



Kelsey Primary School

Primary Science Quality Mark

Gilt Award

Staff and pupils were asked to reflect on what the greatest impact had been for them as a result of our PSQM Gilt journey.

"It has been very beneficial for us to work alongside other science leaders to share ideas and practice and to provide challenge for our Subject Leader." Headteacher

"Our science practice is more creative. I can see that children are more secure in their knowledge and skills."
KS1 teacher

"The best thing about the Quality Mark has been embedding changes to our provision that has helped children reach their potential."
UKS2 teacher

"It's broadened my horizons to more possibilities in Early Years so that children are always curious and inquisitive about the world around us."
EYFS teacher

"Science is now my favourite subject! I always look forward to STEM club."
LKS2 pupil

Key

Before
PSQM

Impact

Next
steps

Whole
school

EYFS

KS1

LKS2

UKS2

Headteacher
quotes

EYFS staff
and pupil
quotes

KS1 staff and
pupil quotes

LKS2 staff
and pupil
quotes

UKS2 staff
and pupil
quotes

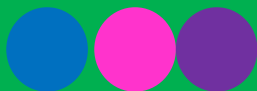
Parent quotes

Existing good practice of subject leadership

Class: Australia 2020/2021											
Teacher: Miss Thompson											
Monday	0855 Phonics V1 Handwriting	0930 Maths	0950 Maths	1045 English	1200 LUNCH	1300 Reading comprehension	1320 IT	1400 BREAK	1410-1500 Science	15-00-15:20 Assembly	
Tuesday	Phonics V1 Handwriting	Maths	BREAK	English	LUNCH	Reading comprehension	Science	BREAK	Science	PSHE	
Wednesday	Phonics V1 Handwriting	Maths	BREAK	English	LUNCH	Reading comprehension	Art	BREAK	D-T	Music	
Thursday	Phonics V1 Handwriting	Maths	BREAK	English	LUNCH	Reading comprehension	RE	BREAK	PE	PSHE	
Friday	Phonics V1 Handwriting	Maths	BREAK	English	LUNCH	Reading comprehension	PE	BREAK	PE	REL	

*EYFS: KS1 should have a daily phonics / reading session. Maths and English should be taught in the mornings if possible.
 *KS2 should have a daily reading comprehension (first thing AM) and SPaG session (20 minutes after lunch). Maths and English should be taught in the mornings if possible.

Science has always been highly regarded with KS1 and KS2 classes having two hours of science each week.



Science has always been prioritised on the school website, alongside English and Mathematics.

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Science

Intent

Our science curriculum is designed to ensure that scientists are:

- inquisitive, curious and knowledgeable about the world around them*
- able to apply their scientific knowledge when investigating*
- able to build arguments and explain key concepts*
- considerate of the uses and implications of science both today and in the future*

Teaching Strategies We Implement

KS2 Class Timetables – Gladys West class and Marie Curie class

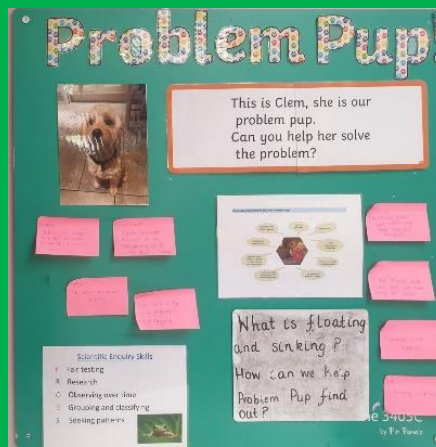
	0855	0930	0950	1045	1100-1200	1200	1300	1400	1410-1500	1500-1530
Monday	Active Spelling	SMSC Assembly	Maths	Break	English	Lunch	Science	Break	History	Music
Tuesday	Active Spelling	Comprehension	Maths	Break	English	Lunch	Geography	Break	RE	Music
Wednesday	Active Spelling	Comprehension	Maths	Break	English	Lunch	Science	Break	Computing	Class read
Thursday	Active Spelling	Comprehension	Maths	Break	English	Lunch	PE	Break	Art/DT	Class read
Friday	Languages	Comprehension	Maths	Break	English	Lunch	PE	Break	PSHE	Celebration Assembly

Science Non-Negotiables



- Teachers must follow the school science curriculum plan to ensure a sequence of knowledge and concepts.
- In order to deliver the aims of the curriculum, all pupils in Key Stage One and Key Stage Two must have two 1-hour science lessons per week.
- Our EYFS classroom must have weekly science-specific continuous provision for children to access, with enhanced provision related to firmly topics in class.
- Teachers must begin a science unit with a pre-unit assessment and end with a final assessment of the progression each pupil has made. Ensure that pre-tests are measurable with a score so that progress can be easily monitored.
- Ensure that opportunities for working scientifically are built into lessons.
- Pupils from Years 1 to 6 should learn about scientific enquiry types using 'FROGS'. This must be displayed on a science working wall in class at all times and referred to in every lesson. Teachers should choose one of the scientific enquiry types to focus on per term.
- Teachers must update assessment trackers at the end of each unit (2021/22 – Science – Assessment grids).
- Key vocabulary listed on the science curriculum plan must be taught in each unit and displayed on science working walls.
- Use knowledge organisers for each unit in science. These must be displayed on working walls and on the table at the start of every science lesson to be used in the starter.
- Working walls will reflect the current learning in class. Key vocabulary and learning will be added to working walls as the unit progresses.
- Termly homework will include at least one science task.

Staff agreed non-negotiables together based on our collective vision of what good science teaching and learning looked like. Our science non-negotiables underpin practice in every classroom, with staff knowing exactly what science lessons should look like. The non-negotiables are well-established and monitoring focuses on ensuring that these practices are in place. Creating them as a team ensured a shared understanding and motivation to consistently maintain good practices in science.



Science displays have always been in place in central areas such as the school hall and Key Stage corridors. Every classroom has dedicated science displays, which are regularly updated to support children in their current learning.

SL: B
T: A
T: C

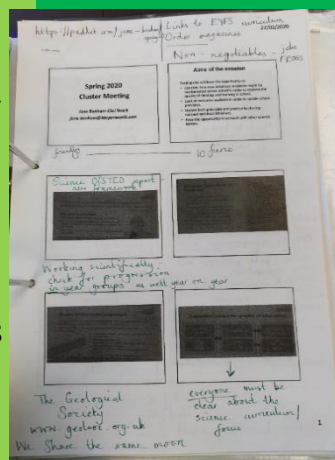
Existing good practice of subject leadership

Focus: CPD in Science



Date	Course attended/staff meeting/staff training details
Monday 14th October 2019	Primary Science Leads meeting Manor Farm Academy
Thursday 30th January 2020	Primary Science Leads meeting Manor Farm Academy
Wednesday 13th November 2019	School peer review with focus on science
Friday 28th February 2020	Science curriculum meeting at Cherry Hill Primary - EYF5
Monday 19th October 2020	Primary Science Leads meeting - virtual
Monday 9th November 2020	Ofsted 2019 Framework in action - vocabulary virtual
Wednesday 18th November 2020	Science, STEM and the new OFSTED framework - deep dives virtual
Thursday 11th February 2021	Primary Science Leads meeting - virtual
Thursday 22nd April 2021	PSOM training sessions, Land 2, RC and AC virtual
Tuesday 18th May 2021	Teaching Primary Science Outdoors - R/S virtual
Wednesday 19th May 2021	Primary Science Leads Summer Network meeting - virtual

SL has always regularly attended local science cluster meetings and engages in science CPD. Summaries, updates and initiatives are always shared in staff meetings and are always shared in staff meetings the week after CPD takes place.



Science knowledge organisers are regularly used in lessons during starters and to inform questions on pre-test assessments.

Key Priority 1

To ensure that the implementation and impact of the newly constructed curriculum matches its desired intent in all subjects.

Reason: The newly designed curriculum has been set out with clear intent in all subjects. It is now important that this intent can be seen to be carried out in lessons and children's books, with clear evidence that learning and knowledge are carefully sequenced and building up across terms and year groups.

Milestones

BY DECEMBER:

- Middle leaders can demonstrate the progressive sequencing of teaching in their subject responsibilities and how and where their subject meets the school's key curriculum drivers.
- All KS2 pupils are becoming Key Stage Ready due to visits to local secondary school.
- Knowledge organisers for science, humanities and RE regularly used by all pupils and staff for supporting
- Monitoring shows that curriculum intent drives run through all subjects.
- Monitoring shows that teaching consistently builds on prior knowledge
- Monitoring shows that the quality of education is at least good.
- Behaviour and attitudes to learning and personal development is at least good.
- Governors monitor the focus subjects of this term

BY APRIL:

- Monitoring of Art and DT show that there is progression of knowledge and at least 'good' across the curriculum with elements of 'outstanding'
- Art and DT have subject knowledge progression documents from EYF5 to Y6.

BY JULY:

- National quality marks are achieved in 21/22 for Science, RE and Healthy Schools.
- there is progression of knowledge.
- Pupils understand the curriculum intent drivers and show evidence of this in their learning
- Conversations with pupils demonstrate that they are developing their understanding of the fundamental British values of democracy, the rule of law, individual liberty, tolerance and respect. School promotes equality of opportunity and diversity effectively.
- Long term retention monitoring shows that pupils are retaining more knowledge and information
- Subject leadership has evidence to show their leadership is good.
- Subject action plans are updated for the new academic year.
- The quality of education in all non core subjects is at least good.

Science has always been prioritised on the School Development Plan.

There has always been adequate time for science staff meetings.

Kelsey Primary School @KelseyPrimary · Oct 7, 2020
USA and Australia class enjoyed a visit from the @ExplorerDome today to further their learning on the digestive system (Years 3 and 4) and animals and their environments (Years 1 and 2). A really special, immersive experience for everyone involved #science



Regular CPD opportunities and involvement in local science cluster meetings ensure that the subject leader is suitably trained and informed of current research and best practice recommendations. Science continues to hold a high status in school with regular opportunities to lead science staff meetings and a sufficient budget for enrichment and resources to supplement teaching.

School budget has always been sufficient to allow for science experiences and school resources.

Science Update March 2021

Staff meeting

Action Plan priority:

Continue to promote science in our EYF5 classroom.

Success criteria:

EYF5 will undertake science star challenges at least fortnightly to increase opportunities for science. They will also participate in an input on science through Knowledge and Understanding of the World at least fortnightly. This will be teacher-led, providing opportunities for discussion and the introduction of vocabulary. This input will also lead to some more opportunities within enhanced provision to access science.

Action plan priority:

Develop pupils' knowledge and use of scientific vocabulary.

Success criteria:

KS1 and both KS2 classes will start science lessons with a new starter called 'Super Science.' This provides opportunities for children to recall prior learning/vocabulary from the previous term and the previous week. This will explicitly introduce the scientific enquiry skills for the lesson using our 'FROGS' poster and provide opportunities to use knowledge organisers at least once a week.

Vision for science



Principles are shared, discussed and reviewed in Super Science lesson starters.

SL led an assembly to introduce Vision and Principles.

Whilst teachers and SLT were clear on what good science teaching and learning looked like, collaboration with pupils was necessary to ensure a shared vision.

Vision and Principles poster displayed around school and in every classroom on science working walls.



School reception and school hall

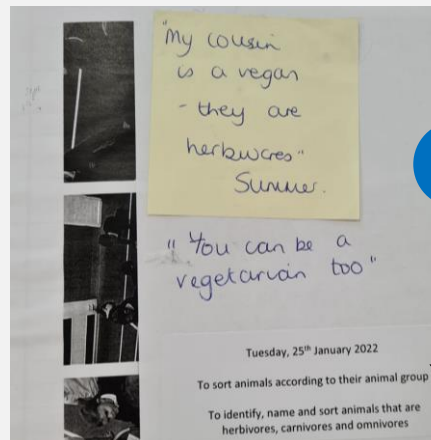
Our shared vision for science is clear across the whole school. There are regular opportunities to discuss Principles with children in classes. Our Principles poster is on display in our school Reception, creating a talking point about science for parents, governors and visitors.



Teachers use the Principles as a whole class assessment opportunity, with children identifying if that principle has been demonstrated in each lesson.

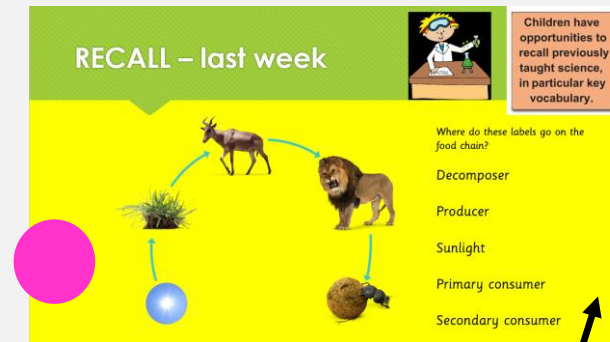


Investigating floating and sinking.



Scientific enquiry types

- F Fair testing
- R Research
- O Observing over time
- G Grouping and classifying
- S Seeking patterns



Science teaching and learning is good when...

Children see the links between science in school and the 'real world'.

Enquiry skills are explicit and these help children to further their subject knowledge.

Children have opportunities to recall previously taught science, in particular key vocabulary.

Children have a curiosity for science.

Children explore science through practical lessons, which are engaging and challenging.

Principles used as monitoring focuses.

Review the whole school science principles with all stakeholders.

Professional learning

Latest research is discussed and evaluated in our local science cluster meetings.

Science curriculum follows the latest research-based evidence.

Science Curriculum Plan



Continue to attend cluster meetings and respond to research.

Our curriculum is current and follows the latest research recommendations. The curriculum map is regularly reviewed and edited, in line with research, by SL, SLT and teachers.



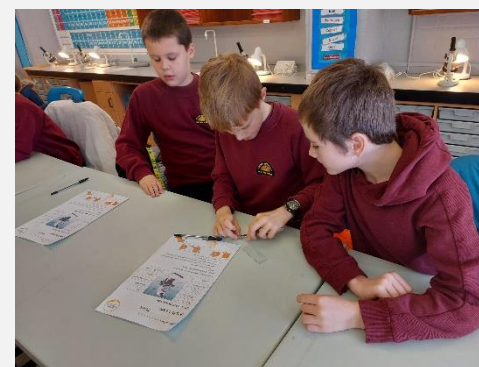
UKS2 attended science days with a local secondary school.

Link with local secondary school has been maintained with LKS2 and UKS2 now participating in science and PE days.

These experiences help fulfil our curriculum driver: Key Stage Ready and Ambitious with all of KS2 now participating. This helps with transition into KS3 and provides professional learning opportunities for teachers and teaching assistants to observe and support in lessons.

See Slide 17 WO:A for cross-curricular links.

Links to Research		
Publication	Selected Recommendations	How are we applying these to our Curriculum?
<p>Research review series: Science (Ofsted 2021) accessed from: https://www.gov.uk/government/publications/research-review-series-science/research-review-series-science-curriculum-explanation-what-it-means-to-get-better-at-science</p>	<ul style="list-style-type: none"> Teachers, teaching assistants and technicians have access to high-quality subject-specific CPD to develop subject knowledge and pedagogical content knowledge. This is aligned to the curriculum. In primary schools, there is at least one teacher who specialises in teaching science and science leaders have dedicated leadership time. Timetables allocate appropriate teaching time to science, reflecting its status as a core subject in the national curriculum. There are particular concerns that pupils in some primary schools are not receiving sufficient curriculum time to learn science. 	<ul style="list-style-type: none"> The science coordinator and teachers undertake regular CPD through courses and staff meetings. The science coordinator has dedicated leadership time to support CPD. The science coordinator, and the whole school, is working towards a Primary Science Quality Mark. In Key Stages 1 and 2, children have science lessons twice a week. In EYFS, children have regular opportunities to access science through Knowledge and Understanding of the World teacher-led inputs and science-based star challenges that children access as part of their enhanced provision. Children have regular access to practical resources in lessons, with a dedicated budget for the science curriculum to update and replenish resources as and when necessary.
<p>The 10 Key Issues with children's learning in Primary Science in England (March 2021) Accessed from: https://www.scienceandtechnology.co.uk/wp-content/uploads/2021/03/2634-Childrens-Learning-in-Primary-Science-Report-2020_v3.pdf</p>	<ul style="list-style-type: none"> Children should develop a deep understanding of the big ideas in science. Children should process and build on their prior learning. Children's science learning should be challenging. Practical work in science should be purposeful. Children should have regular and repeated opportunities to develop skills in science. 	<ul style="list-style-type: none"> Our curriculum has been carefully planned with great consideration of "why this? Why now?" to ensure it is sequential, allows for the development and progression of skills and is appropriate to class topics if possible. Pre and post-tests are undertaken at the start and each of each unit in science. This aids formative assessment, guiding differentiation in lessons, and interventions if appropriate. Scientific enquiry skills are regularly referred to in our <i>Super Science</i> starters so children know what skills they will be using in that lesson. There are regular opportunities to write in science in order for children to explain how they discovered. Our curriculum ensures full National Curriculum coverage and regular opportunities to work scientifically and develop scientific skills.



Labelling parts of a microscope.



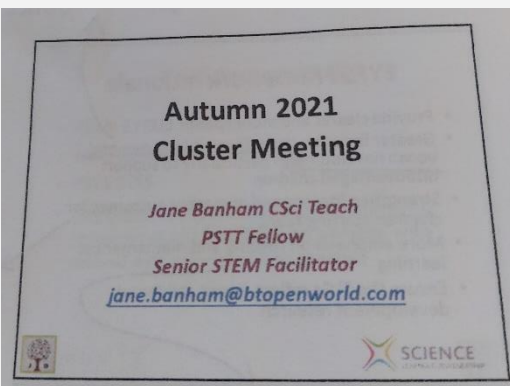
Teachers, TAs and pupils were taught how to use microscopes as we do not have any in school.

KS1 to participate in science lessons at the secondary school. KS2 to use the laboratories for some science units.

Professional learning

SL maintained useful links with other science practitioners.

Jane Banham, who runs my local Science cluster meetings, suggested Learning Room STEM Clubs for ideas for activities to do in STEM clubs.



Although we offered a range of extra-curricular activities after school, none of them were science related.

After school STEM club and Gardening club now offered.



Kelsey Primary School @KelseyPrimary · Jan 4

Our first STEM after school club today. We designed and created heart-shaped marble mazes. The first part of the challenge was to make the mazes and then we competed against one another to try and complete the maze the quickest! #LRSTEMClub



STEM club has been well-attended, with more pupils joining each week.



Kelsey Primary School @KelseyPrimary · Oct 12

Gardening club have been planting lasagne plants today 🌱🌱🌱



Our KSI teaching assistant is a keen gardener and runs this out-of-school club. Children have a wider range of hands-on experiences with plants throughout the seasons and have improved the school grounds.

"I love being able to explore my own ideas and not have to do a specific task. It allows me to be creative."
UKS2 pupil - STEM club

STEM and Gardening Club to be offered to different year groups throughout the year.

"I have really enjoyed using the STEM Club Learning Room ideas. I didn't realise that science linked to so many activities." LKS2 pupil – STEM club

"I enjoyed looking after our seedlings and watching them grow."
KSI pupil - Gardening Club

SL: C

Monitoring and development

Monitoring cycle less frequent, focuses previously lacked sharpness. Evidence of science less prevalent.

SL and SLT evaluated science monitoring and created a new monitoring cycle.

Kelsey Primary School science monitoring cycle

2021-22

Autumn 1	Learning Walk – <i>how does the trained or untrained eye see science in your school?</i>
	Fortnightly display boards – <i>what has been going on in classes?</i>
	Work/book scrutiny – <i>what is science teaching and learning like in school as evidenced by children's work?</i>
Autumn 2	Fortnightly display boards – <i>what has been going on in classes?</i>
	Lesson observation/team teaching – <i>how do teachers provide learning opportunities for all children to make progress during lessons?</i>

Staff know exactly what will be monitored and when.

Outcome

* Based on the needs of our school, we have decided to use the following monitoring activities:

- 1) Learning Walk
- 2) Fortnightly display board
- 3) Work/book scrutiny
- 4) Lesson observation/team teaching

* SL will not carry out planning scrutinies other than to ensure that our long/medium term curriculum is being followed for science.

* SL will support KSI teacher through team teaching and observe other teachers.

* All teachers will share examples of children's work every fortnight.

SL conducted a learning walk.

D. Moving through corridors



Profile of science is high throughout school – seen through displays, outdoor areas, working walls, vision posters etc.

Our Science Spotlight display is soon going to be reimagined into our 'Fortnightly display board' for teachers to share what is happening in their classrooms.

Our Science Pupil Voice display shows the responses from the pupil voice survey. Photographs will be added as each suggestion from the pupils is actioned.

We have a science area in the school hall which outlines what each class is doing each half term. Our Visions and Principles statement is on a poster near this display. We have recently started looking at the Gatsby Career Benchmarks, with a careers fair planned for Autumn 1 2021.

SL working with KSI teacher.

"I just feel no judgement with you and my confidence is so much better." KSI teacher.

SL supported colleague with subject knowledge, expectations, planning ideas and lesson structures.

SL will continue to support with planning and lesson ideas. SL will observe and team teach lessons as part of monitoring cycle.

Monitoring display created.



Teachers provide examples of work each fortnight to show curriculum coverage and progression in classes. Children and staff enjoy looking at what the classes have been doing in science.

SL will continue to undertake termly pupil voice surveys

Emerging themes

- Science lessons happen regularly (twice a week)
- Pupils enjoy the opportunity to learn new things in science then undertake science experiments to see science theory in action
- Pupils enjoy Super Science starters and recalling their learning in different ways
- Pupils talked about the pre-tests being helpful to remind them of prior learning
- Pupils enjoyed going on science school trips – MAGNA and National Space Centre
- Year 5 and 6 have enjoyed a recent trip to a local secondary school to have a lesson led by a science teacher. They were impressed with the opportunity to see more "risky" science. Other year groups have heard about this visit and this has inspired them to want to see more science in action.

Ideas to work on:

- Investing in better science equipment to aid lessons
- Having a science area in school
- More opportunities to work scientifically
- Visiting our local secondary school to use their science labs and take more controlled risks when doing experiments

SL conducted a Pupil Voice survey.

SL learnt about children's view of science in school, which was overwhelmingly positive.

Existing good practice of teaching

We used science research to inform our provision and ensure that our strategies are evidence-based.

The 10 Key Issues with children's learning in Primary Science in England (March 2021)

Accessed from:

https://www.scienceacrossthecity.co.uk/wp-content/uploads/2021/03/3634_Childrens_Learning_in_Primary_Science_Report_2020_v8.pdf

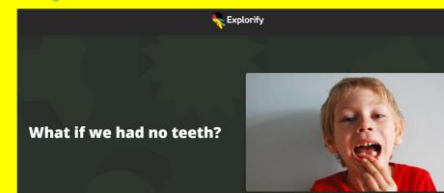
- Children should develop a deep understanding of the big ideas in science.
 - Children should process and build on their prior learning.
 - Children's science learning should be challenging.
 - Practical work in science should be purposeful.
 - Children should have regular and repeated opportunities to develop skills in science.
- Our curriculum has been carefully planned with great consideration of "why this? Why now?" to ensure it is sequential, allows for the development and progression of skills and is appropriate to class topics if possible.
 - Pre and post-tests are undertaken at the start and end of each unit in science. This aids formative assessment, guiding differentiation in lessons, and interventions if appropriate.
 - Scientific enquiry skills are regularly referred to in our *Super Science* starters so children know what skills they will be using in that lesson. There are regular opportunities to write in science in order for children to explain how they carried out a scientific enquiry and what they discovered.
 - Our curriculum ensures full National Curriculum coverage and regular opportunities to work scientifically and develop scientific skills.

RECALL – last half term



What is an apex predator?

RECALL – last week



Lesson starters always build on prior learning from the last term/week.



Record of Governor Visit

Name of Governor:	Revd. Marian Toyne
Date:	Monday, 5 th July 2021
Purpose of Visit:	To observe science lessons throughout the school.

Activities Undertaken:

- I observed a range of science lessons from Year 1-6 and spent time in Early Years observing a science star challenge and review of previous science investigations.
- I met with the Head prior to and after the observations.

- Clearly, I saw evidence of the children being inquisitive and curious as stated in the science intent on the website. The children in Years 1 and 2 and Years 3 and 4 were all involved in hands-on enquiry, using equipment and undertaking experiments, that was highly stimulating. The high level of scientific vocabulary was demonstrated from early years throughout the school. Starters are effective in reviewing and strengthening prior learning/and or introduction to the learning of today. Children were progressing in their knowledge and scientific skills with a high degree of paired work or group discussion. Hands-on activity and teacher led input. All the children were highly engaged.

Governors and SLT have always monitored science across the school to support the SL's monitoring. Reports are shared amongst school staff and governors with suggestions for next step agreed with the SL and HT.

Key Stage One

Cycle A

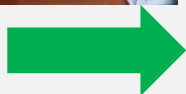
Term	Year 1 and 2	Why this? Why then?
Autumn 1	Everyday materials	Pupils will start the year with a practical science unit that builds on their knowledge of objects made from common materials. Pupils should become familiar with the names/properties of materials.
Autumn 2	Plants and growth	Pupils will learn about what plants need to grow and stay healthy. Pupils can look at plants in the local environment to explore which plants grow in Autumn/Winter. They can grow their own plants and vegetables to embed their learning.
Spring 1	Animals	Pupils will learn about animals in their local environment. This will provide them with a good breadth of knowledge about common animals, including looking at animals that are carnivores, herbivores and omnivores. Pupils will learn about common animals that are born in spring to put their learning in a relevant context.
Spring 2	Seasonal changes	Pupils should observe and talk about changes in the weather/seasons. Pupils can look at the seasonal changes between Winter > Spring.
Summer 1	Living things and their habitats	Pupils will be introduced to habitats for the first time. They will look at the differences between living and dead animals and plants. Pupils will expand on their learning from Spring 1 by looking at animals that live in different habitats to their local environment e.g. seashores, rainforests.
Summer 2	Humans – senses and health Seasonal changes	Pupils should observe and talk about changes in the weather/seasons. Pupils can look at the seasonal changes between Spring > Summer. Pupils will focus on the five senses and body parts that are used for senses. In Cycle B, they will look at all human body parts, recapping the body parts linked to different senses.

We thought carefully about the sequence in which our science is taught.

Resources

Science resources had not been recently audited or organised.

SL created a new science resources area for use by the whole school.



Reorganising and restocking our science resource area means that opportunities to use practical resources have been maximised. Staff now know exactly where equipment is and what we actually have in school to facilitate learning in their lessons.

Assign pupils to become science technicians, with the responsibility of keeping resources organised and SL informed when resources need replenishing or replacing.

"Engagement in science lessons is high as children are doing hands on lessons to link science to the real world."
KSI teacher

Purchased new science books and data loggers.

Whilst we already had a good bank of science books in our library, we needed books suitable for younger year groups. These books can be used in lessons and also read by children whenever they visit the school library or borrowed to take home.



Purchasing a set of data loggers has supplemented both our science and computing curriculum requirements.



EYFS science afternoon with parents based around The Gingerbread Man.



Resources used in parent and carer sessions during whole school science week.

Our whole school science week was very well attended. We purposefully planned these sessions at the end of a science topic so that children across school could use the resources to demonstrate and communicate their learning to family members.

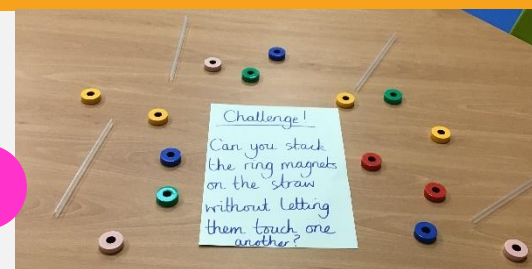


Kelsey Primary School @KelseyPrimary · Dec 8, 2021

Mae Jemison class enjoyed a science afternoon with parents. They presented what they have been learning about plants and explored and investigated resources. #superscience



3



Teaching strategies

Pupil voice indicated that science lessons were well-received but children were keen to try out a range of lesson activities.

Criterion Activity SL 01 – Pupil Voice May 2021

Emerging themes

- Science lessons happen regularly (twice a week)
- Pupils enjoy the opportunity to learn new things in science then undertake science experiments to see science theory in action
- Pupils enjoy Super Science starters and recalling their learning in different ways
- Pupils talked about the pre-tests being helpful to remind them of prior learning
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- Year 5 and 6 have enjoyed a recent trip to a local secondary school to have a lesson led by a science teacher. They were impressed with the opportunity to see more "risky" science. Other year groups have heard about this visit and this has inspired them to want to see more science in action.

Ideas to work on:

- Investing in better science equipment to aid lessons
- Having a science area in school
- More opportunities to work scientifically
- Visiting our local secondary school to use their science labs and take more controlled risks when doing experiments

Pupil Voice responses
May 2021

07/01/22

Pupil Voice

Questions	Class: Gladys West	Year: 3/4	Number of pupils: 2
1) How often do you have a science lesson?	Twice a week.		
2) What is science/a scientist?	Science is about finding out about the world around you, exploring and investigating. We have learnt about different scientists this year; like the ones our classes are named after. There are lots of jobs that involve science like hairdressing (using chemicals) and being a vet.		
3) What do you like about science?	Super Science is a fun way to start lessons. Our science resources are better this year and we enjoy using them in lessons. Our lessons are always done in different ways. Our teachers try to make them interesting.		

We responded to the feedback and ensured that this was reflected in our Principles of good science teaching and learning.

Children have a curiosity for science.

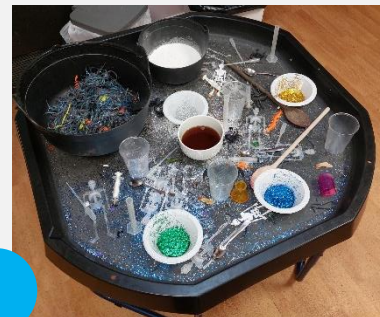
Children explore science through practical lessons, which are engaging and challenging.

Recent pupil voice responses show that children have found lessons interesting and engaging due to the different strategies utilised by teachers.

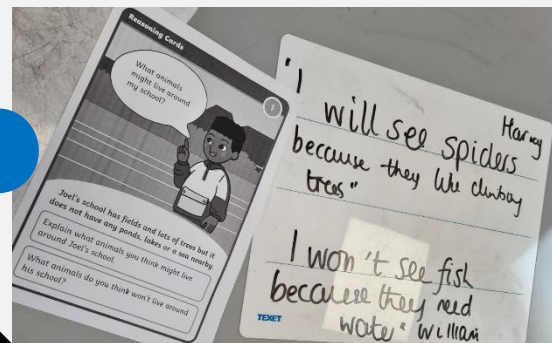
Continue to monitor lessons to ensure that children are accessing a range of strategies.

Children across the school experience multi-sensory lessons that engage them in their learning.

Creating potions.

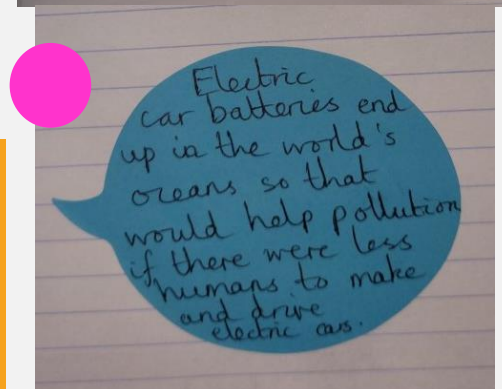
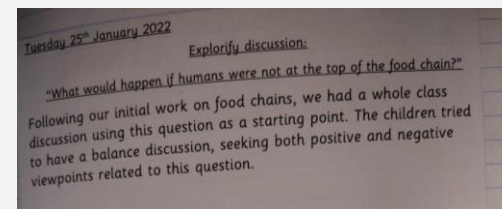


Making models of teeth using marshmallows.



Reasoning questions.

After their success in Maths lessons, reasoning questions were introduced as a way of showing children's understanding of concepts. To build on our work on higher-order thinking skills, we have introduced Explorify so that children have opportunities for deeper thinking and learning.



Explorify lesson starters.

T:A

Teacher CPD

The subject leader had access to science CPD more regularly than teachers.

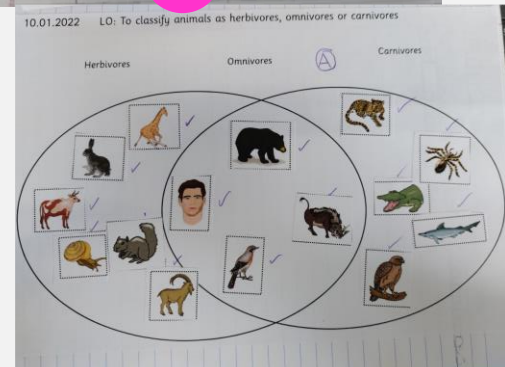
Teachers attended CPD sessions linked to their own curriculum areas of responsibility, feeding back key learning to teachers and SLT in staff meetings.

Measurement and statistics curriculum objectives were covered in one block of Maths per class per year.

We have planned science lessons using measurement and statistic skills to create opportunities to recall and embed prior learning on measurements and statistics.

Tuesday 23rd November 2021
I.O. To carry out a fair-test investigation into friction.

Material	Distance travelled
Wood	82 cm
Cork	54 cm
Vinyl	57 cm
Sandpaper	19.5 cm
Foil	32.1 cm
Carpet	22 cm



Science using stories as a hook has started to be introduced into lessons as a direct result of learning from RSC-funded course *Creatively linking Literacy and Science*.



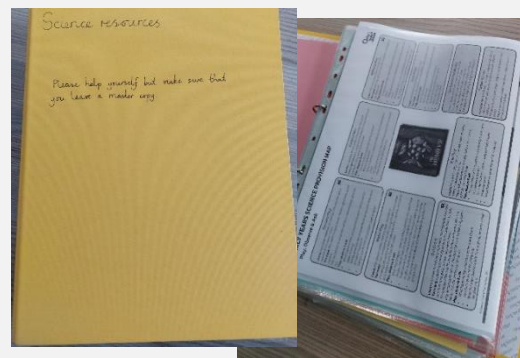
See Slide 8
T:C Resources

Choosing suitable houses to build a secure house for the Three Little Pigs.

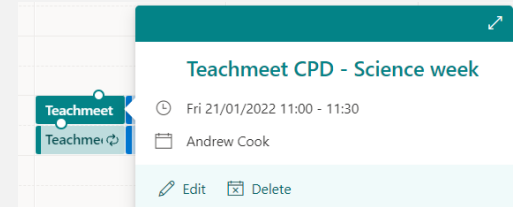
Embed science through stories into our curriculum.

Continue to provide CPD opportunities for all members of staff.

Science resources folder in staff room with magazines, articles, CPD flyers and photocopyable planning and lesson resources.

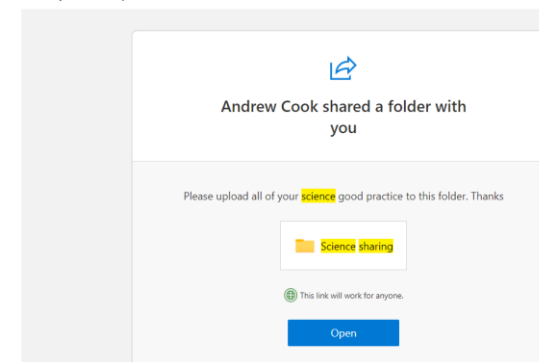


Teachers met to finalise plans for British Science Week.



Teachers now meet on Fridays for CPD, with science CPD regularly planned for and delivered.

AC Andrew Cook
Mon 28/05/2021 12:49
To: Kelsey Teacher Group



Teachers have access to a shared folder for sharing good practice, lesson ideas and resources. This is accessible both in school and at home.

Science folder on the school drive is regularly updated and accessed by staff.

PC > Staff Data (G:) > Staff Only > 2021-22 > Science >

Name	Date modified	Type
Assessment grids	23/09/2021 11:28	File folder
Curriculum	12/01/2022 15:11	File folder
EYFS	19/10/2021 17:07	File folder
Knowledge organisers	03/11/2021 12:34	File folder
KS1	19/02/2022 14:37	File folder
KS2	19/10/2021 16:59	File folder
Maths linked to science	07/03/2022 09:58	File folder
Pre-test and post-test data	07/01/2022 08:07	File folder
Primary science magazines and PSTT newsletters	23/09/2021 14:35	File folder
PSQM	23/09/2021 11:28	File folder
STEM careers	19/10/2021 16:58	File folder
Super science	20/10/2021 16:03	File folder
Working walls	09/02/2022 14:20	File folder
Principles and Vision Kelsey Primary school	04/09/2021 18:58	Microsoft Edge PD...

L:A
L:B
L:C

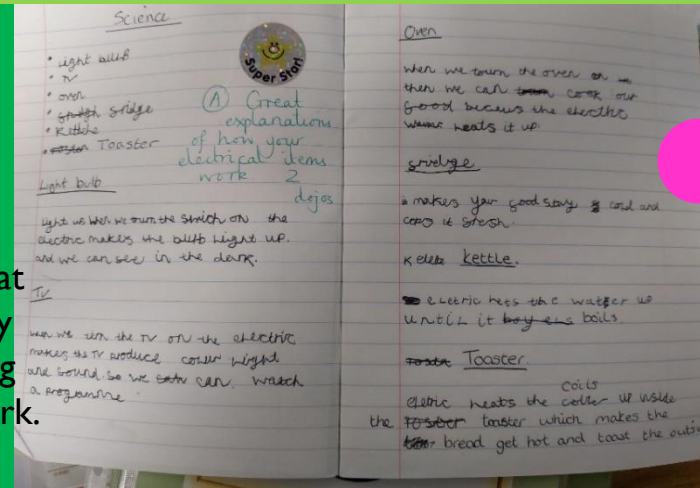
Existing good practice of learning

We commissioned the Nature Reserve on our school grounds to be redeveloped. Paths were cleared, wood chipping and benches were added and the pond was filled again. We wanted children to engage with science in their locality, learning about woodlands as habitats.



Science home learning tasks are designed to be relevant to children's day-to-day lives, building on the science found in their own homes or the locality.

Identifying appliances that use electricity and explaining how they work.



We implemented a starter for every science lesson called Super Science, to recalling learning from the previous term and previous week. The starter includes a slide showing the enquiry types in a child-friendly way. We always share the enquiry type that we will be using in the lesson.

Scientific enquiry types

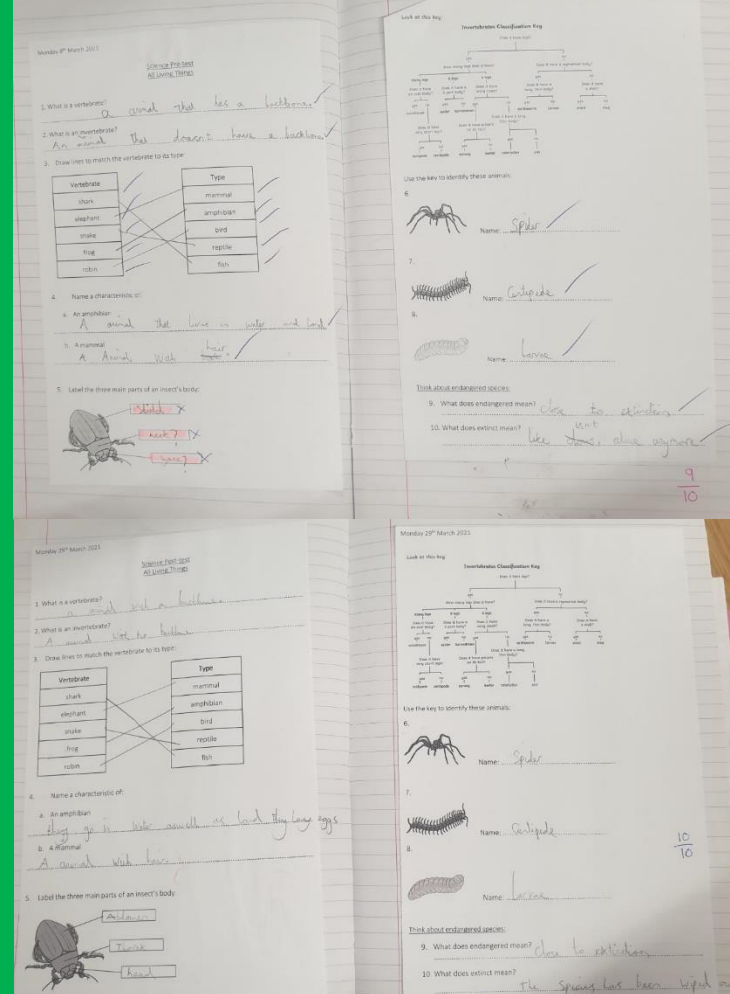
- F Fair testing
- R Research
- O Observing over time
- G Grouping and classifying
- S Seeking patterns



SUPER



We established formative assessment strategies pre-PSQM as part of the school's action plan for science. For every unit of work, children undertake a science pre-test as a baseline for their knowledge. This informs planning and ensures work is appropriate to children's needs. Post-tests are then administered at the end of each unit of work to capture progress. Any interventions that are needed can be planned after the results of the post-tests are collated.



Borrowed science resources to facilitate more opportunities for using enquiry skills in lessons.

Kelsey Primary School @KelseyPrimary · Nov 10, 2021
Gladys West class have loved using ScienceboxEd resources for our science work on Forces and Magnets. They explored which forces can be used on toys to make them move.



Kelsey Primary School @KelseyPrimary · Nov 12, 2021
Parachutes, air resistance, speed. Its all being put to the test in science today!



Working scientifically lessons did not centre on particular enquiry types and skills.

Clear distinction made between enquiry types and enquiry skills.

Scientific enquiry types

- F Fair testing
- R Research
- O Observing over time
- G Grouping and classifying
- S Seeking patterns



Pupils regularly recap what the five enquiry types are and review what enquiry skills have been employed in lessons.

Enquiry Skills

- Asking questions**
Asking questions that can be answered using a scientific enquiry.
- Making predictions**
Using prior knowledge to suggest what will happen in an enquiry.
- Setting up tests**
Deciding on the method and equipment to use to carry out an enquiry.
- Observing and measuring**
Using senses and measuring equipment to make observations about the enquiry.
- Recording data**
Using tables, drawings and other means to note observations and measurements.
- Interpreting and communicating results**
Using information from the data to say what you found out.
- Evaluating**
Reflecting on the success of the enquiry approach and identifying further questions for enquiry.

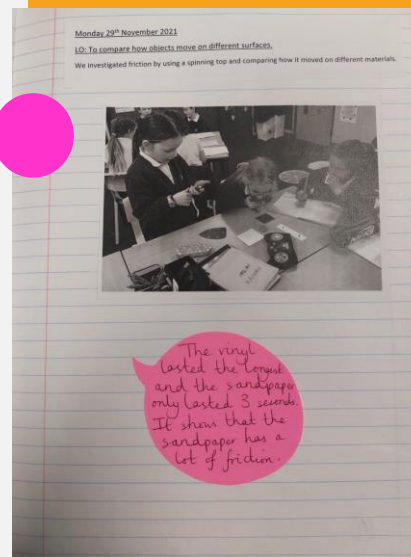


Enquiry skills are explicit and these help children to further their subject knowledge.

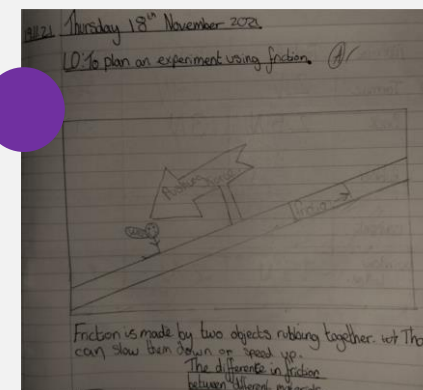
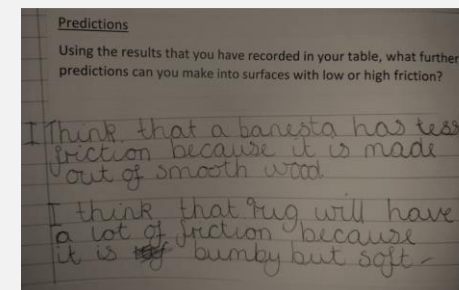


Hiring equipment from a company called ScienceBoxEd meant that our LKS2 and UKS2 Forces lessons were much more hands-on using a range of high-quality resources.

LKS2 compared the friction created by materials using spinning tops. They made predictions based on what they had found out and used these to create questions to investigate.



The vinyl lasted the longest and the sandpaper only lasted 3 seconds. It shows that the sandpaper has a lot of friction.



We will hire resources from ScienceBoxEd to support teaching in science topics where school resources are limited.

"Do all wooden surfaces create a low amount of friction?" Y4 pupil.

UKS2 compared friction of materials in classrooms to those on the playground.

Assessment

Start and end of unit data is collected but mid-unit assessments are not always utilised.

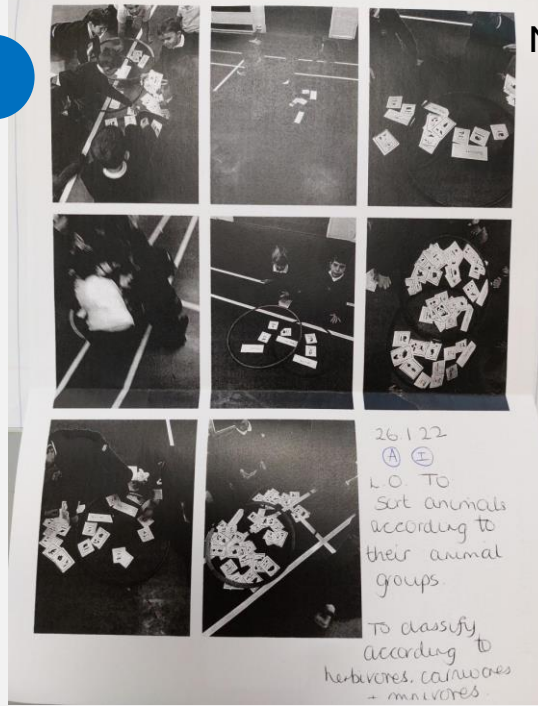
The subject leader was introduced to the PLAN EYFS Matrices in a local network science meeting. The Matrices were shared with EYFS staff as a tool for creating opportunities to assess children's science understanding through the classroom setting/provision.

"It has been so helpful to have such a concise document for EYFS to help plan for assessment opportunities." EYFS teacher commenting on the PLAN EYFS Matrices.

LKS2 PLAN electricity mid-unit assessment.

Pre and post-test data only showed progression from the start of the unit. Now teachers carry out mid-unit assessments alongside pre and post-test assessments to inform teaching and interventions.

Name	Pre-test	Post-test
Henry	2.5	1.5
Landon	2.5	1.5
Jayden	3.5	1.5
Schuma	2.5	1.5
Freddie D	2.5	1.5
Heidi	2.5	1.5
July	1.5	1.5
Conor	3.5	1.5
Archie M	2.5	1.5
Esma	2.5	1.5
Jacob	3.5	1.5
Edward	3.5	1.5
Ethan	2.5	1.5
Rosie	6.10	7.10
Megan	2.5	1.5
Nicola	4.5	1.5
Son	1.5	1.5
Freddie T	2.5	1.5
Brandon	7.5	1.5
Lillie	6.10	1.5
Nora	6.10	1.5
Thomas	5.10	1.5
Esme	5.5	1.5
Mollie	3.5	1.5
Archie P	2.5	1.5
Lucas	6.10	1.5
Zack	0.10	1.5
Amel	1.5	1.5



Mid-unit TAPS assessment.

Teachers used the TAPS assessment a few weeks after the science unit had started to recap prior learning and help identify children who needed further support and intervention in lessons.



TAPS Plan for Focused Assessment of Science




Topic: Animals including humans	Year 1 Age 5-6	Title: Animal classification
Working Scientifically Review: Identify and classify	Concept Context Identify and name common animals including fish, amphibians, reptiles, birds and mammals. Identify and name common animals that are carnivores, herbivores and omnivores	
Assessment Focus <ul style="list-style-type: none">• Can the children name a variety of animals including fish/amphibians/reptiles/birds/mammals?• Can the children classify animals according to different animal groups and/or what they eat?		

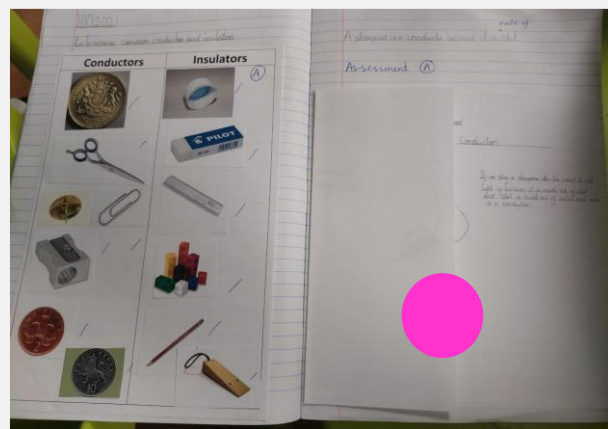


TAPS Plan for Focused Assessment of Science



Topic: Animals including humans		Year 6 Age 10-11	Title: Heart rate poses
Working Scientifically Do: Use test result to make predictions to set up further comparative and fair tests		Concept Context Describe the functions of the heart, blood vessels and blood Recognise the impact of exercise on the way their bodies function	
			
Assessment Focus <ul style="list-style-type: none">• Can children make and explain their predictions based on previous results?• Can children carry out a scientific enquiry to answer their question?			

Teachers reported that it would be useful to carry out the TAPS assessments the week before starting a science unit as a baseline for planning. This would help identify any need to recap prior learning from other year groups.



Tuesday 18th January 2022

L.O: To compare exercises and how they affect pulse rate

Exercise	Start Pulse 30secs	End Pulse 30secs	Why
Running	27	47	because you were moving quite
Football	28	42	
Skipping	31	49	
Jumping jacks	32	53	

While skipping use skipping rope. Check pulse before you start and give yourself breaks.

The most was skipping jacks and the lowest was running because its more active doing jumping jacks.

I think Jumping jacks will make it rise more because your very active while doing it. I think Football will give you the lowest.

Science capital

Science involving the whole school community was infrequent.

Undertake pupil science capital surveys.

In order to ascertain our pupil's science capital, we undertook class surveys. This highlighted pupils' interests, experiences and aspirations related to science. When asked: "when I am older, I would like to be a scientist." many pupils responded with "unsure" or "disagree". As a result of this, I led a number of assemblies to show children how science fits into more careers than they might realise using materials from PSTT: A scientist like me, which was suggested in my local Science cluster meeting.

Our whole school monitoring display is a great hook for discussions about science with the whole school community.

Whole school Science Spotlight display regularly updated. (see SL C)

"It is really useful to engage with visitors about our children's science work across the whole school. The display makes it easy to discuss and demonstrate the progression between year groups with examples." Headteacher

A Scientist just like me

Hi there! I am Dawood Qureshi – A marine biologist



Where do I work?
I study Marine Biology at the University of Portsmouth.

What did I like doing when I was at school?
When I was at school, I wanted to study animals and nature, and to be a scientist, but I also loved art.
What do I like doing in my spare time?
I love to draw, read, play music, write and sing in my spare time. I particularly love drawing - it's a big hobby of mine.

Pupil Science Capital survey responses.

1. When I am older, I would like to be a scientist

Agree ☐ Unsure ☐

Agree ☐ Unsure ☐ Disagree ☒

33. What do you want to be when you grow up?

I would like to be a paramedic

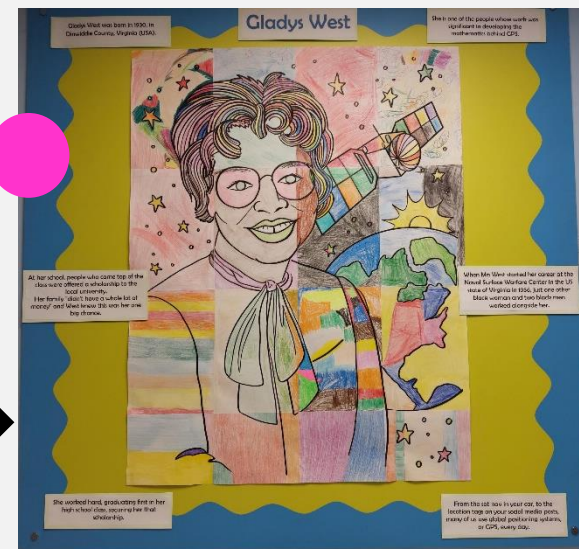
33. What do you want to be when you grow up?

farmer.

We named classes in school after a diverse range of scientists.

LKS2 collaborated on this artwork (on a classroom display) showing Gladys West, who helped invent the Global Positioning System.

Change class names in the next academic year to include scientists who have more unusual careers.



Before the start of the academic year 2021-2022, we named classes after famous scientists to help foster positive attitudes to science. Children learnt about the scientists for their class during their transition week and were set home learning projects to research their scientists with parents. Each scientist is featured on the class pages of our school website, which is regularly visited by parents.

Class page on school website



Who was Marie Curie?

Marie Curie is remembered for her discovery of radium and polonium, and her huge contribution to finding treatments for cancer. This work continues to inspire charities missions to help people and their families living with a terminal illness make the most of the time they have together by delivering expert care, emotional support and research

Science capital

Science involving the whole school community was infrequent.

Held another whole school Careers Fair, which linked to pupils' interests.

As part of the pupil Science Capital survey, children were asked what future careers they aspire to have. Using this information, we invited parents and workers in the local community with STEM careers to attend including vets, a paramedic, farmers and biomass energy plant workers. This improved pupils' science capital with many children being exposed to careers they might not have considered previously.



Conduct another pupil Science Capital survey before the next annual Careers Fair to ensure careers suit the interests of our pupils.

Held a Science Selfie competition with pupils and families.

This helped embed our Science Principle where children see the links between science in school and in the 'real' world, with some children undertaking planned science activities and others looking at the science in day-to-day life (solids, liquids and changing states using milkshakes and ice creams.)



Dear Mrs Clarke.

Yesterday whilst at home self isolating, Noah carried out some colour mixing experiments. He was able to name colours, make predictions, check his answers and also explore how to make darker and lighter shades. He even wrote down his findings in a little note book.
Please find attached a photo of him in action!
Good luck to everyone!

Due to the success of our first competition, host science selfie competitions annually.



One of our science principles this year is for children to have curiosity for science at school and in the world around them. We would love to celebrate the science activities that you do away from the classroom.

For a chance to win a prize, take a selfie of you enjoying science outside of school.
Your selfies could include a visit or taking part in a science activity at home.

To enter, all you need to do is to ask an adult to tweet your science selfie tagging our Twitter page: @KelseyPrimary
Or email your photo to Rachel.clarke@kelseyprimary.co.uk
There are 8 prizes up for grabs.



Kelsey Primary School @KelseyPrimary · 4m

Well done to our 'Science Selfie' competition winners. We had a brilliant response from many of our children who were asked to send us their science at home photos. 🧪🔬🧴 #science #STEM #psqm



To: Rachel Clarke



20220126_172616.mp4
2 MB

4 attachments (3 MB) Save all to OneDrive - kelsey.lincs.sch.uk Download all

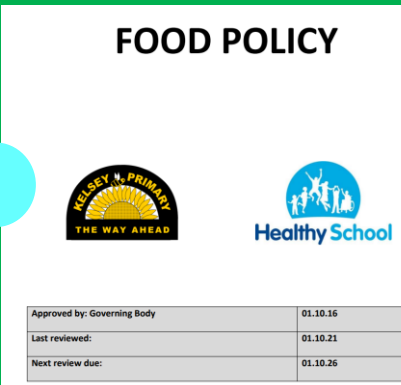
Good evening Rachel

I didn't re read the email before we started the science project so I need to apologize that these aren't technically selfies! But was definitely enjoyed!

Charlie is turning milkshake into ice cream, learning about liquids and solids and getting to eat the experiment!

WO:A
WO:B

Existing good practice of wider opportunities



We achieved our Healthy Schools award after continued work on healthy eating in Science, Personal, Social and Health Education and Design Technology. Our food policy advocates healthy eating with the whole school community working together towards making healthier choices. Our Gardening club includes opportunities for growing fruits and vegetables for our children to enjoy and our Cooking club includes healthy recipes for children to make and enjoy.

Whole school initiatives that link children's learning in science to the real world are well-established including Animal Welfare and Environment teams. Children show responsibility for school pets and look after the school grounds by litter-picking and caring for our plants.

We have always regularly provide opportunities for children to engage in purposeful initiatives such as this competition, with each class undertaking learning on insects before the competition was introduced.

Thursday 20th May 2021

Dear pupils and parents/carers,

You are invited to take part in a competition to design your own bug. Launched by My Living World and the award-winning website KiddyCharts, the 'DESIGN A BUG' competition asks you to create your own weird and wonderful insects, inspired by creatures you've seen in the school playground or local park.

The competition is open to primary school pupils aged 4-11 years. You can bring your imaginary insects to life using drawing, painting, creating a 3D model or on a computer. There is a DESIGN A BUG template attached to this letter that you are welcome to use or, if you create a 3D model or design your bug on a computer or tablet, please email your entries to Rachel.Clarke@kelseyprimary.co.uk

The winning school will receive a special visit from naturalist Nick Baker, who will lead an exciting assembly for pupils. The well-known TV presenter has hosted some of the UK's best-loved wildlife programmes, including BBC's The Really Wild Show and Springwatch Unsprung.

There is also an assortment of fantastic My Living World prizes to be won this year! 4 runner ups will each win four My Living World sets:

1. My Living World Ant World
2. My Living World Bug Safari
3. My Living World Bug Photography Kit
4. My Living World Pocket Microscope

Caistor and Surrounding Areas Science Network Cluster
Meeting Thursday 10th June 2021 9am

Minutes:

Attending: Louise (Caistor Yarborough), Kirsten (Caistor Yarborough), Claire (Waddingham), Andy (Kelsey)

Apologies: Steve (Keelby)

Agenda:

- 1) Welcome and introductions
- 2) Transition Educational Visits
 - a. Leads to explore the possibility of Caistor Yarborough supporting the primaries with their curriculum ambitions.
 - i. Louise offered 3 dates for the primary schools to visit Caistor Yarborough and take part in science and PE lessons to support curriculum work as well as introduce pupils to elements of Key Stage 3 provision.
 - ii. Confirmed dates are July 16th 9:30am – 11:30am (years 5 and 6 Science)
 - iii. September 20th and 22nd Nov 9:30am – 2pm (all KS2 classes Science and PE)
- 3) Staff training needs (Science)
 - a. Discussion around how Caistor Yarborough could support the primaries with specialist subject CPD
 - i. Louise offered to organise termly CPD for staff around high quality Science teaching.
 - ii. Louise and Kirsten to visit Kelsey (all welcome) later this term to further discuss specific



Good links have been established with our local secondary school and primary schools in the local area. Science Network Cluster meetings are regularly scheduled to support primary to secondary science transition and provide CPD from the science department to support our teachers in their science teaching.

Parents/carers and the wider community have always been invited to participate in our whole school Careers Fair to present their STEM careers to inspire children. Careers have included vets, paramedics and mechanics. Local media are always invited to report about the event to the local community.

WO:
A

Cross-curricular science

Science book scrutiny.

Science had been taught mostly discreetly.

Created more opportunities to develop cross-curricular links to science.

Opportunities for writing across the curriculum

Science-

- Three Little Pigs adopted story about everyday materials
- Persuasive Poster for Houses (Choose selected material)
- Instructions of how to grow a plant- Harry Potter Screaming Mandrakes
- Instructions how to look after an animal
- Adventure Story for an animal in the spring
- Poems on Seasons
- Non-chronological report on Seasons
- Cinquain Poems
- Recount of a Nature Walk using the senses

Writing document was edited to include links to science.

Autumn 2	<i>the lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods</i>	Comparison of Neil Armstrong and Christopher Columbus, Tim Peake, Yuri Gagarin?	<i>a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066</i>	The Space Race in England – Learn about why the Brits didn't have a Space Program	<i>a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066</i>	The Modern British Space Program
		<ol style="list-style-type: none"> 1. Who was Neil Armstrong? 2. Who was Christopher Columbus? 3. Compare the two 4. Who was Tim Peake? 5. Who was Yuri Gagarin? 6. Compare the two? 		<ol style="list-style-type: none"> 1. End of WW2 and the rocket Scientists 2. The first British Rocket 3. Later British Rockets 4. NASA and the moon landings 5. Did the Americans sabotage British attempts? 6. Who won the Space Race? 		<ol style="list-style-type: none"> 1. Satellites and Gladys West 2. Mars/ Luna Rovers 3. Commercial Space Trips 4. Female Astronauts (Helen S, Mae J, Valentina T) 5. James Webb Telescope 6. Where are we going next?

History document now includes links to space topics with lessons focusing on scientists.

Summary

What is going well?

- Lots of practical lessons using scientific resources.
- Science lessons are happening twice weekly, as agreed.
- Teachers are following the curriculum document.
- Lots of enquiry based lessons to build children's enquiry skills.

Ways forward

- Link science to English by getting children to undertake work based on stories or write about their science learning.
- Opportunities to work across the curriculum are often missed, with lesson objectives focusing on science without a link to other subjects to help embed learning.
- Keep including reasoning questions and targets so that children can show their understanding of scientific concepts.

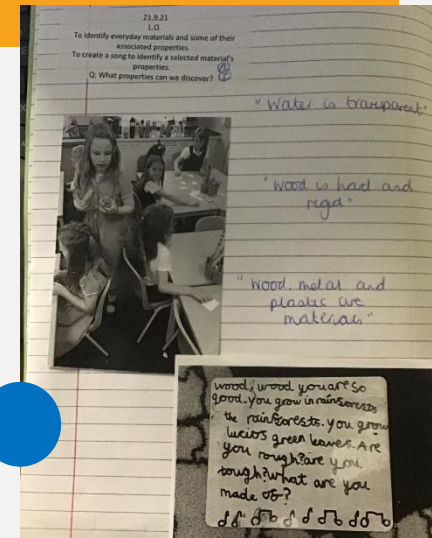
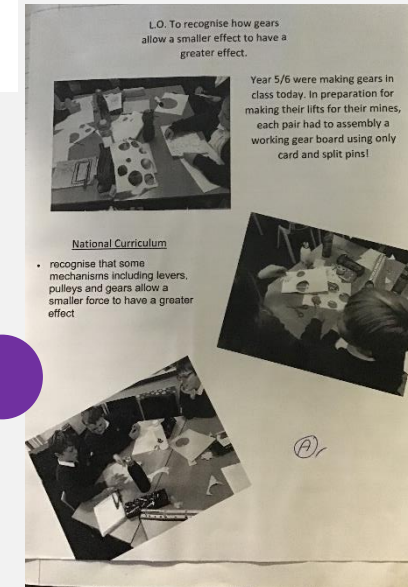
Actions

- Teachers to edit curriculum maps to maximise opportunities to teach science across the curriculum, starting with English and History documents.
- Rachel Clarke to follow up in Spring Term 1.

Using gears and pulleys to make mines (links to Design Technology and Geography.)

After discussing cross-curricular links in a staff meeting, teachers have begun to be more creative in their lesson ideas.

Creating songs to describe the properties of materials.



New data loggers were purchased for KS2 Computing. Children took accurate measurements and recorded their findings using tables. They reported their findings orally. This unit of work in Computing also provided formative assessment opportunities for science and mathematics too.

Kelsey Primary School @KelseyPrimary · Jan 21
Gladys West class have been using our new Data Loggers in Computing. They collected data using sound, temperature and light sensors and compared which areas of the classroom were the lightest/dullest, warmest/coolest and loudest/quietest #computing #science



Continue to collaborate as whole school staff to identify further cross-curricular science opportunities and add to curriculum maps.

Enrichment opportunities did not always involve every year group in school.

Creating a whole school science calendar helped ensure equal access to enrichment.

	Autumn 1	Autumn 2	Spring 1
Dates/ deadlines:	Monday 20th September 2021 Whole KS2 visit to CYA Science and PE 9.30am-2.30pm Thursday 23rd September 2021 PSQM Session 5 4-6pm Wednesday 29th September 2021 Year 3 and 4 visit to Magna Science Adventure Centre Thursday 30th September 2021 RSC course Making the most of Maths in Science 2-4pm – Michael Monday 11th October 2021 RSC course Science Capital: Theory to Practice 2-4pm – Rachel Monday 11th October 2021 Year 5 and 6 visit to National Space Centre Friday 15th October 2021 Whole school Careers Fair	Friday 12th November 2021 PSQM Sessions 6/7 1pm-5.30pm Monday 22nd November 2021 Whole KS2 visit to CYA Science and PE 9.30am-2.30pm Wednesday 1st December 2021 Year 1 and 2 visit to Eureka Week commencing 6th December 2021 Whole school science week with parents and carers Thursday 9th December 2021 EYFS visit to Rand Farm Park Thursday 9th December 2021 RSC course Enriching your Primary Science curriculum 2-4pm - Rachel	Week commencing 17th January 2022 Whole school Science Selfie Competition launch Wednesday 26th January 2022 Local Science Leaders' Network Meeting at The Keyworth Centre, Lincoln – Rachel C Thursday 3rd February 2022 Year 1 and 2 visit to The Deep Thursday 10th February 2022 PSQM Session 8 9am-4pm

Enrichment was not included on our curriculum plan.

Kelsey Primary School
Science Curriculum Plan
Biology Chemistry Physics

Cycle B

Term	Year 1 and 2	Year 3 and 4	Year 5 and 6
Autumn 1	Animals, including humans	Light	Properties and changes of materials
Autumn 2	Seasonal changes	Animals, including humans	Animals, including humans - circulation
Spring 1	Uses of everyday materials	Animals, including humans	Electricity
Spring 2	Plants	Living things and their habitats	Animals, including humans – changes, growth and development
Summer 1	Seasonal changes	Sound	Light
Summer 2	Animals, including humans	States of Matter	Evolution and inheritance
	Humans – body parts		
	Seasonal changes		

Sharing the calendar with all staff on our shared email address and in our staffroom means that all staff are aware of and can plan for upcoming enrichment and CPD events. Placing all of the events into a central document helped show that there is inclusivity of enrichment experiences across all classes.

“Building in annual science enrichment visits and visitors for all year groups has brought the science learnt in school to life for our pupils and given them inspiration to consider possible future careers.” Headteacher

Continue to regularly update and share the whole school science calendar, encouraging staff to contribute with their ideas.

Whilst enrichment happened regularly, experiences were not consistently planned across the whole school.

Linking enrichment opportunities to our science topics supports teachers in their science visits/visitors planning.

Kelsey Primary School
Science Curriculum Plan
Biology Chemistry Physics



Cycle A

Term	Year 1 and 2	Year 3 and 4	Year 5 and 6
Autumn 1	Everyday materials	Electricity	Earth and Space
Enrichment		Magna Science Adventure Centre	National Space Centre
Autumn 2	Plants and growth	Forces and Magnets	Forces
Enrichment	Eureka (links to scientists covered in History and science)		
Spring 1	Animals	Animals, including humans (food chains – predator and prey)	Animals, including humans - lifestyle
Enrichment	Rand Farm incubator The Deep	Yorkshire Wildlife Park – Teeth and Eating workshop	
Spring 2	Seasonal changes	Animals, including humans	Properties and changes of materials
Enrichment		Rand Farm - residential	Explorer Dome – States of Matter workshop
Summer 1	Living things and their habitats	Plants	Living things – classification
Enrichment	Rand Farm – The Living Farm experience	RHS Garden Harlow Carr	Whisby Education Centre
Summer 2	Humans – senses and health	Rocks, soils and fossils	Living things and their habitats – life cycles and reproduction
Enrichment	Seasonal changes		
		Peak District Mining Museum and Temple Mine	

Including enrichment on our curriculum plan means that teachers are supported in ideas of visits or visitors to capitalise on learning in science topics. This has ensured that these experiences happen more regularly, across the whole school. SL can support teachers in their planning and risk assessment by looking at the curriculum plan each term and teachers are able to make cross-curricular links related to the enrichment too e.g. writing a recount of their trip.

Our EYFS curriculum is being redesigned in light of the new framework. We will produce a similar document to highlight enrichment opportunities in EYFS when completed.

Enrichment opportunities did not always involve every year group in school.

Every year group has had the opportunity to go out of school on a science visit.

KSI visited Eureka! The National Children's Museum.



EYFS visited Rand Farm Park for the Real Christmas Experience.



All classes have been able to embed their science learning in class through relevant science visits. This helps fulfil our science principle of children being curious about science and experiencing science first-hand outside of school.

UKS2 visited the National Space Centre.



Teachers to plan visits and visitors by following the curriculum map. SL to catch up with teachers, support staff and pupils after visits to ensure that they were useful in embedding and enhancing science learning. SL and teachers to continue to edit the enrichment opportunities document as appropriate.

LKS2 visited Magna Science Adventure Centre to do an Electricity workshop.



"It's great that our children get to go on so many science visits. It makes science exciting for them." Parent

"I really enjoyed our trip to The Deep. We got to see some of the animals we had been learning about in class up close and even touch some of them!" KSI pupil