

# **CORRINGHAM PRIMARY SCHOOL**

**Middle Street  
Corringham  
DN21 5QS**

**Head Teacher – Mrs Esther Watt-Jones  
Pupils on Roll - 108**

**Corringham is a village school situated between Gainsborough and Hemswell. 76% of pupils are from Gainsborough and the surrounding villages with just 24% from the catchment.**

**We have 4 classes: Squirrels (EYFS); Badgers (Years 1/2); Hedgehogs (Years 3/4) and Owls (Years 5/6)**

**2017 sees the school celebrating it's 150<sup>th</sup> anniversary.**



**We have applied for the Silver Primary Science Quality Mark to continue to raise the profile and enjoyment of science within the school and support staff subject CPD.**

**A1 B3**

Updated Events Log -  
arranged for planning & book  
scrutiny 19/4/17

**Staff Meeting 15/3/17- Agenda  
Action Plan**

- Share updated action plan and areas still to be addressed

Remind staff to upload all evidence  
to their folders on G drive

**Time Scale**

- Criteria Reflections to be written within next 3 weeks.
- PSQM to be completed by end of May ready for pre assessment
- PSQM to be submitted in June

**Principles of Science**

- Posters to be displayed in classrooms.
- Principles to be added to Medium Term Planning
- Principles to be displayed in corridor
- Staff & Children's comments to be added using Post-its / speech bubbles

**Pupil Voice Update**

- Share results from pupil voice questionnaire

**The subject leader holds a number of staff meetings throughout the year to share best practice, advise of curriculum changes and introduces new science based initiatives and ideas.**

**The Subject Leader provides science-specific training to build knowledge and skills of teaching staff.**

**Science Week activities are carefully planned for the whole school. All staff are actively involved throughout the process.**

**CPD training attended by the subject leader is fed back to staff at staff meetings.**

**Impact of Science Leader**

There has been a very positive impact in Science this year because of the efforts of Lesley Burnett, the subject leader.

The profile of science in our school has been significantly raised. Pupil interviews show that this is a popular subject that many children of different ages enjoy taking part in.

**The Impact:**

- This year we have had a whole school science day (activities planned by Lesley that enabled the elder pupils to lead and teach)
- The after school Science club (Mad Science) that 20% pupils from different classes attended
- 5-minute science activities/investigations planned each half term done by each class and displayed prominently on a display board
- Lesley and myself (the Y5/6) teacher both went on the Thinking Doing Talking Science course and this has enabled staff to increase knowledge and receive new equipment
- New storage space has been found so that all equipment is easily found and not hidden in various cupboards!
- Science plans for each year group have been adapted where necessary. These were shared in a staff meeting led by the subject leader.
- Increase in the amount of practical science going on in each class, including children sharing their own science homework experiments with others
- Science display boards in each classroom, with the "Principles of Science" prominently displayed.

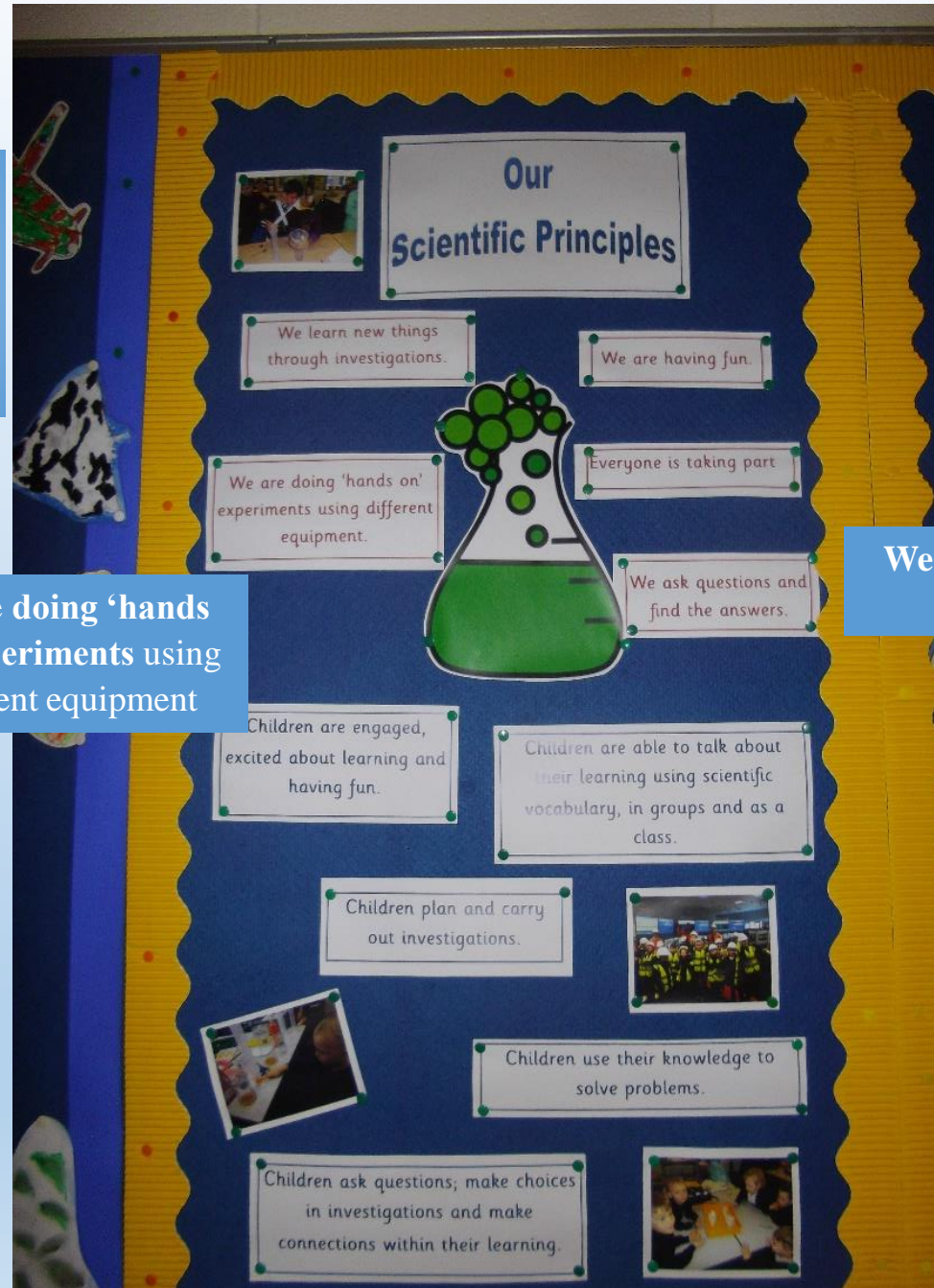
Patrick Reeve

A pupil voice contribution to our scientific principles related to 'hands on' learning opportunities. Our whole school science day reflected this with ten different activities.



We are doing 'hands on' experiments using different equipment

Our Principles of Science Statement is displayed in each classroom and on planning. This reflects both pupil voice and staff contributions. Our Scientific Principles display can be found in the Hall.



We ask questions and find the answers

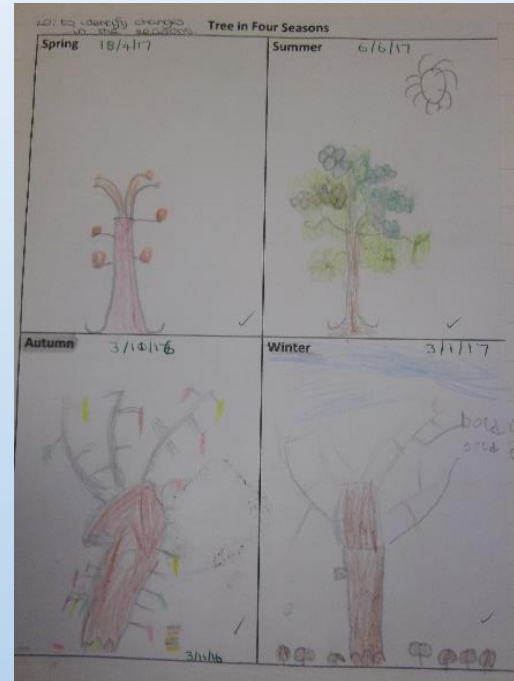


Dr Monroe came to talk about how science is relevant to his job. A child asked a question about pain which resulted in discussing the central nervous system. For the children to understand this better, they went outside to model being the brain, spine and ribs and were then able to see how nerves are connected.

Reflecting the pupils voice aspect of our Principles of Science.



Children in Badger class have been observing the seasonal changes to the cherry tree in the school grounds and recording the changes with drawings.

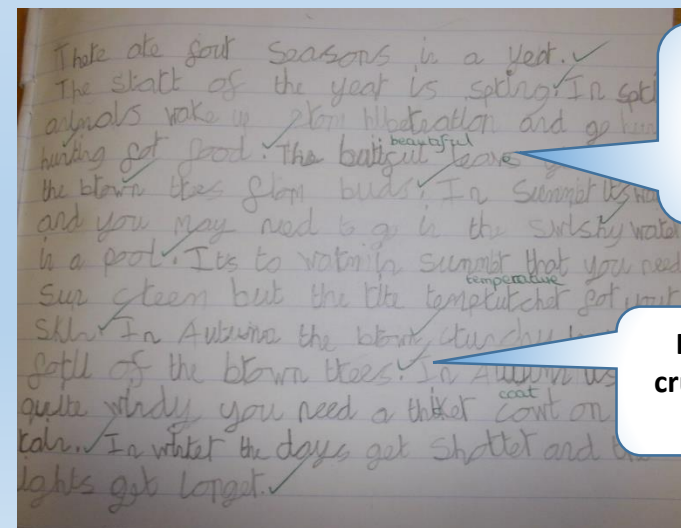
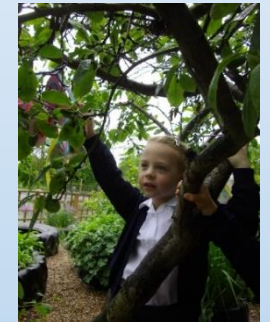


During Awesome Authors independent writing in June, which had a topic focus, some children referred to the changes of trees through the seasons as part of their writing thus further demonstrating their learning.



I enjoyed cooking as part of our French Day. I've made ratatouille and used lots of vegetables.  
C.S. Year 3

We use all the school grounds in our teaching and learning of science.



Spring  
The beautiful leaves grow on the brown leaves from buds.

In Autumn, the brown crunchy leaves fall off the brown trees.

A2 C2

During the whole school science day which was led by the Year 5/6 children, all the supporting adults had a Working Scientifically sheet for recording any observations throughout the day as the children were involved in the activity they were overseeing. At the end of the science day, the subject leader ensured all teachers had copies of the evidence for each activity for evidencing their children's scientific enquiry skills relating to making scientific predictions, developing their own questions, using scientific vocabulary and other relevant comments observed by the supporting adult.

Scientific Vocabulary

It's called photosynthesis

Science Day - 15th March 2017 If you get the opportunity during the activities, please note any relevant comments made on this sheet. This will then be photocopied and returned to each class teacher to support evidence. Thank you.

	Working Scientifically					
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Planning Investigations</b>	Progression Statement Ask simple questions when prompted	Progression Statement Ask simple questions when prompted	Progression Statement Ask relevant questions when prompted	Progression Statement Ask relevant questions when prompted	Progression Statement With prompting, plan different types of scientific enquiries to answer questions	Progression Statement Plan different types of scientific enquiries to answer questions
<b>Conducting Experiments</b>	Pupils can use equipment to take measurements	Make relevant observations Conduct simple test with support	Observe closely, using simple equipment Perform simple test	Make systematic observations, using simple equipment	Select, with prompting, and use appropriate equipment to take readings	Take measurements using a range of scientific equipment
<b>Conclusions &amp; Predictions</b>	a) Pupils can analyse data	Gather and record data to help answer questions	Gather and record data about similarities, differences and changes	Identify differences, similarities or changes related to simple scientific ideas and processes	Suggest how evidence can support conclusions	Identify scientific evidence that has been used to support or refute ideas or arguments
b) Pupils can draw conclusions	Use observations to suggest answers to questions	Use their observations and ideas to suggest answers to questions	With prompting, suggest conclusions that can be drawn from data	Use simple evidence to support their findings	Use test results to make predictions or to support further comparative and fair tests	Use test results to make predictions to set up further comparative and fair tests
c) Pupils can develop investigation further			Suggest possible improvements or further questions to investigate	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions		

Handwritten notes on the sheet include: "All the children in the groups have been very creative, they have been enthusiastic to create gardens, arbours, rain forest, beach scenes, night camps... talk about changing seasons and why nature changes through sun, warmth, cold and rain, light and darkness." and "Maddy in the Summer the flowers will be much more colourful and the grass and leaves much greener." Another note says "Sorry! the materials are brown and damp because its just been winter everything has been wet and cold."

Asking questions

Why are we using vinegar? Could we use a different liquid?

Working Scientifically

	Working Scientifically			
	Year 3	Year 4	Year 5	Year 6
<b>Planning Investigations</b>	Progression Statement Ask relevant questions when prompted	Progression Statement Ask relevant questions when prompted	Progression Statement With prompting, plan different types of scientific enquiries to answer questions	Progression Statement Plan different types of scientific enquiries to answer questions
<b>Conducting Experiments</b>	Make systematic observations, using simple equipment	Make systematic and careful observations using a range of equipment, including thermometers and data loggers	Select, with prompting, and use appropriate equipment to take readings	Take measurements using a range of scientific equipment
<b>Conclusions &amp; Predictions</b>	Gather and record data about similarities, differences and changes	Identify differences, similarities or changes related to simple scientific ideas and processes	Suggest how evidence can support conclusions	Identify scientific evidence that has been used to support or refute ideas or arguments
b) Pupils can draw conclusions	Use observations to suggest answers to questions	Use their observations and ideas to suggest answers to questions	With prompting, suggest conclusions that can be drawn from data	Use simple evidence to support their findings
c) Pupils can develop investigation further		Suggest possible improvements or further questions to investigate	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	

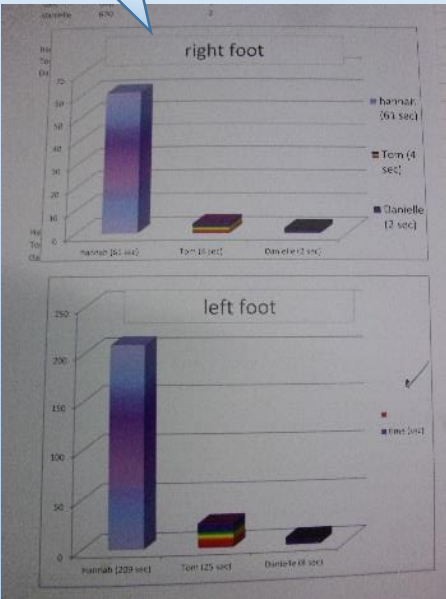
Handwritten notes on the sheet include: "Come! Why are we using vinegar? We could put the powder in just the new powder we put on the case it exploded." and "I think its going to erupt because we put BoFS in cakes and it makes explosions." Another note says "I put 50ml of vinegar + 10ml of BoFS and it went up to 100ml. I changed 50ml of BoFS goes up to 50ml. I liked it when it went over the top."

Predictions  
I think it's going to erupt because the bicarbonate of soda will react with the vinegar.

A2 B1 B3 C1 D1

# Some of the ways we record evidence to support different learning styles.

I like using ICT to record my scientific data.  
TBR Year 5

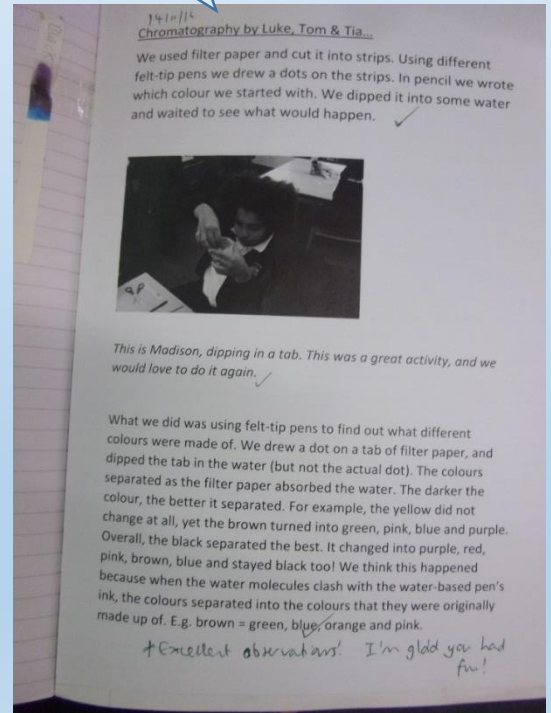


EYFS & KS1 sometimes use floor books to record evidence.

I made notes about my 5 minute science experiment then used ICT to present my work.  
MS Year 6



In Badger class, children wrote their predictions on Post-its and an adult scribed their questions.



**In support of the School Development Plan , the subject action plan clearly sets out the goals for the year.**

Objective	Action	Time scale	Success Criteria	People involved	Monitoring and evaluation
To continue to develop the role of the subject leader	Attend science subject leaders meeting	Mar 2017	School continues to work towards achieving PSQM.	LB	Staff meeting to update staff on requirements and way forward
	To attend PSQM training days  Thinking, Doing, talking Science 4 day training (Year 5 focus)	Feb/May 2017	Training is used within classroom.	LB /EWJ  LB / PR	Staff meeting Impact of pupil progress – June 2017 (Y5 assessments)
To continue to raise the profile of Science across the school	Chn to complete questionnaire regarding attitude to Science in the school.	Jan 2017	Awareness of how children view Science.	LB	Feedback to staff
	Science Club available for Y1-6	Every Tues after sch	Chn enjoy science and have fun. Chn choose to attend science club.	LB/AJ	Get chn to write an evaluation of what they like about science club and how it could be improved.
	Science Week Whole school cross curricular theme	13-17 March	Whole school take part in Science week. Chn are excited about Science and are talking about in school and at home.	All staff	Ask chn; what do you think about Science? Do you enjoy Science?
To continue to support staff in the new curriculum	Science teaching cycles and NC progression amalgamated to ensure coverage at correct point within school year.	Feb 2017	Staff are aware of what they are expected to teach and to what level.	LB/AJ  All staff	Staff meeting  Lesson drop ins/study
To monitor progression in Science across the school. To ensure assessment is accurate.	Staff to use Eazmag to complete formative and summative assessment of children.	Ongoing	Eazmag reports show that sufficient progress has been made.	CT	LB/AJ to complete data analysis.
	Working scientifically to be updated half termly.	April 2017			

Excerpt of the School Development Plan

Subject Leader Development

Science subject leader – develop subject knowledge.  
Attend: Thinking, Doing, Talking Science training and work with collaboration schools to apply for science quality mark.  
To undertake PSQM.

SL and Y5 teacher to feed back to staff.

SL to re-introduce ‘5 minute science’ across the school to raise profile.

**The Thinking, Doing, Talking Science training undertaken by the subject leader and the Year 5/6 teacher has supported CPD in the Year 5 curriculum and raised the expectations of scientific enquiry across the school.**

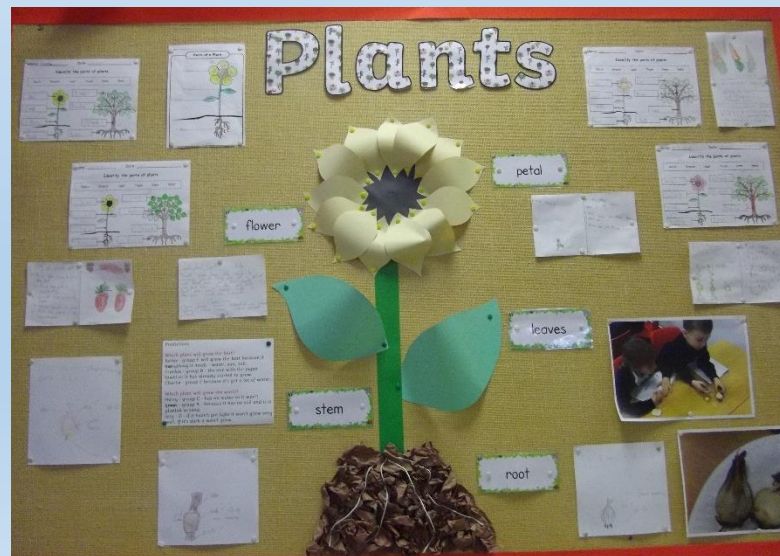
**The Year 5/6 teacher and Year 1/2 teacher have implemented some of the teaching and learning strategies such as Odd One Out and The Big Idea. The impact has been that the children have developed their scientific vocabulary and enquiry skills.**

**Feedback from the training was shared at staff meetings along with resources and support, with pedagogy of teaching specific areas of the curriculum when required.**

**The impact has been staff have been upskilled and children are more excited about science across the school.**

A4 B2

The whole school 5 minute science display is in a communal area. Children are often heard discussing their experiments / investigations.




A range of displays across the school.



 **Corringham CE Primary School, Lincolnshire** added 10 new photos.  
31 January · 🌟

Squirrels and Badgers had a special visit today from Tom and his ambulance. The children got to explore inside the ambulance, see the blue lights and try some of the equipment too. Thank you Tom!



-  **Claire Dean** Tom Finney loved coming to see the children 😊 xx  
Like · Reply · 1 · 31 January at 21:10
-  **Clare Ritson** Claire Dean please say thank you from charlie and myself he came home from school so happy and loved telling us about it all made his day x  
Like · Reply · 1 · 31 January at 21:33
-  **Jackie Stockdale** Oscar loved this! Thank you school and Tom! Xx  
Like · Reply · 1 · 31 January at 21:34
-  **Claire Dean** Aww bless him. I will tell Tom he was so sweet he came out with a picture for Tom xx  
Like · Reply · 1 · 31 January at 21:34
-  **Claire Williams** This is all Laura has been talking about all evening. Such a good experience for the kids. thank you.  
Like · Reply · 1 · 31 January at 22:29
-  **Jemma Stanser** George loved this. Thank you. X  
Like · Reply · 1 February at 07:35

**Parents are kept informed about science in school through our Facebook page, newsletters, flyers and science homework. Parents often comment on the events / visits through Facebook.**



### Extracts from the Newsletter

*We've had a busy few weeks...A Big Science Day, a tractor visit, a visit from Animals UK and Red Nose Day fun.*

*If you want to see more photographs, please follow us on Facebook.*

We are also looking for 'green fingered' volunteers. Our school garden is looking tired and we could really do with some help. Do you have any spare time to help us, either during the day or after school? Please get in touch if you can spare some time. We are also looking for donations of top soil ;-)

**Diary Dates:**

Fri 10th	Last Day
Mon 20th	Back to school
Wed 22nd	Squirrels & Badgers visit to Lincoln Castle
Wed 1st March	Corringham World Book Day Celebrations
Fri 3rd	Mad Science Special Assembly—pupils only

 **Corringham CE Primary School, Lincolnshire** added 7 new photos.  
17 March · 🌟

Thank you to Mrs Elwess who spent the day with us talking about food and farming. We loved the tractor visit too! Have a great weekend everyone!



- 👍 33 Chronological ▾
-  **Claire Williams** Thank you Mrs Elwess. Kids loved it and are very impressed with their hats!  
Like · Reply · 1 · 17 March at 20:06
  -  **Victoria Elwess** It was a pleasure! The children were all so polite, well behaved and very willing to engage. I loved watching their faces when they sat in the "big seat" of the tractor 😊!  
Like · Reply · 1 · 17 March at 21:44

A4 C1

### Badgers (Year 1/2) science homework



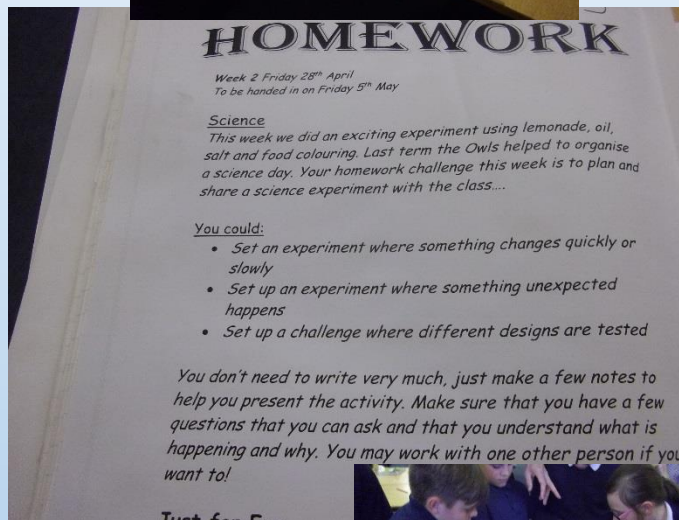
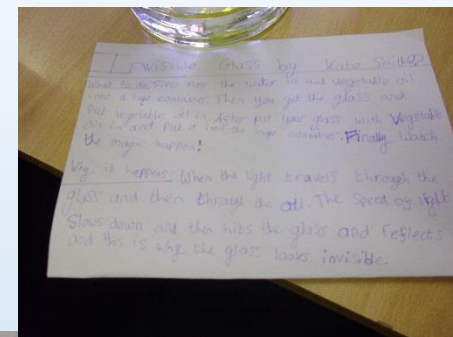
As part of our science topic, we are looking at different ways to record the weather. Please make a rain gauge or weather vane.



### Badgers science presentation homework display about the weather.



### Owls (Year 5/6) science homework



### Hedgehogs (Year 3/4) science homework

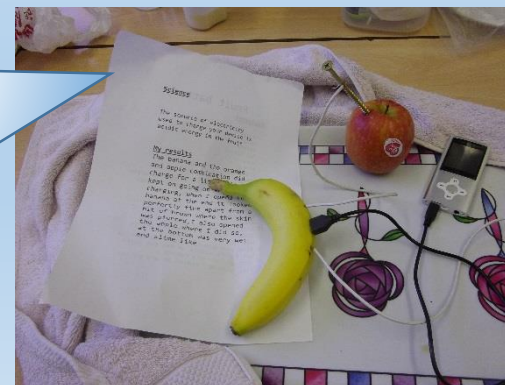


I like doing this kind of homework. My grandma helps me find things out and we enjoy making things together.

RR Year 3

I am really interested in science and technology so I wanted to see if I could create an electrical circuit using fruit to power my phone. It worked!

JE Year 5



A4 C1 C2 D1

A parent farmer brings in the tractor and shares how science is used in farming.



Parent volunteers helping in the school garden and making bird scarers.



I enjoy growing plants and it is lovely to watch the children engaging with nature and asking questions.

Mrs R S (Parent helper)



I enjoyed having the defibrillator on. I want to be a paramedic when I grow up!

Charlie

A child's uncle is a paramedic and brought his ambulance and his defibrillator!



A child's mum is a dental practice manager and arranged for the dental hygienist to visit us.



We are aiming to raise the profile of science within our school and require your help.

Are you an engineer, pharmacist, food technician, farmer (arable or livestock), veterinary nurse, doctor, hospital worker, dentist, animal worker, gardener or have any job linked to science?

Would you be interested in coming in to school to share your expertise with our amazing children through a Q&A session about how your job is linked to science?

Would you be available any time during the week's  
30<sup>th</sup> January - 3<sup>rd</sup> February  
13<sup>th</sup> - 17<sup>th</sup> March - Science Week

We would be happy to accommodate your time table.

Please contact Mrs Burnett (Badgers) or Mrs Jones (Squirrels) for further information.



The local doctor visited us and helped the children create a human central nervous system. It was great fun.





**Whole School Science Day**  
Evidence of the activities led by year 5 & 6 children supported by adults. The impact on science across the school has been invaluable with the increased use of scientific vocabulary and a 'buzz' about science.



I loved teaching everyone how to do the activity and using scientific language. I liked seeing the reactions of everyone.

LG Year 5



I enjoyed showing other people the activities. I liked helping them make predictions and just the WOW factor!

KS Year 6



I liked having the responsibility and trust

TR Year 6



I liked doing all the different activities

IM Year 2



## An evaluation by the EYFS teacher on Symbiotic Science CPD

As part of our work towards the PSQM, the Science leader asked me to attend the Symbiotic Science training day.

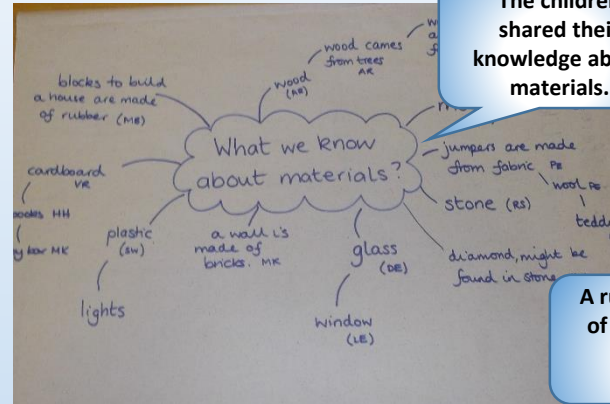
In EYFS, science is covered through 'understanding the world' and so it can sometimes be tricky to ensure children are being introduced to simple scientific concepts without losing the basis of play and exploration.

The Symbiotic Science course gave me so many ideas which were adaptable to EYFS, showing how science can be done in a simple, practical, fun way. I really liked the floor books as a way of recording a scientific investigation and so I used this tool in my following science topic, materials. The floor book allowed me to record everything from the investigation in one place and showed a build up of work and evidence over time. The children took an active role in building up the book, suggesting ideas etc. The children were really excited to be making their own book.

This training also developed my confidence in exploring scientific ideas with children and developing their vocabulary. By pairing practical, fun activities with scientific vocabulary the children have a key learning memory which helps them to recall the vocabulary at a later date. Even after the materials topic, children are still talking about different materials and their properties!

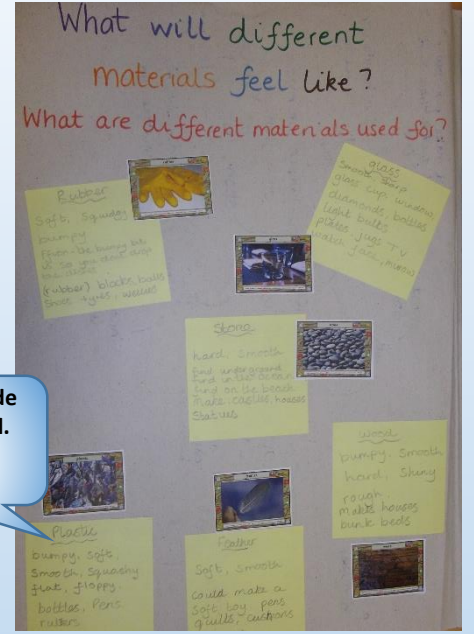
Overall, this CPD has increased my confidence to explore scientific ideas and vocabulary with my class which I previously thought may have been to high level for them. The impact on the children has been fun, practical science activities, a developing scientific vocabulary and a thirst to find out more on their own.

Anja Jones



The children shared their knowledge about materials.

A ruler can be made of plastic or wood. P.E. (EYFS)



Paper didn't work 'cos it let water through. A.R. (EYFS)

Material	Is it waterproof?
wood	<input checked="" type="checkbox"/>
fabric	<input checked="" type="checkbox"/>
plastic	<input checked="" type="checkbox"/>
metal	<input checked="" type="checkbox"/>
wool	<input checked="" type="checkbox"/>
tissue paper	<input checked="" type="checkbox"/>
kitchen roll	<input checked="" type="checkbox"/>

The topic was linked to EYFS literacy topic about The Three Little Pigs story. The children wanted to find out which material was waterproof and would make a good roof for the pigs houses.

**A2 B1 B2 C1**

**Overview**  
**5 Minute Science Experiments / Investigations**

To take place ½ termly  
 Photos / predictions / observations / conclusions / further investigative questions etc to be added to whole school display asap

**Term 3 – Chromatography**

**Term 4 – Dissolving gases**

**Term 5 – Air pressure – magic jumping coin**

**Term 6 – Float or Sink experiment – Salt Water Egg**



The bubbles are carbon dioxide, CO<sub>2</sub>, Sonny told us about them on science day.

IM Year 2



Children relate previous knowledge showing greater depth and making links in their learning

**5 Minute Science Observation Focus - Working Scientifically**

NC	Year 1	Year 2
Pupils can ask questions	Ask simple questions when prompted ✓	Ask simple questions ✓
Pupils record work with diagrams and label them	With prompting, suggest how findings could be recorded ✓	Record and communicate their findings in a range of ways and begin to use simple scientific language ✓
Pupils can draw conclusions	Use observations to suggest answers to questions ✓	Use their observations and ideas to suggest answers to questions ✓

**Dissolving gases**  
**Resources** - Lemonade / Oil / Food Colouring / Salt / pipette  
 In a transparent beaker / cup pour in some lemonade.  
 Add the same amount of oil.  
 Using a pipette add about 10 drops of food colouring  
 Then add salt  
**What happens? What does the oil do?**  
 Salt is heavier than lemonade, so when you pour salt on the oil, it sinks to the bottom of the mixture, carrying a blob of oil with it. In the lemonade, the salt starts to dissolve. As it dissolves, the salt releases the oil, which floats back up to the top of the lemonade.

*LA / IM referred to something new vocabulary & demonstrated understanding.*

Focus Group 1					
Amelia Anna Bertie Connor George Eleanor	Charlie Chloe Leo Isabelle Laura Jenson	Ethan Frankie Harry Kaleb Elspeth Lewis	Maya Joe Isla Mali Nicholas Oliver	Lily Islay Warren Oscar Sophie	

*In mixed ability groups led by LB with CC recording comments as evidence*  
*See sachets up back of books for evidence*  
*Chn able to support sensible ideas using scientific vocab.*

Chn to make observations **How could you record what is happening? What do you think is happening? Is it the same as your prediction?** Conclusion to be done as who class. **What happened? Why?**

**Planned questioning**

Independent activity following investigation whilst next group begins investigation  
 Chn to use beaker template to record observations for our 5 minute science book. Label diagram ✓

Chn not working on science experiment to do independent choosing. EB to support independent activities.



Small groups enable TA to scribe observations to evidence children's understanding and use of scientific vocabulary



Children not working with an adult are able to explore scientific equipment independently and create their own investigations



# B3

Hedgehog class enjoyed using data loggers to record the temperature in different parts of the school grounds as part of their Plants topic.



I liked using the data loggers because they help to record data but we don't have to write anything.

MC Year 3



I enjoyed using the data logger to record the temperature because you could see the changes straight away.

GH Year 4

An example of our science resource audit. This was undertaken with all staff in July 2016 and resources were collated in a central space.

As a result of the audit and curriculum requirements, data loggers were purchased using funding from the Edina Trust.

Consumables are replaced as required. A full audit will take place in July to ensure resources are available for the next academic year.

Force meters/ Newton meters	*
Forces	*
Pushmeters	*
Ramps and stands	*
toy cars	*
K'Nex / Lego / Duplo wheels and wheel bases	*
Rubber bands / Forces bands	*
Springs	*
Toys	*
Wooden blocks / friction blocks	*
Different types of elastic	*



**Pupil Voice questionnaires were conducted in May 2016 prior to beginning the PSQM and then in March 2017. As next steps have been addressed, children's interest in science has improved. Undertaking the PSQM has had a positive impact on the children's overall science experience.**

## May 2016

2 children from each year group were given a questionnaire to complete in order to assess their perception of science throughout the school. It is proposed that the findings will contribute in constructively supporting to raise the profile of science throughout the school.

## Conclusion

75% of the children taking part in the questionnaire like science with 67% understanding their learning. 75% indicated studying science is really useful with 67% expressing that asking scientific questions promotes further questioning. 67% expressed a preference for group work. 58% preferred to draw pictures related to their science with the same % enjoying writing about the experiments.

## **Next Steps**

Ensure that science planning includes group and individual activities to support all learning styles. Evidence science in a variety of ways to support all learning styles. Photos, pictures, writing, videos, TA observations etc.

## March 2017

### Pupil Voice Results

All children from Year 1 to Year 6 completed the PSQM pupil voice questionnaires and the results were collated.

### Conclusion

Science is being taught on a regular basis throughout the school.

Most pupils enjoy science and taking part in experiments / investigations. School trips and visitors into school support pupils learning and help to develop a good attitude to this subject. Most pupils prefer 'hands on experience' such as experiments and investigations.

Pupils work in groups, with partners or independently dependent on the activity. Some pupils do not like working in teams as it can lead to arguing.

A number of pupils commented that scientific language / vocabulary was an area of science they found difficult. Writing up investigations / experiments was also referred to as a difficulty in science. Co-operating / working as part of a team was a frequent comment by KS2 pupils.

### Next steps

- To record in different ways
  - photos
  - floor books
  - annotated pictures / annotated diagrams
  - focusing on a specific aspect i.e just the method; fair test; hypothese; questions; conclusion
  - videos
- Have appropriate topic vocabulary displayed to support pre learning / refer to during the lesson

**All of the next steps have been implemented. The impact of this has been to allow the children to experience recording in different ways and allowing them to focus primarily on the science not on the writing.**





**Hedgehogs Class (Year 3/4 ) visited West Burton Power Station to support their Electricity topic.**



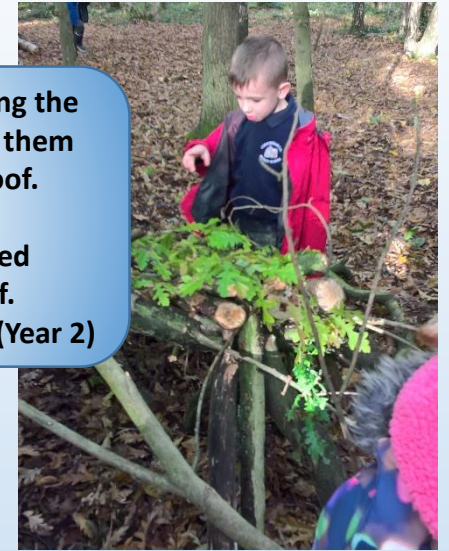
**We did lots of different activities and it made science real.  
EB (Year 3)**



**Badger Class (Year 1/2 ) enjoyed a trip to Hartsholme Park in Lincoln to take part in Den building activities.**

**When we'd finished building the dens, we poured water on them to see which was waterproof. Our den was the most waterproof because we used shiny leaves to make a roof.**

**CE (Year 2)**



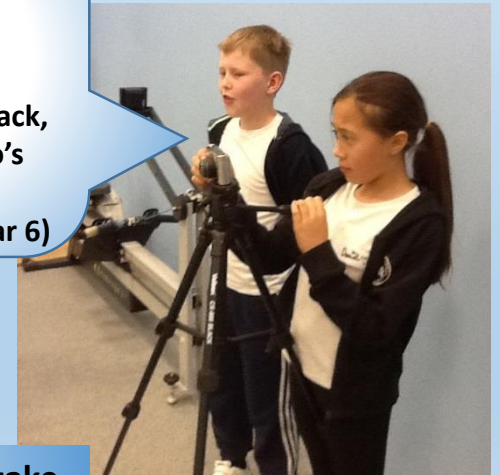
**I enjoyed the day because I had the opportunity that not many people would have.**

**KS (Year 6)**



**We did a range of activities and filmed them with a special slow motion camera. This made us improve our throwing technique. I enjoyed it because using the playback, we could discuss the pro's and con's clearly.**

**JB (Year 6)**



**Some children from Owls class (Year 5/6) were chosen to take part in a Science Sporting Specialism day at Lincoln University.**