

Taking our learning outdoors



Creating awe and wonder.



Home projects



Annual science fair

Subject Leader Report 2019-2021 PSQM Gilt Award

*SL = Subject Leader T = Teaching
L = Learning WO = Wider opportunities*

Key =

EYFS

KS1

LKS2

UKS2

Before

Impact

Dream Believe Achieve



Sharing our learning



DEMOCRACY

RULE OF LAW

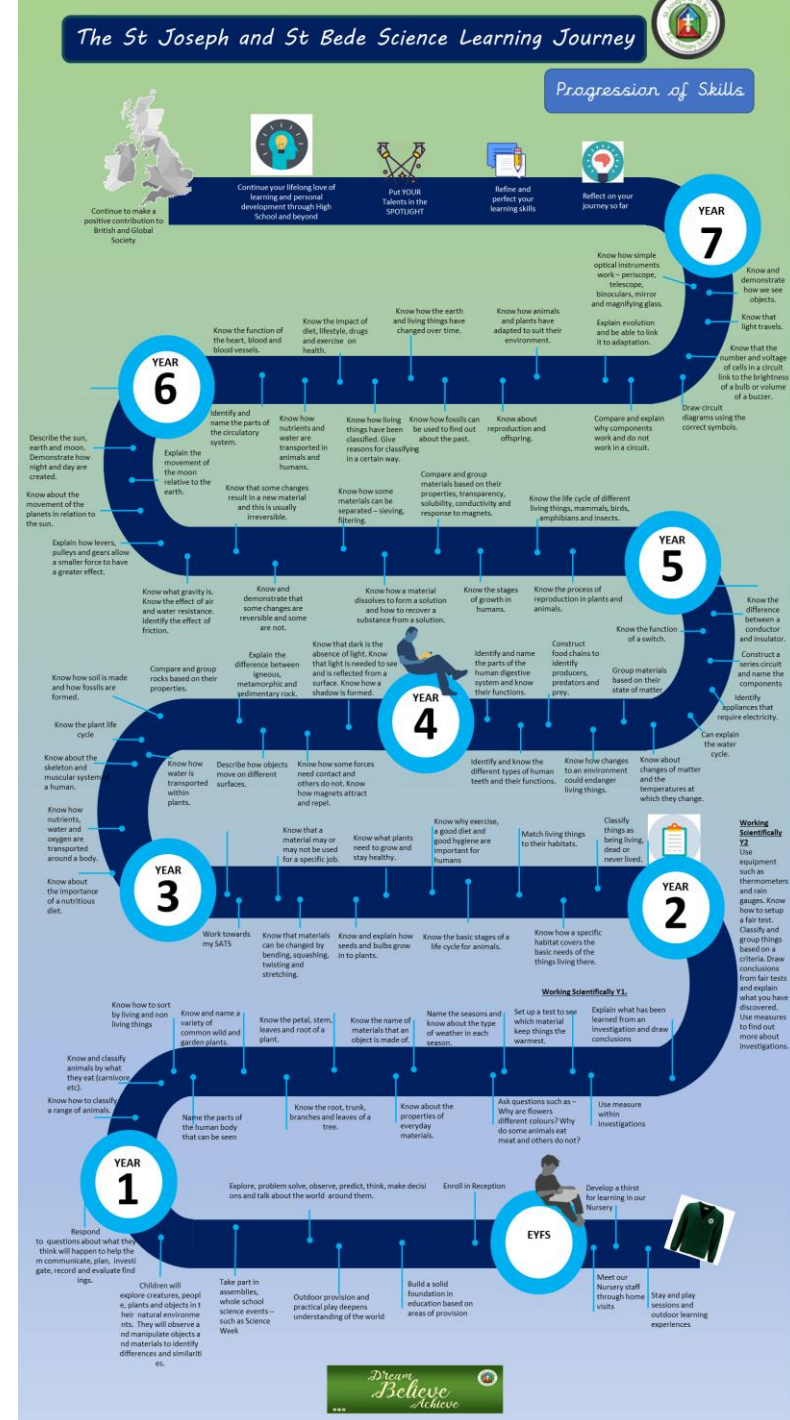
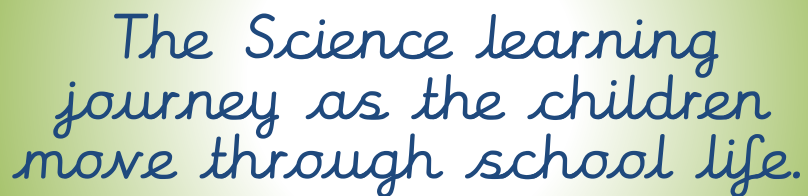
BRITISH VALUES ARE ROOTED
IN GOSPEL VALUES

INDIVIDUAL
LIBERTY

MUTUAL
RESPECT &
TOLERANCE

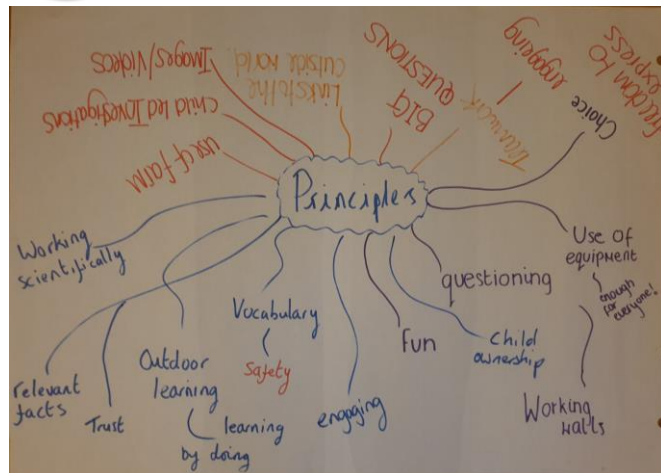


Dream Believe Achieve



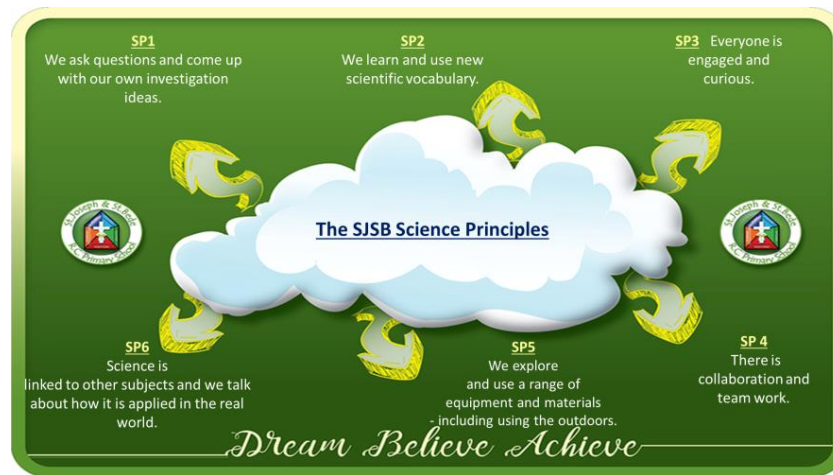


SL1: There is a clear vision for the teaching and learning of science



A mind-map was created of what we thought were the most important components of a great science lesson. These were then shared with the children to gauge their thoughts.

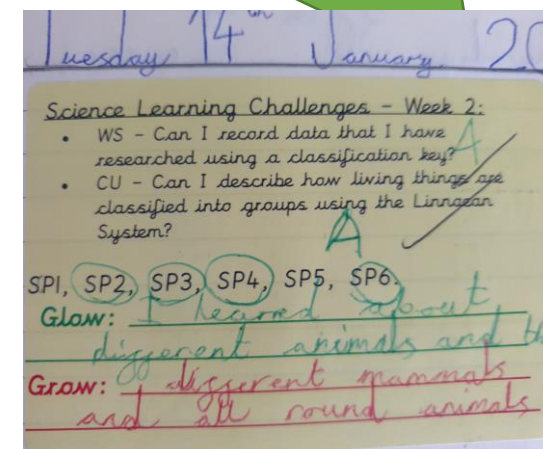
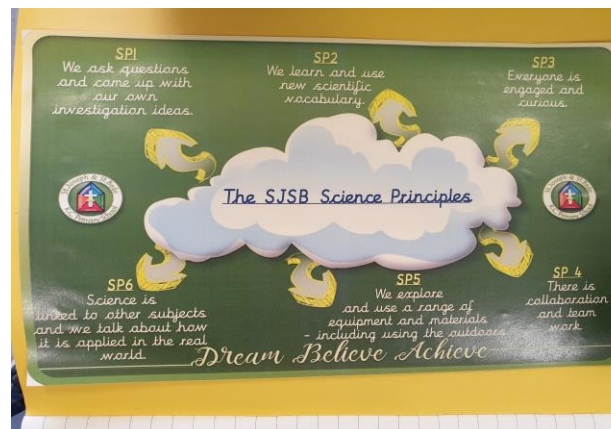
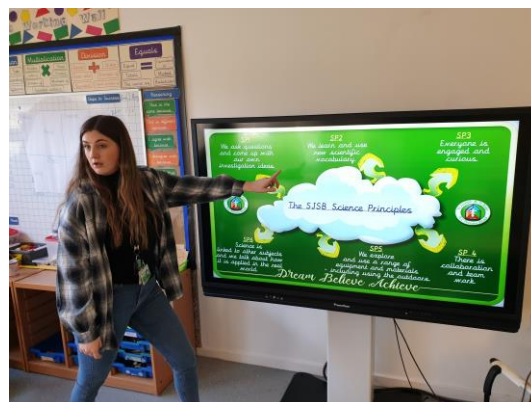
The school does have science principles but they are no longer used and the children are not aware of them.



The new science principles are now prominent in our school. They are the first slide of every PowerPoint, they are included on learning challenges so the children can reflect on which principles they have used, they are on all working walls and are at the front of the children's books where they can refer to them.



KS1



Dream Believe Achieve



SL1: There is a clear vision for the teaching and learning of science

SP1 – Children's questions being used in lessons, carrying out their own investigations

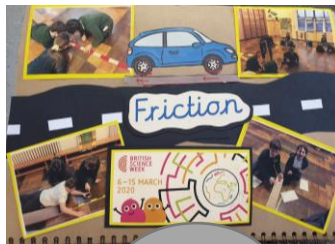
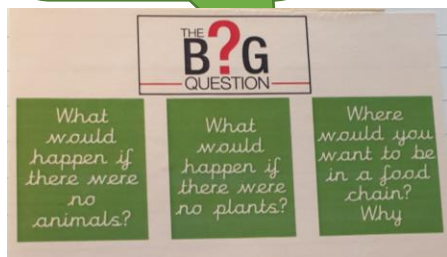


SP2 – Vocabulary on working walls and in knowledge organisers

Key Vocabulary	
vibrate	to move back and forth very rapidly and steadily
ear	the organ of hearing in humans and animals
hear	to receive sound with the ears
air	the mixture of gases that surrounds the earth (oxygen, nitrogen, and other gases)
medium	a substance that is a means of passing on a force or an effect
sound	anything that people or animals can hear with their ears
volume	the amount of sound
pitch	how high or low a sound is
loud	having a large amount of sound; easily heard
faint	weak or slight

SP4 – The children's curiosity and wonder being created.

EYFS



LKS2

UKS2



SP6 – Trip to Jodrell bank, science applied in the real world.

KS1



#SJSBScienceWeek

#sjsbScience

PIC-COLLAGE

SP5 – The children using a range of exciting equipment

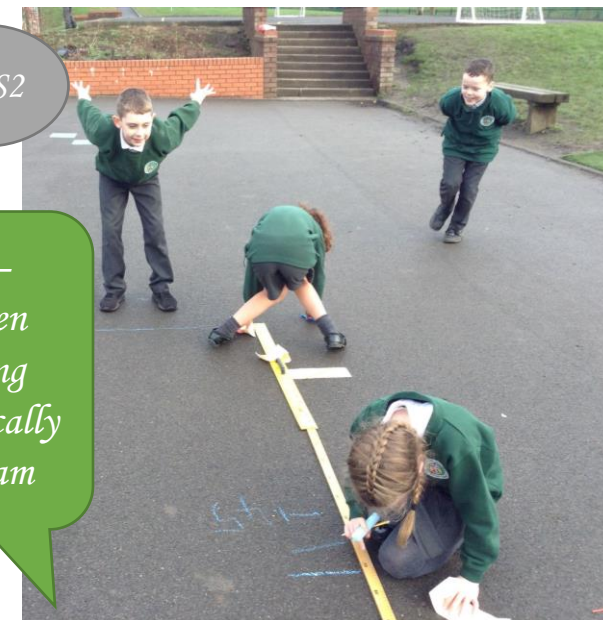
LKS2



Dream Believe Achieve

LKS2

SP4 – Children working scientifically as a team





SL2: There is a shared understanding of the importance and value of science

Previous budget of £800

Now increased to a healthy budget of £1000

Our school community turns up in ever increasing numbers to enjoy our various science events.

There has never been an extra-curricular science club.

SL introduced first extra-curricular science club – Mad Science, plus whole school assemblies. The club was attended by 26 children from Y2 to Y6.

34 Total	Science	1000	3.5	996.5
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Canceled: Staff Meeting
Calendar (swhalley@sjsb.co.uk)

Tuesday, 21 January 2020
15:30 ▶ 16:30 (1 hour)
Repeats weekly on Tuesday until Tue, 21 Jul 2020

Conflict: CPD KS2 NC Assess... [RSVP](#)

Science briefing Year 1 writing no more marking

Attendees

An increase in science staff meetings per year (3), plus monitoring staff meetings.

SL discussed new teaching and learning initiatives with HT and HG before staff meeting.



New resources bought and stored in the Science area.



Science is now included as part of the SIP.



Met with JM and CB, discussed where we are now from previous monitoring – new initiatives for teaching and learning agreed, roll out until Christmas, meet again in Spring to monitor...

To achieve the primary science quality award.

S. Whalley to attend PSQM courses and session.

To review disseminate the principles to all staff.

Embed Science Assessment.

Quality mark is achieved. Attainment and progress measures are increased. Assessment is embedded. Profile is raised

£730

Dream Believe Achieve



SL3: There are appropriate and active goals for developing science

Head Governor involved in the Science learning around school. Children see science in the real world and hear from experts.

Each Key Stage produces a medium term plan to show the flow of science for the half term – complete with working scientifically and curriculum links. SL checks and offers further advice if needed. Ensuring fluidity in all units.

Scientific understanding

Materials.

Check in task

Distinguish between an object and the material from which it is made

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock –

Describe the simple physical properties of a

Materials.

Identifying, classifying and sorting – How can you sort different materials?

Distinguish between an object and the material from which it is made

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock

Materials.

What material will stop an ice lolly from melting?

Observation over time and fair test.

Distinguish between an object and the material from which it is made

- Identify and name a variety of everyday materials, including wood,

Materials.

Design your own castle, interior and exterior, what materials will you use? Why?

Identifying materials and their properties.

Distinguish between an object and the material from which it is made

- Identify and name a variety

Materials.

Can your house survive the mighty blow of the big bad wolf?

Fair test. Identifying and classifying materials.

Distinguish between an object and the material from which it is made

- Identify and name a variety of everyday materials, including wood,

Materials.

Check out.

Distinguish between an object and the material from which it is made

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock –

Describe the simple physical properties of a variety of everyday materials

LKS2



Staff subject knowledge needs identified and supported.

Staff CPD Questionnaire

	Very confident	Moderately confident	A little confident	Need some support
Working Scientifically (WS) Skills		X		
Classification enquiries	X			
Pattern-seeking enquiries		X		
Comparative and fair test enquiries	X			
Secondary source use enquiries		X		
Observation over time enquiries		X		
Applying writing to WS skills	X			
Applying maths to WS skills			X	

"The CPD questionnaire helped me to highlight where I needed support and allowed the SL to support me in a comfortable environment," Y1/2 teacher.

Once new initiatives are introduced, monitoring and support follows shortly after to ensure everyone is striving for the same goals. (Staff meetings did take place but HT cancelled the recurring event so now it looks like they were all cancelled!)



Canceled: Staff Meeting

Calendar (swhalley@sjsb.co.uk)

Tuesday, 17 December 2019

15:30 ▶ 16:30 (1 hour)

Repeats weekly on Tuesday until Tue, 21 Jul 2020

No Conflicts

RSVP



Subject Leaders presentations Hist/Sci/RE



Canceled: Staff Meeting

Calendar (swhalley@sjsb.co.uk)

Tuesday, 21 January 2020

15:30 ▶ 16:30 (1 hour)

Repeats weekly on Tuesday until Tue, 21 Jul 2020

Conflict: CPD KS2 NC Assess...

RSVP



Science briefing Year 1 writing no more marking

Consistency



A yearly subject overview is presented to staff and governors.

Dream Believe Achieve



SL4: There is a commitment to the professional development of subject leadership in science

SL introducing new CPD and resources during staff meetings. Reach Out online CPD has enabled staff to improve their subject knowledge before a unit. TAPS has given teachers working scientifically resources to allow them to assess these skills fully. Sharing CLEAPPS resources has ensured that staff have a greater understanding of how to keep safe in science.

LKS2 being creative with their Science by explaining their knowledge through a story.

Y1 Teacher –
“The big questions on the Reach Out CPD were great for working scientifically ideas.”



Congratulations! You have completed this unit.

Let the world know!

Invite colleagues by email

Share online
Post About Reach Out CPD on Facebook
Tweet about Reach Out CPD
Your tweet will look like this...
“I’ve just completed a unit of primary science CPD on [reachoutcpd.com](#)”
Email invites

Presentations for SIL online science CPD

SI [redacted]@siliverpool.gov.uk>

To: Bury primary science SLs <buryprimaryscience@siliverpool.gov.uk> +2 others

Teaching Scientific Thinking a... 2 MB
odd_one_out.pdf 3 MB
PMI.pdf 1 MB

Show all 4 attachments (7 MB) Download all Save all to OneDrive - St Joseph & St Bede RC Primary School

Dear all

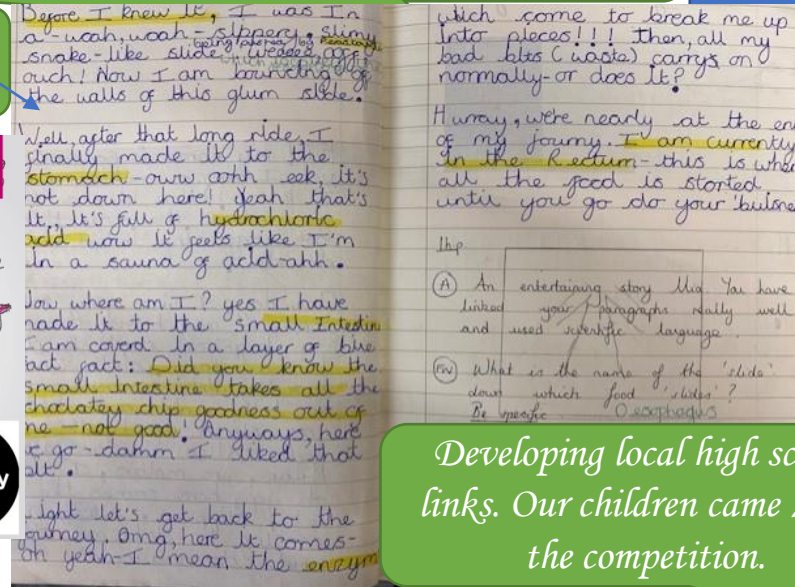
Thank you for attending the online CPD session yesterday on teaching scientific thinking in primary science.

SL introduced Reach Out CPD and resources to staff.

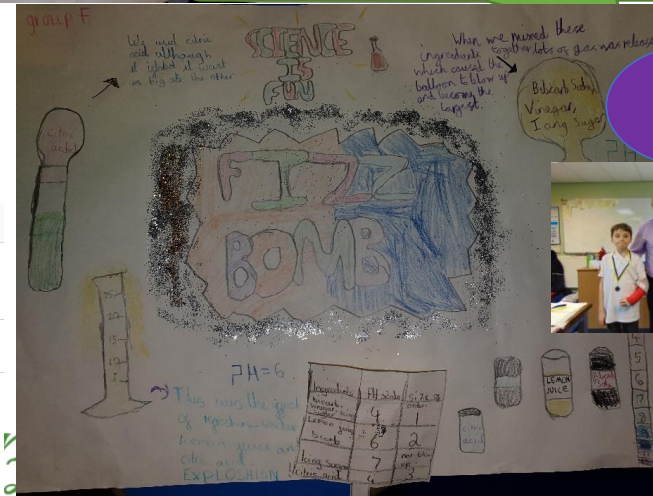
SL attends subject leadership CPD three times a year with School Improvement Liverpool (CPD log for all courses)

Less Science CPD for other teachers in school.

Developing local high school links. Our children came 2nd in the competition.



UKS2



Limited contact with the science community.

SL is now part of the Greater Manchester SEERIH network, attending meetings and speaking with other members. SEERIH provided me with many different ideas for working scientifically in the classroom. Such as KS1 using The Three Little Pigs to explore materials.



KS1



SL5: There are monitoring processes to inform the development of science teaching and learning

The main priorities from the end of 2019 school year.
Regular monitoring took place pre 2019.

SL has updated the book monitoring forms twice since the start of PSQM, to focus on the school's targets. On the left, there is an extra box to fall in line with our new Science Principles, ensuring that the impact can be monitored. On the right, I included a table to help the staff see how well they have covered working scientifically through the year, staff can clearly see where the areas of focus are.

Moving Forward...

- Selfie competition to take place in Spring 1, this will raise the profile of science within the school ready for National Science Week in March.
- A science fair to be held at the end of the National Science Week, with each class presenting their project.
- To ensure that there is consistent use of language throughout the school (especially for displays). Details will be emailed. This includes use of a knowledge organiser for assessment.
- Further trips and wider experiences (MOSI)
- And after all, you're my wonderwall.
- Staff to receive CPD and extra resources for assessment and teaching techniques.

Pupil voice has enabled me to monitor the development of science across the school. The changes we have made have had a very positive impact.

Y5 Pupil – "I love Science because you get to do lots of experiments and we don't always write in our books."

Question/Statement	2019	2020
I like science lessons.	83%	91%
I learn more science when working in a group.	75%	82%
I usually understand what the science lesson is about.	66%	85%
What I learn in science is really useful.	68%	89%

Y3 Pupil – "You learn things for yourself when we do experiments."

Curriculum Coverage

- Science is being taught at the right curriculum level with good coverage in all units.
- Tasks are wide ranging, they are engaging and challenging to the children.
- Writing is a whole school improvement target – children are provided with the freedom and opportunity to write in their Science learning.
- There are some gaps in units (lessons and time), Science is a core subject so needs to be covered comprehensively.

Working Scientifically

- Children have used all of the 5w's in their learning.
- There is a range of recording methods – graphs, tables, diagrams.
- Experiments, when written up, include correct scientific terminology and sections on independent variables, method, results, etc. (Be careful not to confuse results with a conclusion.)
- Need to increase levels of experimentation, performing simple tests and observations over time.
- Good use of ICT throughout.
- Double page spreads really showcase the children's learning.

SJSB Principles

- Principles have been embraced in UKS2.
- It is evident that the children are discussing the new principles and self-assessing around them.
- Learning challenges have been updated to show a 'working scientifically' and a 'conceptual understanding' challenge.
- Big questions are used effectively.
- Concept cartoons are being used for assessment and further work.
- Check in vocab task has also been included.

UKS2

LKS2

Class Teacher: Ch...
Year Group: 3
Children's Books: E... (HA)
Tally of coverage so far (complete below):

Observation Over Time	Identifying, Classifying and Sorting	Research
1	6	1
Fair Test	Pattern-Seeking	Total
4	1	13

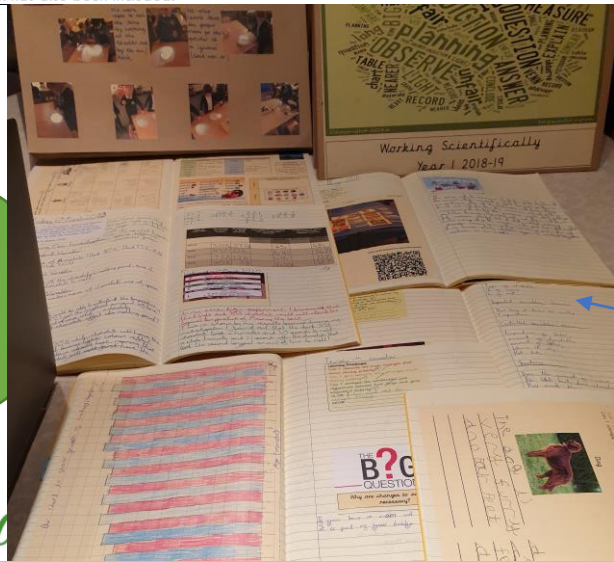
What is working well:

- Engaging planning
- Breath of challenge
- Differentiated activities/accessible to all learners
- Experiments promote love of learning and independence in finding answers
- Next steps are clear
- Prior knowledge is formatively assessed each lesson
- Children are enjoying their learning
- Check ins/outs are helpful in assessing the understanding/knowledge gained.
- Resources like SeeSaw and LBQ help engage children.
- Consistency throughout LKS2

What are my next steps:

- Encouragement of children consistently and correctly using scientific vocab and terminology
- Reinforce methodology of experimenting and understanding of which steps need to occur in what order.
- Build on children's writing/explanation skills and push them to look deeper eg A occurs because of B, if X didn't happen, what would happen to Y? etc
- Revisit what makes a fair test until fluent.

Books are brought to staff meetings/Friday monitoring so everybody can share ideas and best practice. Feedback is then provided.



Dread



Wednesday 2nd October 2019

Impact Week: The Last Words

Can I organise my writing using simple devices to structure the information and support the reader?

Can I use a variety of scientific vocabulary within my report writing?

Can I show careful consideration of my audience when presenting my writing creatively?

Previous years monitoring showed that more assessment resources were needed to spot gaps and misconceptions.

SL bought concept cartoons to help with teaching and learning. They have been used for further work, plenaries, to start lessons as a question/debate and as check in tasks.

New knowledge organisers provide key vocabulary, with definitions, to help the children. They show specifically how the children will work scientifically. There is an opportunity for children and adults to assess. The National Curriculum links are included as are big questions. The organiser also shows the text we are linking our learning to.

Dream Believe Achieve

*SL and NQT
planning KS1
materials unit.*

*Knowledge
organisers
not used
effectively.*

LKS2

A collage of eight photographs showing students participating in a 'Dance of the Vagina' activity. The photos show students in various poses, some holding large orange paper cutouts of a vagina, and others in more abstract or artistic poses.

SPI, SP2, SP3, SP4, SP5, SP6.
Glow: beyond report
different animals and the
Glow: different mammals
and all round animals

Y5 teacher – “Children love the principles and use them all the time, the learning challenges really provide a focus on each lesson.”

[illegible]

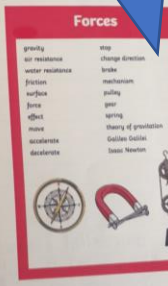
UKS2 Science - Autumn 1:

Science Big Questions

- Can you feel a force?
- Why do objects fall to the earth?
- What keeps a plane in the sky?
- How do boats float?
- What's the difference between a push and a pull?

Our Science Targets:	Achieved
Can I explain that <u>unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object?</u>	✓ (A) 19.9
Can I identify the effects of <u>air resistance, water resistance and friction that act between moving surfaces?</u>	✓ (2) 10
Can I recognise that <u>some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect?</u>	

Forces



Autumn 1: What lies beneath our feet?

Vital Vocabulary		Animals
The Earth		vertebrates an animal with a backbone
crust the hard layer on the earth's surface	invertebrates an animal without a backbone	endoskeleton a skeleton inside the body
mantle the part of the Earth between the crust and the core	exoskeleton a skeleton outside the body	hydrostatic skeleton a flexible skeleton supported by fluid
core the most central part of the earth	extinct a species of animal that no longer exists	endangered an animal or plant that may soon exist no more
minerals small particles that make up different rocks		
fossils the remains of an animal or plant, which has been preserved in rock		
continental drift the theory that the Earth's continents have moved over time		
tectonic plates pieces of Earth's crust that separate and move away from each other		
divergent boundary where two tectonic plates move away from each other		
convergent boundary where two tectonic plates collide		
transform boundary where two tectonic plates slide past one another		

TECTONIC PLATES

Scientific
Questions


Questions
What would I find inside the Earth?
How is our Earth moving?
What animal skeletons might we find underground?

Scientific Enquiry


Research

Who was Inge Lehmann and what did she discover about the Earth?

Grouping



How can we group dinosaurs based on their characteristics?

Debate			<p>Why did the dinosaurs die out?</p>
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Identifying and Classifying

How can we sort local endange species using classification key

Our Core Skills: Assessing our learning

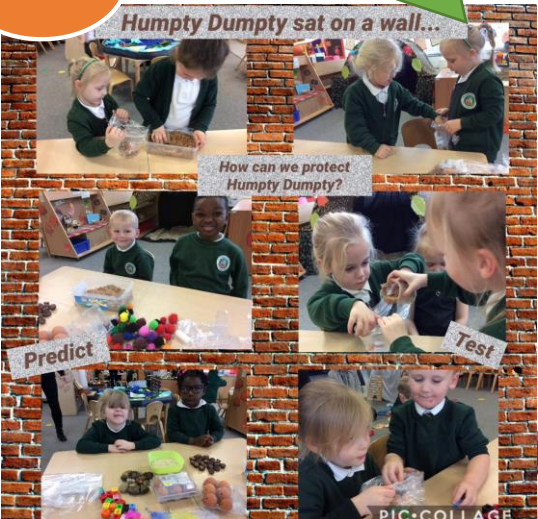


T1: There is engagement with professional development to improve science teaching and learning

Whole school teaching impact. 

EYFS working scientifically, making their own choices, exploring their senses and making predictions.

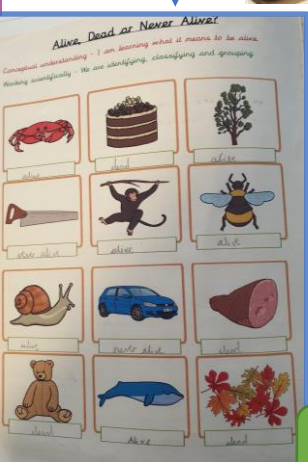
EYFS



Previous monitoring had shown that KS1 had become overly worksheet based.

KS1 now working scientifically, creating their own questions and taking their learning outside of the classroom.

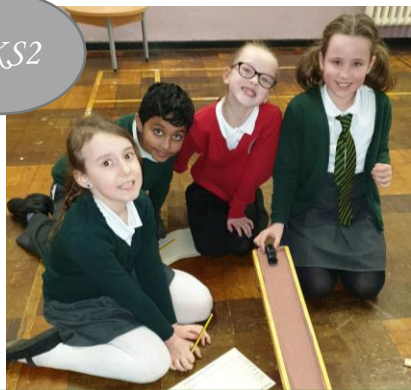
KS1



LKS2 exploring friction and sound, creating big questions, designing their investigations and working as a team.

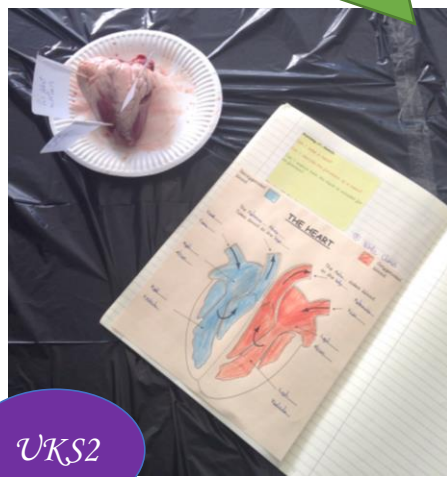


LKS2



UKS2 using real life practical resources and creating their own NHS rainbows.

UKS2



All classes are now taking their learning outside the classroom and using more resources since December 19 staff meeting.

Dream Believe Achieve



T2: There is a range of effective strategies for teaching and learning science which challenge and support the learning needs of all children

LKS2 explored magnetism by linking it to their topic of plastic pollution, their classroom had been turned in to a rubbish tip, they had to find a way to separate the materials to recycle them.



LKS2

Learning walks show a wider range of strategies to support the needs of all learners, including concept cartoons, ICT, active and outdoor learning and linking science with other learning.

EYFS

Key Scientific Vocabulary

Anomaly	Investigation
Eiger	Observation
Results	Measure
Date	Fair test
Method	Repeat
Dependent variable (what the child changes)	Independent variable (what the child does not change)
Procedure/Method	



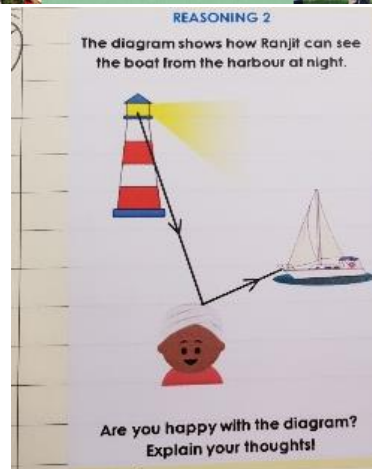
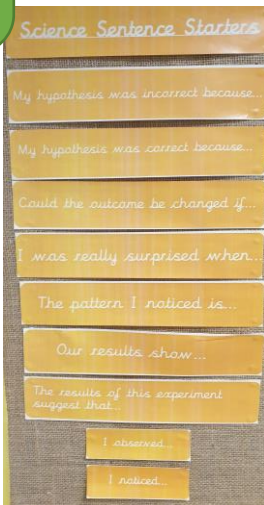
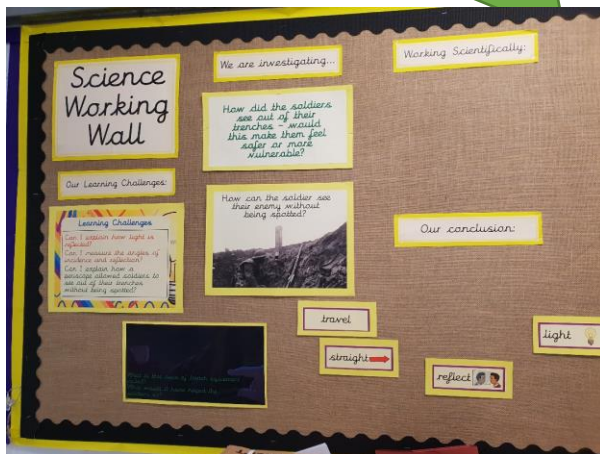
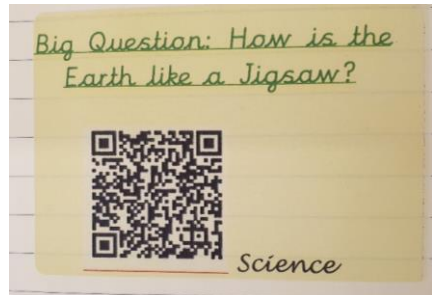
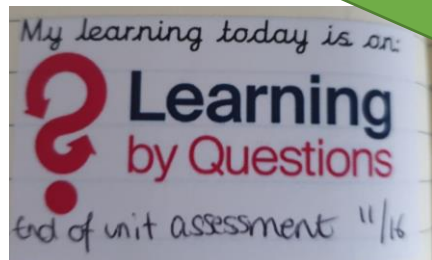
KS1

Investigating the children's own big questions.



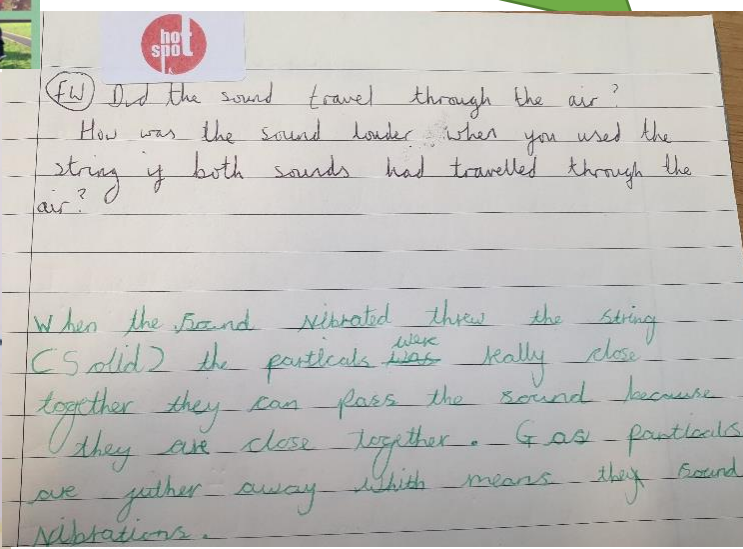
SL introduced Learning by Questions and assessment by video or voice recording (QR codes) to support SEN children and children that struggle with their English skills.

Working walls are consistent with new sentence starters and science vocabulary added to all working walls.



I disagree with the diagram as the light should hit the object first and then reflects into

Teachers using big questions, diagrams and cartoons to stretch children and address misconceptions.



UKS2

Dream Believe



T3: There is range of up-to-date, quality resources for teaching and learning science which are used regularly and safely

School has signed up to ASE, teachers taught relevant lessons about the pandemic to help the children's understanding.

Staff had limited knowledge of online resources they could use to support teaching. Some physical resources needed to be updated.



LKS2

Our amazing hobbit hole built in 2020.



Our farm and forest school areas are used every week for science.



UKS2



This week's farm team have been fabulous!



BUILDING THE FIRE
LIGHTING THE FIRE
TOASTING SMORES



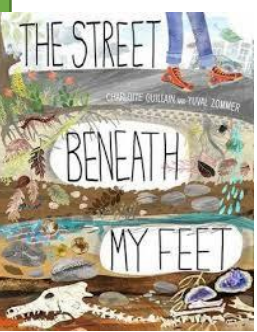
LKS2



Science resources organised with gaps showing resources are in use!



Quality texts to support learning and make cross-curricular links.



SL introduced all staff to useful teaching websites in the November staff meeting.

CPD and other resources

Year	Page	Resource	Notes
Y1	1	Y1 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	
Y2	2	Y2 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	
Y3	3	Y3 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	
Y4	4	Y4 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	
Y5	5	Y5 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	
Y6	6	Y6 PLANS FOR FORMAL ASSESSMENT OF WORKING SCIENTIFICALLY	

TAPS = TEACHER ASSESSMENT IN PRIMARY SCIENCE



Y6 using TAPS assessment criteria in their lessons.

- Science Learning Challenges - Week 4:
- WS - Identify different types of scientific enquiries to answer their own questions.
 - CU - Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light in to the eye.
- SPI, SP2, SP3, SP4, SP5, SP6.

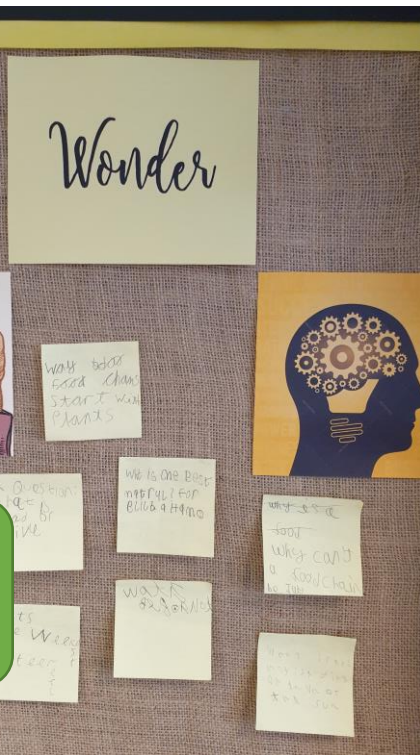
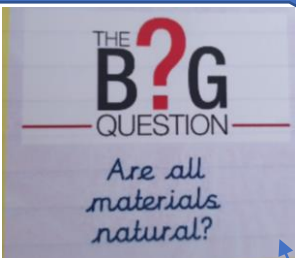
UKS2

Dream Believe Achieve



L1: There is a shared understanding of the purpose and process of science enquiry

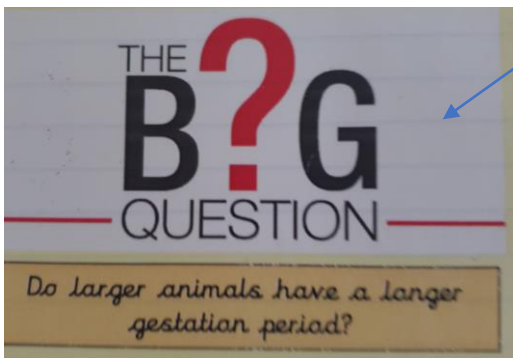
Monitoring from 18-19 showed that lessons were generally enquiry led. SL wanted to see more of this and wanted the children to have more ownership of their investigations.



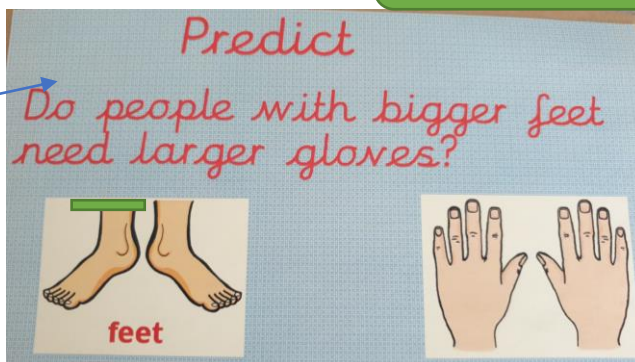
SL introduced a wonder-wall for children's scientific questions.

"I love it when my big question is on the board!"
Y2 child

What keeps a plane in the sky?
How do boats float?



Most investigations now start with a question created by the children.



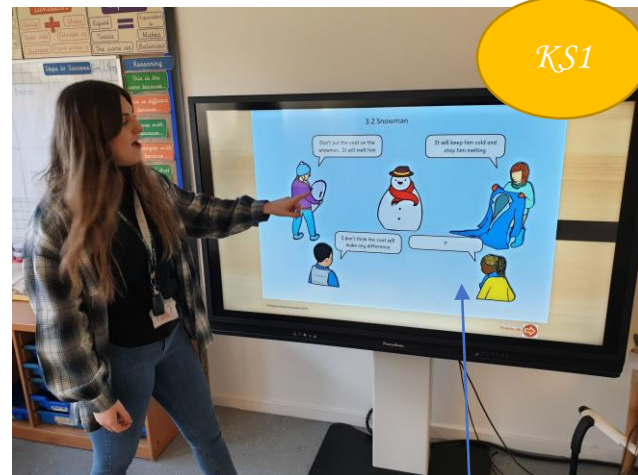
Dream Believe Achieve

Children in LKS2 choosing their own equipment from their big questions and discussing how they will conduct their experiment.



One of our home learners took our ice experiment even further!

Creating curious learners



KS1



Which Material Stops Ice from Melting the Longest?
Prediction/Hypothesis
I predict that the _____ will make the ice melt the slowest.

Results
Check the ice after 5, 10, 20 and 30 minutes.
Order the ice (1, 2, 3) by which one has melted the most at that point. So if you are using kitchen foil, cotton and newspaper, you would write them in the material column, if the ice in the newspaper had melted the most after 5 mins you would put a 1 in this column, if the ice in the cotton had melted the least after 5 mins then you would put a 3 in that column. If you can't tell then you can put the same number for more than one material.

Material	5 mins	10 mins	20 mins	30 mins
Tinfoil	2	1	1	1
cloth	3	2	3	3
Paper	1	1	2	2

All lessons start with enquiry, including concept cartoons. KS1 investigated how to stop a snowman melting, the children were surprised by the results both in school and at home.

Homemade giant lolly



L1: There is a shared understanding of the purpose and process of science enquiry

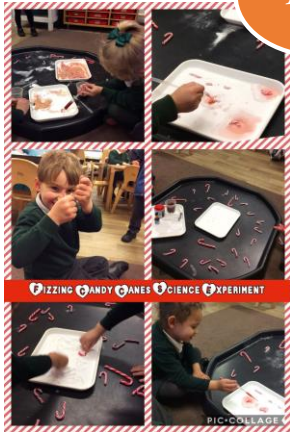
KS1 creating inspiring areas of provision and deciding as a class which exercises they should use in their experiment.

Monitoring from 18-19 showed that lessons were generally enquiry led. SL wanted to see more of this and wanted the children to have more ownership of their investigations.

All aspects of working scientifically can be seen all around the school! Enquiry in action!

EYFS

EYFS exploring forces by building catapults and watching chemical candy cane reactions.



EYFS



KS1



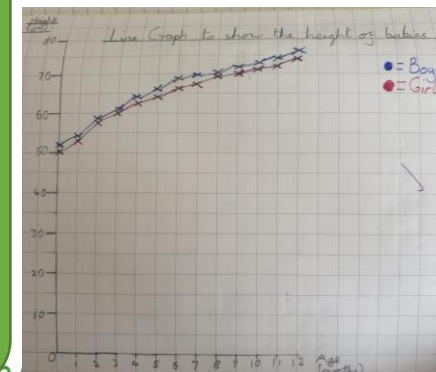
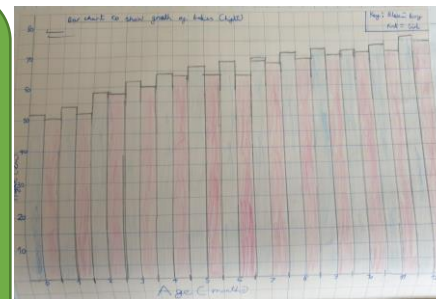
UKS2 using PEEL to conclude their experiments. The children given the freedom to display their results however they choose.

LKS2

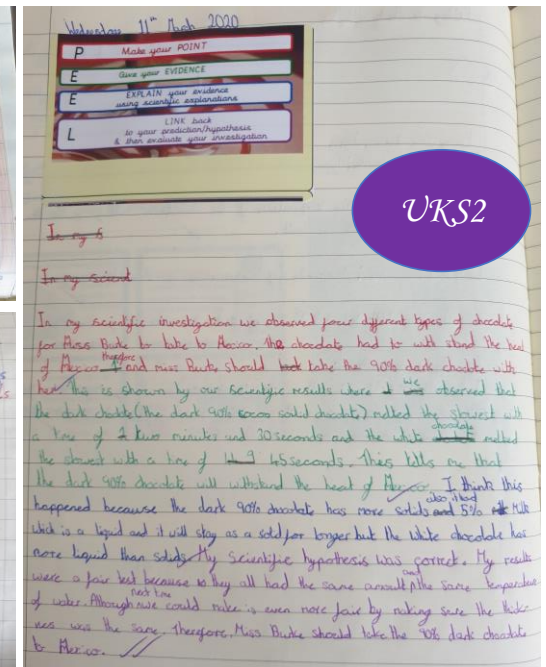
The whole of LKS2 participating in a digestion workshop and having the freedom to create their own circuits



LKS2



UKS2



Dream Believe Achieve

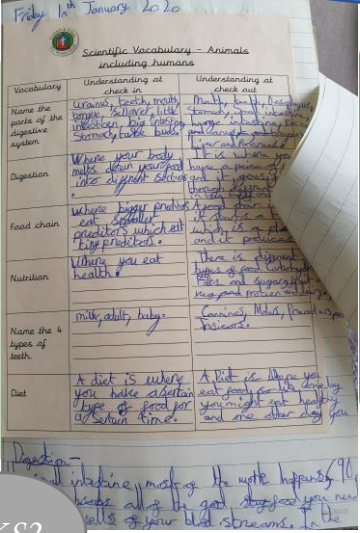


L2: There is a shared understanding of the purposes of science assessment and current best practice

Assessment slides from Nov 19 staff meeting.

Improving assessment was the main focus from 18/19 monitoring

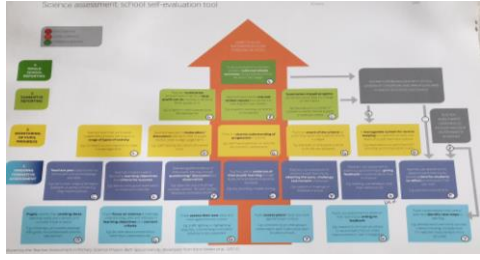
New check in and check out tasks clearly show progress from the start and end of the unit. We had to change the format as this Y4 child had learned so much! 3 pages later!



LKS2

Handwritten student work on 'Scientific Vocabulary - Animals' showing progress from start to end of unit.

Handwritten student work on 'Scientific Vocabulary - Animals' showing progress from start to end of unit.



TAPS self-evaluation tool used at start of PSQM.

Y4 student video recording.

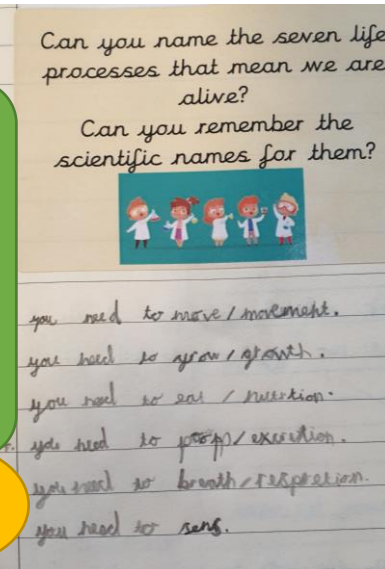
Check in and out tasks also recorded using QR codes to help SEN.



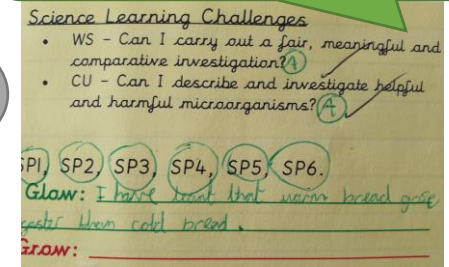
LKS2

Concept cartoons and stretch challenges used in plenaries to check understanding

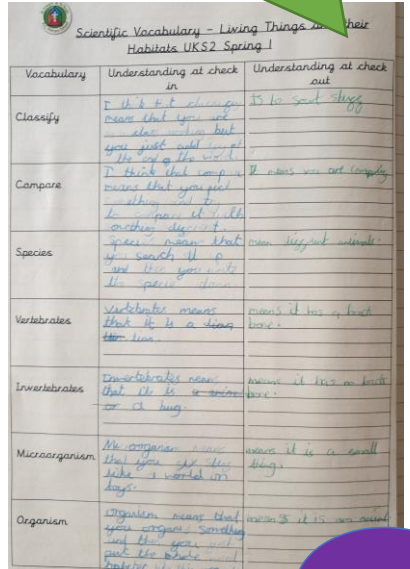
KS1



Assessed learning challenges



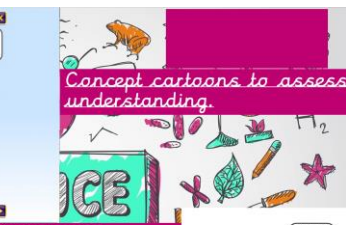
Check out task shows Y5 child has clearly addressed original misconceptions.



UKS2

Scientific Vocabulary - Sound		
Vocabulary	Understanding at check in	Understanding at check out
Vibrate		
Medium		
Pitch		
Volume		
Faster		
Frequency		
Ear		

Simple pre-task to be conducted in week 1, post-task at the end of the unit. Immediately informs teacher of gaps in knowledge and misconceptions. Words like medium and pitch have alternative meanings. The child may understand the words in a certain context, e.g. Medium means that something is not too big but not too small, it is in the middle. However, they may not know how this word relates to sound. Even if the child does provide an accurate definition of some of the words, you would expect to see a more detailed definition at the end of the unit - progress!



We have purchased two complete sets of concept cartoons. We have also purchased a KS1 set of cartoons with questions and investigations that can follow an investigation. There are a wide range of KS2 cartoons for each unit. All cartoons have a suggested follow up activity and an 'ideas' slide which provides an explanation of what a scientist may say in this conversation. Visual resources. The resources can be an excellent addition to any science lesson. They could prompt an investigation or show scientific reasoning in a plenary. The main idea is to use the most appropriate cartoon for your unit in week 4/5 as an assessment tool. The answers will immediately reflect the children's understanding and then allow you time to plug any gaps.

Working scientifically - practical scientific methods, processes and skills

Conceptual understanding - what do you want the children to learn?

Self assessment - children to reflect on where they think they are learning and to indicate which principles they used in the lesson.

Working scientifically - practical scientific methods, processes and skills

Science Learning Challenges - Week 5:

- I can conduct a fair test, changing one variable at a time.
- I can explain why the pitch of a sound is higher or lower.
- I can relate changes in pitch and volume to the types of forces that have been applied.

SP1, SP2, SP3, SP4, SP5, SP6.

Today I am: ☐

Science Learning Challenges - Week 5:

- I can recognise that living things can be grouped in a variety of ways.
- I can use classification keys to help group a variety of living things.
- I can gather, record, classify and present data in a variety of ways to help in answering questions.

SP1, SP2, SP3, SP4, SP5, SP6.

Today I am: ☐

Dream Believe Achieve



L3: There is a commitment to developing all children's science capital

We run two science competitions to encourage and inspire more science to happen at home.

Science Selfie Contest

Super Science Prizes for our Selfie Winner!

Simply post a selfie of yourself, or with your family, enjoying science outside of school. Your selfies could include a visit or taking part in a science activity at home. You can include captions, the more imaginative the better!

To enter the contest, all you need to do is tweet or email your selfie, with your name and class, to Mr Whalley. @whalley_mr or class7@sjsb.co.uk Remember to include the hashtag #SJSBScienceSelfie

Winners will be announced at the Science Fair on Thursday 14th March - Good Luck!

SCIENCE SELFIE!
What is Static?



Science Competition!

B?G QUESTION

What is science?

This may seem like a simple question, but what if you really think deeply about it?

How does our television turn on, with the touch of a button, from across the room? How do our phones and tablets recognise our very own fingerprints? How does our heart beat around 100,000 times a day without us even thinking about it?

For a chance to win some super exciting science goodies, I want you to show me 'what science is'.

When you are out in this wonderful world of ours, put on your science head and look around you. Where is the science happening? What is the science that is happening? Take a photo of the science you have spotted and provide a scientific explanation of what you think is happening. You could use Pic Collage or other photo apps to make your entry look fantastic!

When you have finished, you can tweet your entry to @whalley_mr or email me - class7@sjsb.co.uk

The deadline for entries is the 12/3/2020 and the winners will be announced on the following day in assembly.

Thank you in advance,
Mr Whalley.

KS1



KS1



We have many trips and visitors, bee keepers, VR experiences, Jodrell Bank and many more.

V.R Special
Volcano
Experience.

Our annual science fair designed to create wonder and add to children's science capital.



LKS2

Vortex Cannons!



LKS2



EYFS



Dream Believe Achieve

KS1



UKS2



Our eco-ambassadors are applying for the green flag award in March.





WO1: There are appropriate links between science and other learning

All planning is cross-curricular, this KS1 magical adventures topic compliments each subject by reinforcing learning in all subjects.

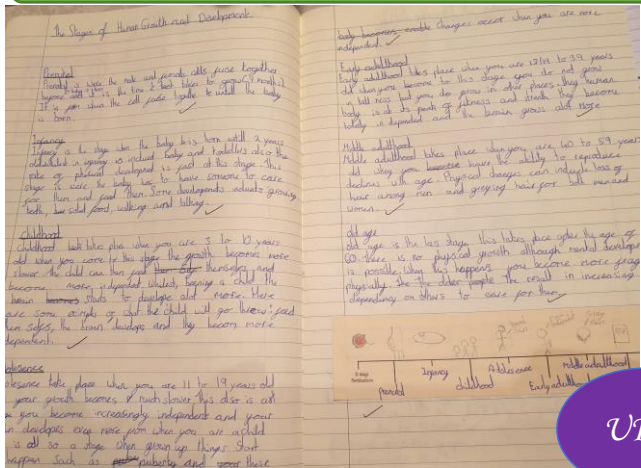
WOW	Dragon-Slayer Interview	Ice-Lolly Experiment	Build your own Castle
Learning Challenge.	Can a person change?	Who is special in your life?	Can something that keeps you warm also keep you cold?
English	 Sentence Stacking	 Sentence Stacking Lessons – Alternative ending	 George and the Dragon



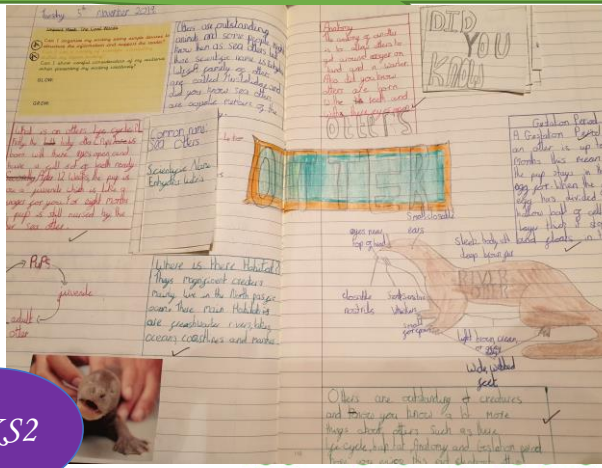
Scientific understanding	Materials.	Materials.	Materials.	Materials.	Materials.	Materials.
Check in task	Distinguish between an object and the material from which it is made	Identifying, classifying and sorting – How can you sort different materials?	What material will stop an ice lolly from melting?	Design your own castle, interior and exterior, what materials will you use? Why?	Can your house survive the mighty blow of the big bad wolf?	Check out.
		Distinguish between an object and the material from which it is made	Observation over time and fair test.		Fair test. Identifying and classifying materials.	Distinguish between an object and the material from which it is made
Historical/geographical understanding	Monarchy and Castles	Monarchy and Castles	Monarchy and Castles	Monarchy and Castles	Monarchy and Castles	Monarchy and Castles
	Medieval Times	Who lives in castles?	What are the key features of a castle?	Medieval Times	Is a castle the same as a palace?	Medieval Times
	use common words and	Medieval Times				

Our farm and forest school is used to meet the targets of the National Curriculum and for our older children to learn leadership skills.

High levels of presentation and writing skills are expected in Science books in line with the SIP.

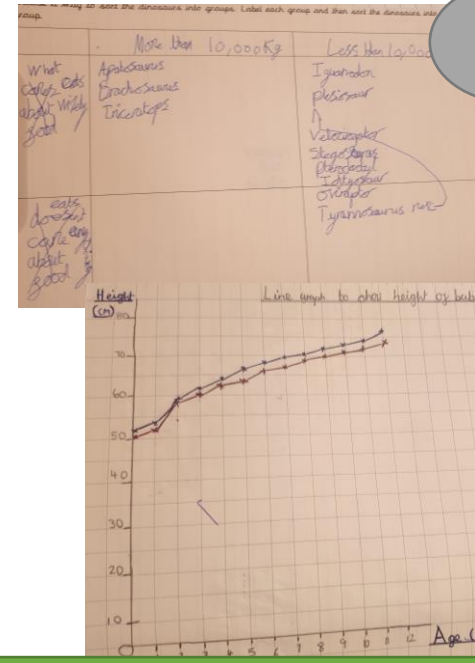


UKS2




UKS2

SL and Maths lead discussed how to include more statistics in science Jan 20. Range of recording and self choice across key stages



LKS2



UKS2

Today Class 2 came outdoors and...

- Explored their senses, noticing mini-beasts and veins on 'see-through' fallen leaves.
- Played with nature and used equipment to help see things more closely.
- Asked questions
- Tested their body's compass and used compasses to find North, South, East and West.

Our tree-side tale was The Sun, the Moon and the Cockerel. We thought about the noises on our farm and why animals make the noises they do.



Leaf veins



What's that smell?



Binoculars

Seeds and Gardeners



EYFS



EYFS



EYFS



EYFS



WO2: There are appropriate links with families, other schools, communities and outside organisations to enrich science learning

Our whole class assemblies are always related to real events such as this Y1 assembly about space and Tim Peake.

Our Y6 children improving the local environment for our residents.



UKS2



The children wrote to Boris Johnson to express their concern about plastic pollution.



KS1



*2019/20 we had 63 competition entries.
In 2020/21 we had 104 entries.*

Our classes all had a great experience when Facetime farmers.



We were all taught how to keep safe during the Coronavirus pandemic

- We will not be mixing with any other bubbles outside of upper key stage 2
- We will play on the bottom yard - only here as this is our bubble zone
- We will go for lunch at different times to the other bubbles
- We start school at 8.50am and finish at 3.10pm in OUR Bubble
- You will have your own locker to put your coat in
- Remember - no backpacks are allowed in school



Dream Believe Achieve



Next Steps.

SL3 – SL wants to establish Science links with other schools in the Beacon trust, to share best practice and resources.

SL1 – Science principles will continue to be monitored yearly.



SL4: SL wants to be further involved in the Science community, offering to be involved in research (SEERIH), to write book reviews for ASE Primary Science and to be more active on Twitter



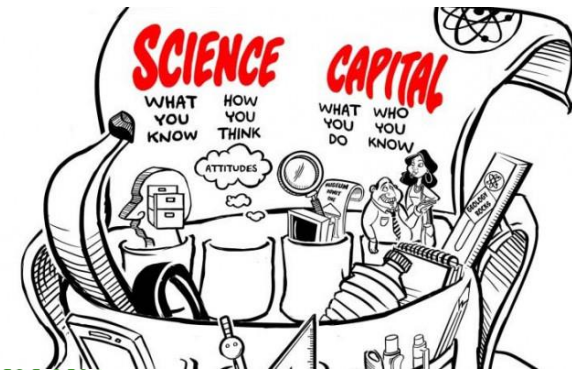
SL2: SL will start a new Science after school club when the pandemic allows.

SL2: SL is looking at the budget for next year, ASE membership will be renewed and he will look to buy further physical resources including microscopes.

SL5: SL will use a parent voice to liaise with parents on how to build science capital for the children in our school.



Dream Believe Achieve





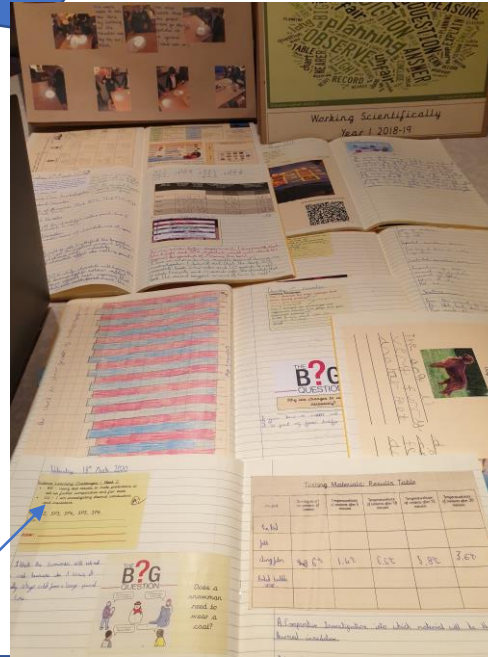
Next Steps.

T1 – SL to complete a whole school staff voice and check subject knowledge. SL will also check assessments for gaps in knowledge.

Staff CPD Questionnaire

	Very confident	Moderately confident	A little confident	Need some support
Working Scientifically (WS) Skills		X		
Classification enquiries	X			
Pattern-seeking enquiries		X		
Comparative and fair test enquiries	X			
Secondary source use enquiries		X		
Observation over time enquiries		X		
Applying writing to WS skills	X			
Applying maths to WS skills			X	

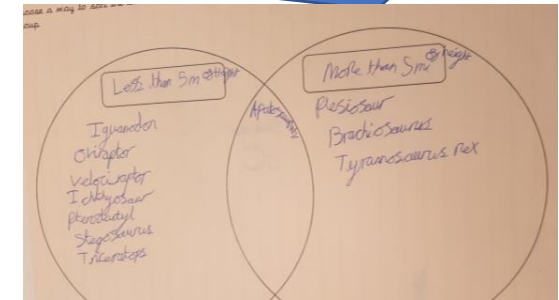
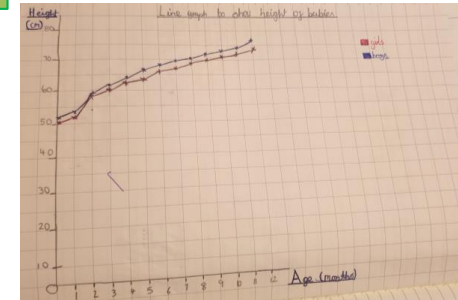
T2 – SL to continue to monitor through learning walks and book looks the changes that have been made to science teaching this year.



T3 – SL will enquire about sourcing equipment from the Royal Microscopical Society and Linnean Learning to further improve the facilities in school.



L1 – SL wants to provide children with further autonomy when it comes to result recording. Staff meeting to be arranged for CPD.



L2 – Now that check in and check out tasks have been established, a greater variety of tasks will be introduced.

practice
MAKES
progress

L3 – Make more specific links with the curriculum and our forest school to enable more outdoor learning.



Dream Believe Achieve



Next Steps

WO1 – SL to start to create more cross-curricular links with subjects like PE. Learning science through physical activity.

Newton's First Law

"Every object in a state of uniform motion tends to remain in that state of motion unless external force is applied to it."



WO2 – SL to sign up to 'Topical Science' newsletters (STEM) and share this with the children. SL to look to agencies such as Borrow the Moon for resource support.



Dream Believe Achieve