict which material you think will be most reflective. Why do you think this?
I predict the most reflective material will be the yellow paper because when a torch is reflected to something it bounces off and then comes off.

Record your results

Most reflective	Least reflective
Mirror	CD
Yellow paper	polythene cup
	Bubble wrap

Draw a diagram of how you test the material.

Light reflecting back mirror

21st October 2021

Prediction
My prediction is that bubble objects will have less water resistance, which means it will reach the bottom faster.

Diagram

mirror is very reflective. A polythene cup is not.



Lb – Assessment

Science: Rocks

Band 2	Band 3
No Single Band Statements	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
	Describe in simple terms how fossils are formed when things that have lived are trapped within rock
	Recognise that soils are made from rocks and organic matter

Summative assessments are carried out by all year groups on a programme called 'Target Tracker'.

This will allow teachers to identify the achievement of children and address gaps where possible. It also supports teachers in the future to look back on and see if there are any gaps to be plugged the last time children visited that unit.

KWL grids are used to find out what pupils know before a unit of work and come back to it at the end to summarise learning.

Science: Seasonal Changes Autumn and Winter		
K	W	L
What I know	What I want to know	What I have learnt
all leaves fall off trees. Leaves change colour. Rains + gets boggy gets windy	What the leaves look like when they fall off the tree what clothes do I have to wear.	Orange, brown, yellow, wet Crinkly. Trees have no leaves Hat, Scarf, boots Jumper coat glo

This supports teachers knowing starting points for the children.

Year 1 example of a pre-assessment.

This supports teachers knowing starting points for the children. It could also show misconceptions or areas of study that may require more time and attention.

Name: Zita Date: 5.01.22 Total Marks: /44

Animals Including Humans Assessment

1. Write the name of each animal.

a)  b) 

c)  d) 

a) dog
b) shark
c) snake
d) frog

2. Match the animals to their group.

 amphibian
 bird
 mammal
 fish
 reptile

Electronic quizzes on Kahoot provide instant feedback on each question answered.



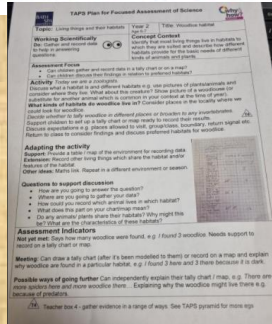
Instant feedback means that teachers can address misconceptions, move through lessons at a good pace if they know their children have a good understanding.

Lb – Assessment Cont

Y6 '2-page spread' to summarise learning. This was also an idea shared from SEERIH network meeting that SL attended.

TAPS resources have been shared to support teachers with assessment activities. Y2 example completing the microhabitat TAPS experiment. (Ref to SLb and Ta)

Regular assessments and strategies used to support on-going assessment need to be monitored. Summative assessment checks need to be undertaken. Some strategies have been trialled and the effectiveness needs to be shared and rolled out into other year groups.



Forest gutter and wood debris about over animals

	Tally	Total
branches	1	1 ✓
tyres	1	1 ✓
wood	HHH	5 ✓
grass	1	1 ✓

Found 12 woodlice under wood. I think they live there because the dark and they can hide from predators and birds. There were 6 woodlice under the leaves but 11 under the branches.

Informs teachers judgements when assessing.

A year 3 and 4 example of 'Marking to improve'

NS: What are 'cat eyes' on the road made of? Cat eyes are when headlights shine at the mirror. It is made out of mirror.

NS: Do all gases weigh the same? Can you give an example?
No. 71.6 kg before 70.6 kg after

This can either consolidate children's understanding or challenge them further, hopefully improving pupil outcomes.

LIVING THINGS AND THEIR HABITATS!

THE LINNAEON CHART

Carl Linnaeus was a very brilliant Scientist, who founded Linnaean classification chart. He used it to divide groups of organisms into kingdoms or groups. Such as: their Kingdoms, Species, Class, order, domain etc.

Turn in two scales!

Micro-Organisms Make up the World. Some can be good for us however others can't. There are 5 microbia: Virus, Bacteria, Protocoa, Algae and Fungi. Thousands of them can fit on a full stop.

Our Experiment!

For 2 weeks we kept pasci of bread in a zip lock bag. As so how many micro-organisms would grow on them. Atk were from with slight discolourment however most were found full of mold with density, hardness, Condensation, Short Stomach and discoloured. One was so bad the microben had transpired and started growing onto the bag, turning it green.

MY RECALL FOR OUR SCIENCE TOPIC

MICRO ORGANISM

Did you know? All of the Covid 19 cells, globally could fit on a can, top!

Did you know? If you don't wash your hands through the day, million cells live on your hands!

Did you know? Did you know every mammal and Vertebrate have a unique way of eating. Which only their species does!

"At the end of each topic of learning, the class would complete a two-page spread about everything they remembered from their learning. They were able to format it in any way they chose, and it was good form of assessment."

Y6 Teacher

Lc – Science Capital



Find out more about the 350+ careers in the NHS

The deadline isn't until April/May therefore we do not have evidence yet. The intended outcome will be that KS2 children are more knowledgeable about many NHS Careers and how they have science links.

A Jamboard snippet from a recent SEERIH Network meeting. Ref SLb

This particular activity supported the subject leader in even more strategies to develop science capital.



"I don't know who enjoyed it more, the kids or me!"
Year 2 TA.

This is 'an exciting resource and competition for KS2, designed to help raise career aspirations, challenge stereotyping and put learning into context for the future.

"As the school has worked hard to incorporate more Black history into their learning, Y6 also made links to this by learning about John Edmonstone who taught and influenced Charles Darwin and who was also born into slavery but became a free man."
Y6 Teacher

An external company are coming into school to run a Forensic science workshop with each class as part of British science week.(WOB)



This raised children's (and staff) enthusiasm and engagement in science whilst raising their science capital opportunities.

"It's made me want to be a police officer searching for clues. I love how from DNA you can tell eye colour, whether you're a boy or a girl and what hair colour you have."
Year 3 Pupil

Curiosity cube. We had some interesting predictions.

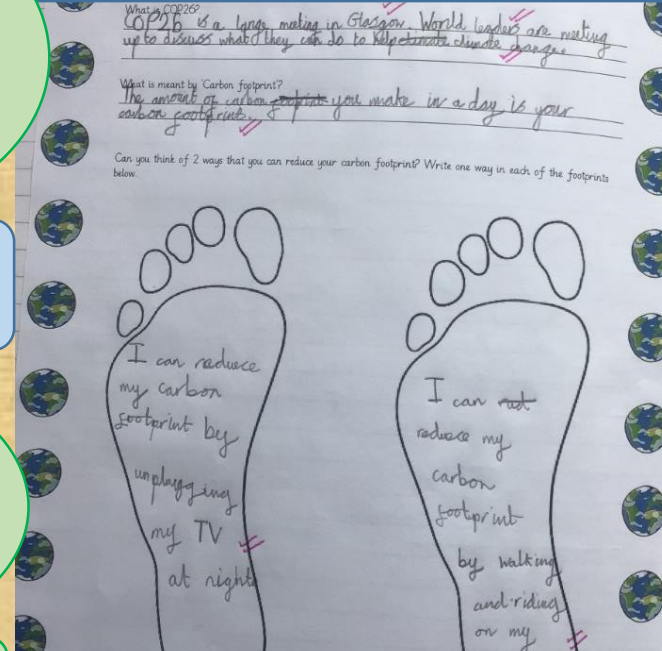
EYFS use a curiosity cube to help promote science capital.

This gives pupils more opportunities to experience things thus raising their science capital as they learn.

Year 3 lesson 'tweak' to make reflection and 'cat eyes' on the roads linked to family jobs therefore, relevant to children.

After talking about 'cat eyes' and Hi-Vis "My grandad is a truck driver and he starts in the morning when it is dark so needs to be seen."
Year 3 pupil

Year 3 participated in work on Cop26 and learnt about their environmental footprint.



Children are aware of the difference they can make and relevance this has to them and their world.

A Message from The STEM Ambassador Hub Trans-Pennine:

Thank you for tuning in to Dr Smith's Tour of the Solar System. We hope that you and your children enjoyed the session! We would be very grateful if you could complete this short survey for us so that we can continue to improve our virtual event delivery and provide you with more fun STEM activities for free!

<https://forms.gle/firYxSA3auHS6iCE6>

To see Dr Smith's presentation and explore other space activities view this padlet: [Virtual Tour of the Solar System \(padlet.com\)](https://www.padlet.com/)

If you would like a video copy of the session then please contact ambassadors@sciencemuseum.ac.uk

Kind regards,

The STEM Ambassador

Y5 went on a virtual tour of the solar system with the STEM Ambassador Hub via Eventbrite. Ref WOb

We need to further embed this over all the year groups. We will look closer at the science capital teaching approach in the Summer Term.



EYFS gives pupils opportunities to role play a variety of job roles such as a nurse or construction worker

Children get to act out some of the tasks for jobs with STEM links.



"I'm taking care of the baby." EYFS

W0a – Cross-Curricular

Poem written by one of our Year 6 pupils.

What If - Joy Bobade

Observing the dripping ceiling,
Shivering in the winter evening.
Only listening to the rain,
What ifs began to infect my brain.
My white blood cells couldn't protect me,
It made them all flee.

What if there was only one race?
What if we could breathe in space?
What if everyone had the same DNA?
What if we could travel through black holes too?
What if we could explore the sun?
What if trees could run?

What if humans didn't have a spine?
What if organs were combined?

What if our senses became one?
What if we reverse our planet to when it was gone?
What if there was no electricity?
What if everything had no toxicity?
What if life went on forever?
What if go back in time whenever?
What if we could watch over every crisis?
What if we could create our own virus?
What if our soul could leave our body?
What if we had no knee?

All these thoughts swirled,
Imaging a different world.

Cross-Curricular links made to poetry.
Using the 'What if' poem by Shel Silverstein. (Idea from SEERIH Network – SLb) This was set as a home learning task so that parents could get involved too.
(Wob)-Opportunities

Y4 teachers MTP planning shows books highlighted in yellow that are being used in English as a link to science.

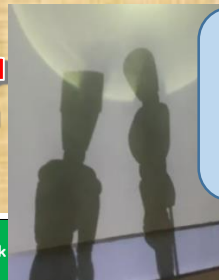
Water of Life				Wonderful World			
Winter's Child - Angela McGallister and Graham Baker Smith  https://www.bbc.co.uk/iplayer/episode/b09jkhbr/ad/cbeebies-presents-stage-shows-the-snow-queen	The Story of Snow: The History of Winter's Wonderland - Mark Gosselin and Zola Nelson 	The Rhythm of the Rain - Graham Baker Smith 	We are Britain! Benjamin Zephaniah  Please, Mrs Butler - Alan Albers  Opportunities to perform poems.	Lesser Spotted Animals - Martin Brown  Encyclopedia of Animals - Jules Howard & Jason Vogel  Extracts from A Life on our Planet / Blue Planet / National Geographic	Oxford Reading Tree: Level 18: Tree Tops Non-Fiction: Our Earth is Unique  Our Earth is Unique 	Tiger, Tiger, Burning Bright - Fiona Waters & Britta Taskentova 	The Promise - Nicola Davies & Laura Carlin 
Charlie and the Chocolate Factory - Roald Dahl 				Coming to England - Nicola Benjamin 			



EYFS dance linked to mini-beasts topic.

Promotes physical health and raises pupil enthusiasm and engagement.

Y6 applied their knowledge of light to create shadow puppet theatre linked to their history topic.

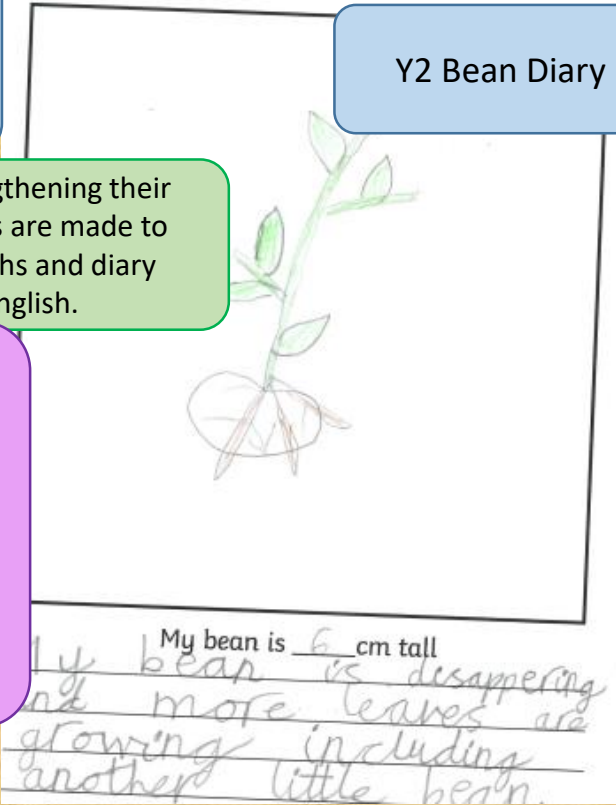


Children are strengthening their knowledge as links are made to measuring in maths and diary writing in English.

Ensure that links are made to a wide variety of subjects to continue and not just maths and English.

My Bean Plant: Week 4

Y2 Bean Diary



Whole school recycling project. Ref Lc
Example of Y3 milk carton's that have been recycled through their woolly mammoth art project.



Children's science capital was raised as they discussed the importance of recycling and looking after the planet.

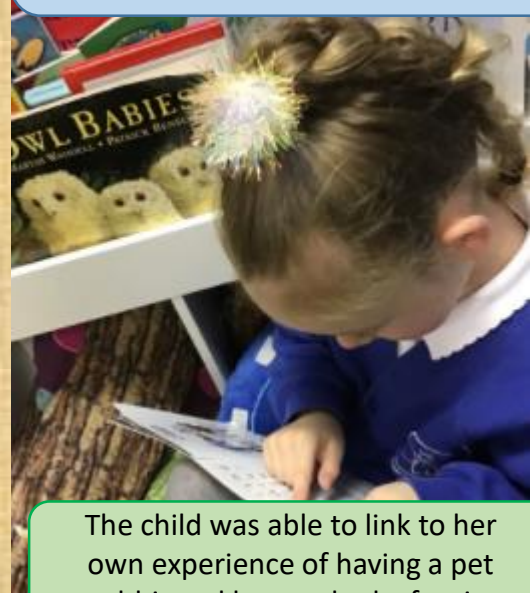
Year 5 linked their science on materials to block out light with their topic on WW2.

Children were able to explore a scientific concept to give them a first hand experience linked to their topic of what it would be like during an air raid.



WOa – Cross-Curricular Continued

A Reception child was reading a book about pets and was able to look through her phonics sounds at the same time.



Year 3 made replica rocks and fossils necklaces linked to their stone age themed day to celebrate the end of their topic.

This will raise enthusiasm and engagement whilst embedding their knowledge on rocks and fossils.

The child was able to link to her own experience of having a pet rabbit and how to look after it.

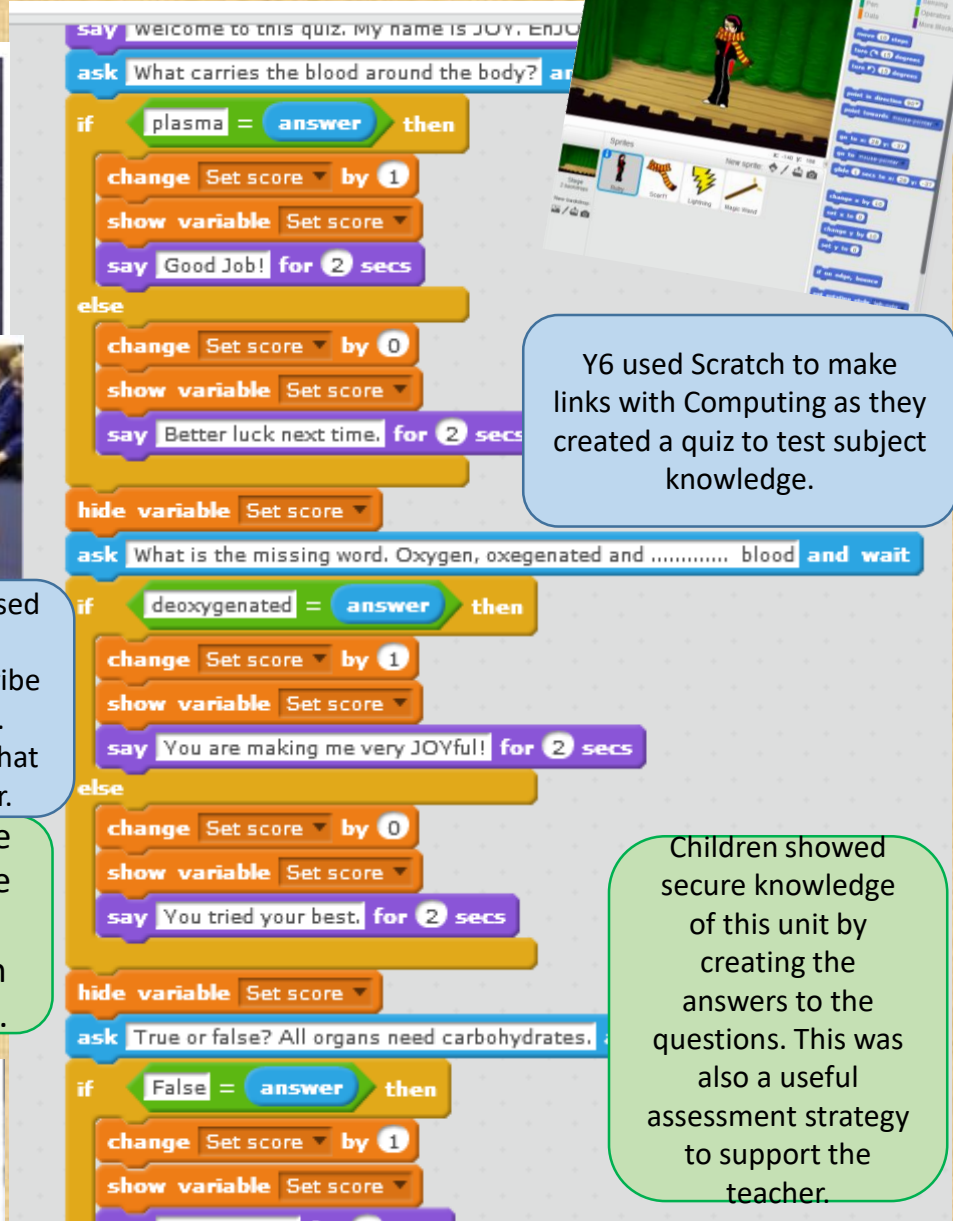
Continue using a range of cross-curricular approaches over a variety of subjects. Monitor the impact these have on children and if it raises outcomes as they get opportunities to apply their skills.

Reception observed and talked about how the leaves change on the trees during different seasons. This supported them with their artwork.



The curiosity cube in EYFS is also used to promote and raise speech & language skills. They have to describe and observe what they see, feel. Sometimes make predictions on what something is or could be used for.

In reception the children are gaining experiences to make observations of the world around them in preparation for the National Curriculum.



Y6 used Scratch to make links with Computing as they created a quiz to test subject knowledge.

Children showed secure knowledge of this unit by creating the answers to the questions. This was also a useful assessment strategy to support the teacher.

