



# Smithdown Primary School





# Science Displays

As well as being in all classrooms, displays are also along main corridors.

Children are aware of the different types of scientific enquiry

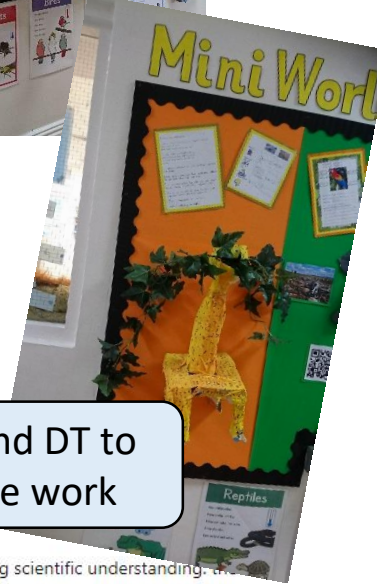
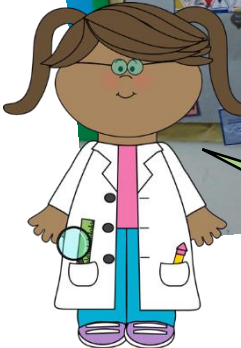
Concept cartoons and interactive 'lift the flap' encourage children to interact with the displays and develop their scientific thinking.

Science principles on all displays

'I discovered' and 'I wonder' boards on all displays

Links with art and DT to support science work

SL1, SL2, T2, L1, L3



Mrs Ridley @katieridley3 · 28 Nov 2017  
Progression in science - clear evidence of developing scientific understanding. The human body in y1 and y3. @SmithdownPr @SmithdownPrimY1 @SmithdownPrimY3 #smithdownsci



Science displays are celebrated and shared with the wider community via Twitter.





# Family Events

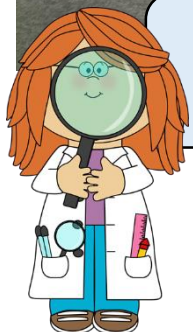
Evaluation forms after the event were extremely positive. We are now going to make this an annual event.



"I have never done anything like this with my child before. I was impressed by how much he knew."

Y3 Parent

SL2, SL4, WO2, L3



Thank you to our families who attended family science today. @IrelandIreland1

@kateridley3 @SmithdownPrimY1 @SmithdownPrimY5 @SmithdownH

@MrsD\_Eyfs #smithdownsci @MrsCarpenter30

"It was fun to see them learning and finding out new things. Thank you"

Y1 Parent



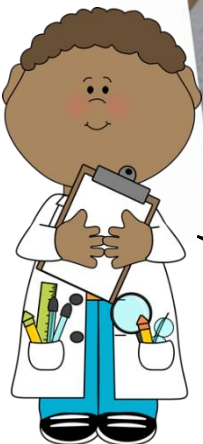
"This is the first time I have been into school. My son and I love science. I'd like to do this again"

Y1 Parent





# Science Ambassadors



Science Ambassadors regularly monitor the science homework packs. The work is of a consistently high standard.

SL2, SL3, WO1, T3, L1, L3



Dear

Thank you very much for applying for the role of science ambassador, due to the high quality of the applications, I have decided to invite all applicants to interview.

Your interview will take place on Thursday, the first interviewee will be called at 12.50 and each interview will last approximately ten minutes.

As I will need my Science Ambassadors to be able to find things out and write reports, I have a pre-interview task: I would like you to carry out some research about a scientist of your choice and bring that information with you to the interview.

You can present your research anyway that you chose. For example, you may decide to write a report, create a PowerPoint presentation or give a verbal presentation. These are only suggestions – if you have a different idea then please use that; I also love creativity and originality!

I look forward to seeing your work on Thursday.

Yours Sincerely,

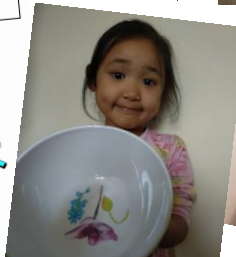
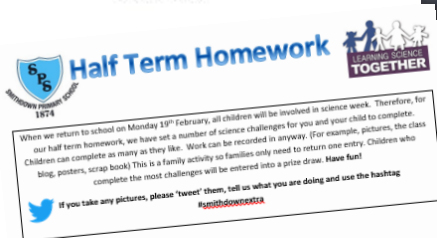
Mrs Ridley  
Assistant Headteacher and Science Lead.

PUT OFSTED QUOTE HERE





# Science at Home



During science week, the whole school had the same homework. Families loved sharing their investigations via twitter.

SL2, SL4, WO2, T2, L1



**Smithdown PrimaryY5** @SmithdownPrimY5 · Mar 29  
More examples of great science homework. The children are loving the 'Whiz, Pop, Bang' science magazine. It's great to see them excited and engaged with science outside of the classroom. #smithdownsci #smithdownextra @SmithdownPrimY2 @pstt\_whyhow



**Professor Worthington** @ProfessorWorth1 · Feb 25  
Einstein enjoyed looking at all the interesting things in @Victoria #smithdownextra



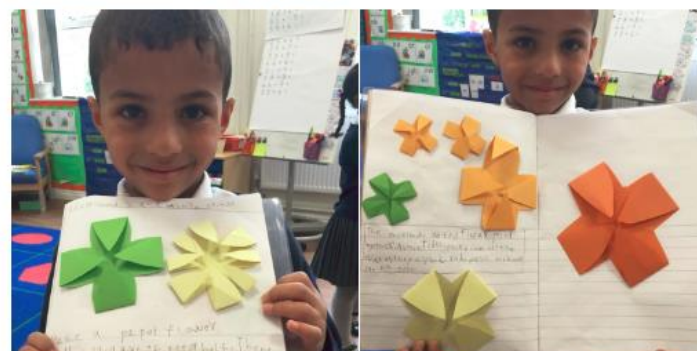
Our science bear, 'Einstein' even encourages families to visit science museums!



Science at home bags have given pupils the opportunity to investigate at home and chose how to present their work.



**Miss Hathaway Y1** @misshath2 · Apr 27  
More fabulous homework from our science bag by this super scientist 🧑🏫 #smithdownsci @katieridley3 @SmithdownPrimY5 @MrsD\_Eyfs @SmithdownPr @SmithdownPrimY1 @MrsCarpenter30







# Science Week



**Mrs Dickinson** @MrsD\_Eyfs · Feb 23

Thank you to Mrs Ridley for organising our Science Week @SmithdownPr. Well done to all the Science winners #smithdownsci #smithdownextra



**Miss Guy** @MissGuy\_ · Feb 21

We made a keyboard play by making a circuit with our bodies! We realised electricity can be passed through us safely #makeymakey #smithdowncomputing #smithdownsci @MGLWorld\_Paul @katieridley3 @thejoylabz



Workshops from 'Primarily Science' and PSTT provided exciting learning for the children and excellent CPD for staff.



**Miss Ansell** @miss\_ansell1 · Feb 26

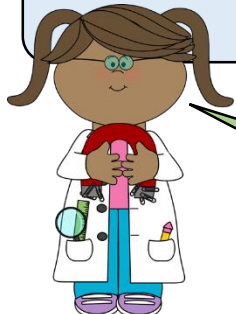
Please visit [littleinventors.org/ideas/](http://littleinventors.org/ideas/) to check out Auvina's invention. Give it a like :) #smithdownextra @SmithdownPrimY2



**Miss Hathaway Y1** @misshath2 · Feb 23  
Ice cream making and tasting was a great success! #smithdownsci @SmithdownPrimY5 @katieridley3 @MrsD\_Eyfs @SmithdownMrsG



Science assemblies demonstrate to the children how much we value science.



SL2, WO2, T2

The children enjoyed entering the 'Little Miss Inventor' competition





# Links with Liverpool Hope



**Miss. Comer Y3** @MissComerx · May 24

It has been a brilliant day at @LiverpoolHopeUK celebrating the Hope Challenge project. Loved all of the children seeing where I went to University!  
#raisingaspiration #smithdownextra



Visits to Hope University have provided our pupils not only with a range of scientific work, but it has also given them the opportunity to experience a University setting – hopefully encouraging them to think about their futures.

SL2, WO2, L1



**Smithdown PrimaryY5** @SmithdownPrimY5 · 6 Dec 2017

Our science fair was so much fun! Reactions, classifying, questioning, investigating, improving #smithdownsci



PGCE students ran a science fair for Y5 and Y6 pupils, giving children a range of opportunities to think scientifically.



**Smithdown PrimaryY5** @SmithdownPrimY5 · 2 Nov 2017  
Great day working scientifically at Liverpool Hope. #smithdownsci



Students specialising in EYFS and science worked in our EYFS unit.







# Edible Playground



The edible playground is designed to be used at all times; children will be encouraged to explore and tend to, the area during playtimes and lunch.

The bug hotel will support key learning for pupils; allowing them to look at different insects with magnifiers.



Using the greenhouse will develop the children's knowledge and understanding about growing conditions.



Our outdoor classroom will give us even more reasons to take our learning outside.



SL2, SL3, SL4, T1, L3



# Enhancing the Curriculum

Miss Ansell @miss\_ansell1 · Feb 7  
2LA have had a fantastic day visiting @SEALIFEManc. #smithdownsci #smithdownextra



Science is enhanced through educational visits and visitors into school.

Abby Carpenter @MrsCarpenter30 · Feb 26  
Something egggiting is happening in year 1! #smithdownsci @misshath2 @Miss\_Jones11 @SmithdownPrimY1 @



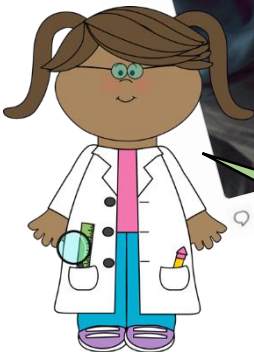
Children are encouraged to touch and handle, ask "Why?" and "How?"

Miss Ansell @miss\_ansell1 · Mar 19  
2LA had a great day @FarmerTedsFarm to help us with our science work. #smithdownsci @SmithdownPrimY2 #smithdownextra



"Miss. look, I'm a dentist." Y1 boy

, SL2





# Pupil Voice



"I think that I'd quite like to be a forensic investigator when I'm bigger." Y5 Girl

SL1, SL2, T2, T3, L1



"I love it when we get to investigate. We do that a lot."  
Y6 Girl



"I can't believe that sand is so beautiful. Big things are made of small things." y2 pupil

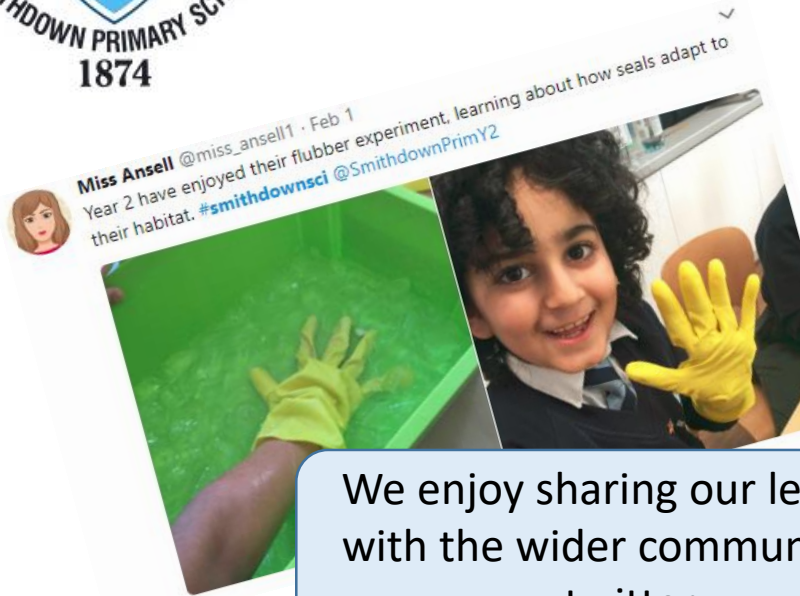


"Wow! I can see the chambers" Y6 Pupil





# Working Scientifically



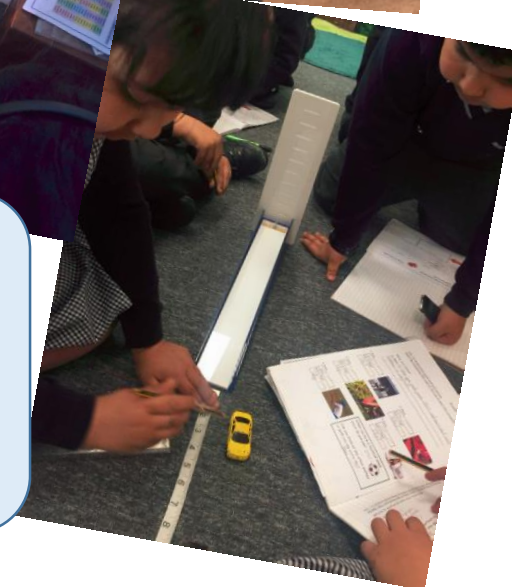
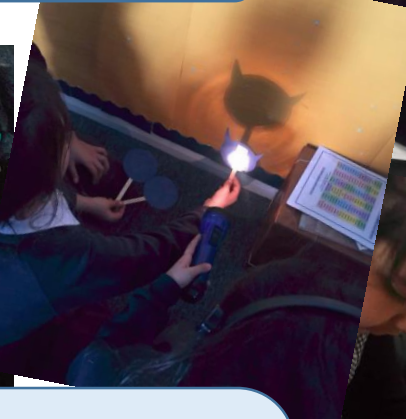
We enjoy sharing our learning with the wider community via twitter.



School grounds are regularly used



Pupils are given many opportunities to plan and carry out their own investigations



SL1, SL2, L1





# Monitoring Science

Science planning ensures that there is clear progression and that there are a range of opportunities for scientific enquiry.

Smithdown Primary School				
Science Plan Year				
Teacher:		Term: Spring		Unit: The Human Body
	Learning Objectives	Independent or Group Activities	Working Scientifically	Outside Learning
Lesson 1	To elicit what children already know about the body	Children to complete teacher made sheet - what do they know about the human body - can they identify organs and their functions? Do they know what the heart does? Can they explain the function of blood?		
Lesson 2	To explain how the circulatory system works.	Using red/blue cards and children - model how oxygenated and deoxygenated blood pass around the body. Watch BBC's Operation OUCH.		
Lesson 3	To know how your lungs work To plan and carry out an investigation on lung capacity	Using iPads for research, can children explain how the circulatory system works? Repeat above for the heart. Two part lesson: (each group have 1 hr then swap) 1. Research functions of gas exchange system 2. Plan investigation creating spirometer to measure lung capacity. (Do taller people have bigger lungs?)		
Lesson 4		Science Week Class workshop - what is blood? Investigating factors that effect heart rate, dissection of heart.		
Lesson 5	To be able to analyse results from previous experiment.	Using data from week 3, children will graph their findings and identify any trends.		
Lesson 6	To plan an investigation into factors that effect heart rate	Using planning charts, do children have a question about what might affect heart rate? Support groups to plan and carry out child led investigation.		Children outside to run/jump about



Knowledge assessment - Pupils must master the underlined subject content to reach

Year: 1		Topic: Everyday materials	Term:
		1. distinguish between an object and the material from which it is made 2. identify and name a variety of everyday materials including wood, plastic, glass, metal, wax, ... 3. describe the simple physical properties of a variety of everyday materials 4. compare and group together a variety of everyday materials on the basis of their simple physical properties	
Not met	Met	Expected	Exceeded
Emerging			

Current assessment at the end of the topic has, in the past, been more knowledge based. From September 2018 there will be two sheets to fill in - one for knowledge and one for working scientifically..

SL1, SL2, SL3, SL4, T2, L1, L2

## Science Monitoring Report

Term: \_\_\_\_\_

Evidence of appropriate curriculum coverage?  
(refer to whole school overview and NC)

Are the science principles adhered to?

Evidence of a range of scientific enquiry?

Evidence of progress across the year?

Progress across the key stage?

Comments on working wall:

- Principles displayed
- Posters - (wonder, I discovered)
- Scientist of the week
- Vocabulary Bank
- Key learning points
- Children's work

Are there opportunities for children to use their writing skills to show understanding in the given subject? (e.g. advert, report, diary entry, letter?)

Further Comments

Science is monitored three times a year, books and displays are looked at and children are spoken to. The science principles continue to ensure that the shared vision for science is maintained.

Observation

Date: 06.02.2018

Subject: Science

Teacher: Anna Davis

Year Group: 6

Lesson Topic: Science - understanding night and day

Teaching and Learning

- High expectations were clear throughout the lesson
- Behaviour of pupils was good and, where necessary, school policy was followed to effectively deal with any behaviour issues
- 'Odd one Out' starter engaged pupils right away and provide an opportunity for pupils to show their level of understanding
- All pupil's thoughts and ideas were valued and any misconceptions were dealt with in a way that supported the children and allowed them to move their learning on
- Secure teacher knowledge allowed children to make excellent progress and good use of high level scientific vocabulary ensured that high expectations remained throughout the lesson.
- All misconceptions were addressed including one child who said that the moon gave out light.
- The learning environment was used effectively by both the teacher and the pupils
- Excellent use of time lines to help children understand how different scientists had helped us to develop our understanding of space as we know it today.
- Multiple choice activity was used to recap and consolidate learning - eyes shut, hands up to assess the pupil's knowledge and understanding
- Good use of models to try to help children understand the scale.
- Resources were effectively selected to challenge children and broaden knowledge and understanding.
- As the children discussed their ideas, the teacher moved around the room, effectively challenging misconceptions and/or moving their learning on
- Children worked well in groups and collaborative learning is evident
- Mini-plenary was used to identify...

Over the year, teachers have three lesson observations- one of them must be science. Science is listed as Priority 4 on the SDP



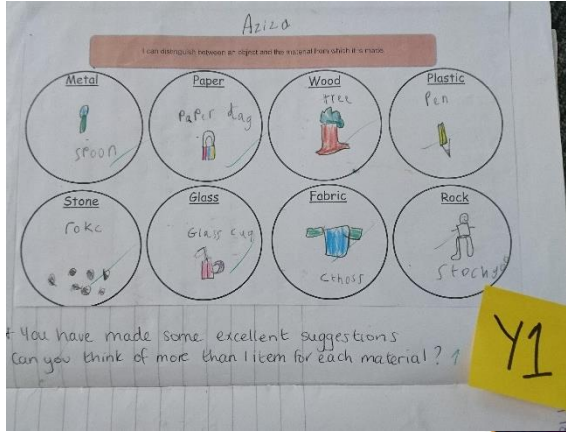
Smithdown Primary School  
School Development Plan 2017-18

Key Priorities for 2017/18
Priority Target 1: To improve the teaching, learning and assessment of writing throughout the school
Priority Target 2: To improve the quality and effectiveness of questioning, marking and feedback to ensure that it has a direct impact upon outcomes for all pupils
Priority Target 3: To raise standards in maths by improving pupils ability to use and apply their mathematical skills across the curriculum
Priority Target 4: To improve knowledge and skills and progress for all learners in science
Priority Target 5: EYF5 To ensure teaching and learning increases standards of the specific areas
Priority Target 6: To ensure that all pupils are engaged and motivated in their learning
Priority Target 7: To enhance the outdoor learning environment

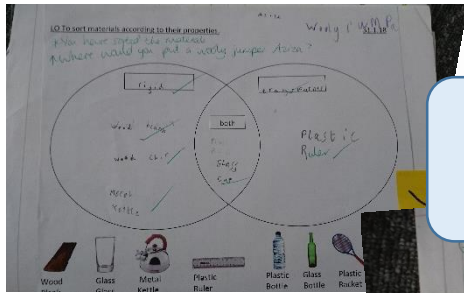


# Progression in Sorting And Classifying

## Sorting and Classifying



Y1



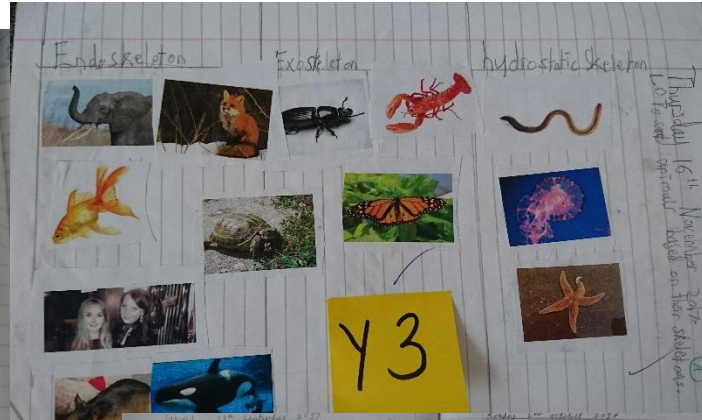
Children work practically before recording their work.

SL2,T2, L1

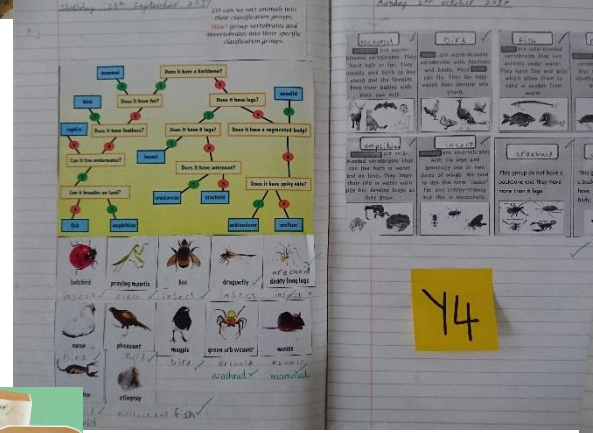


Y2

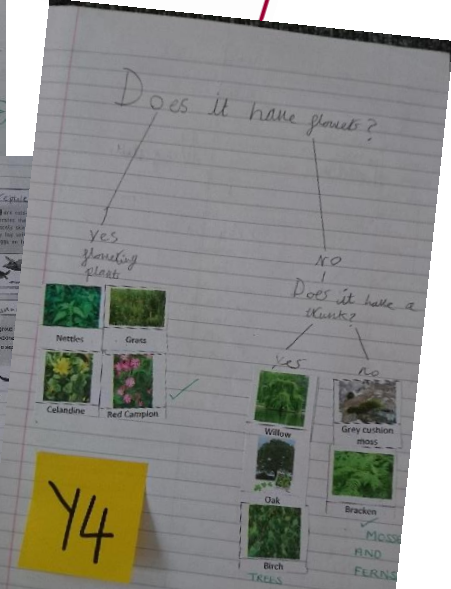
Challenge! FW you tell name one property of metal?



Y3



Y4



Y4

It is clear that, across the year groups, children are being given the opportunities to sort and classify

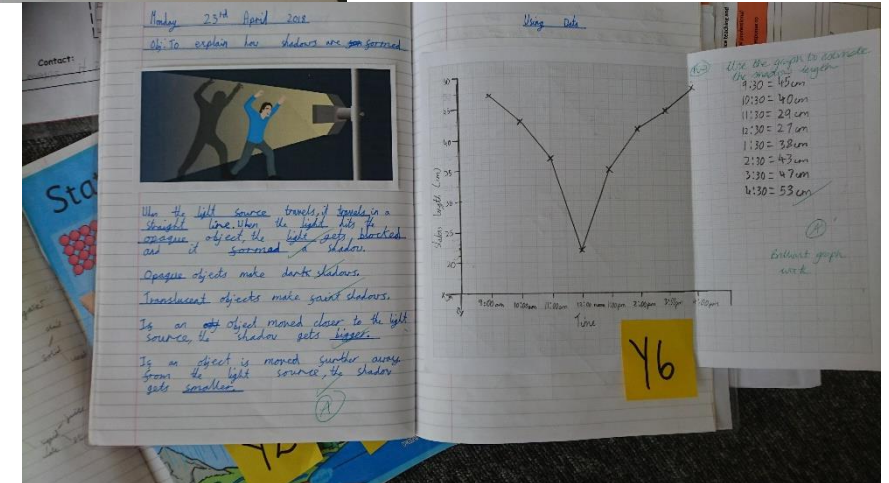
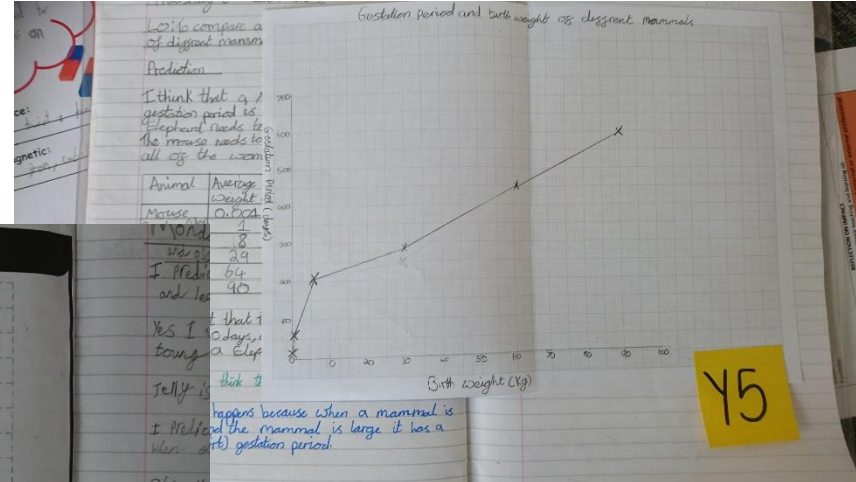
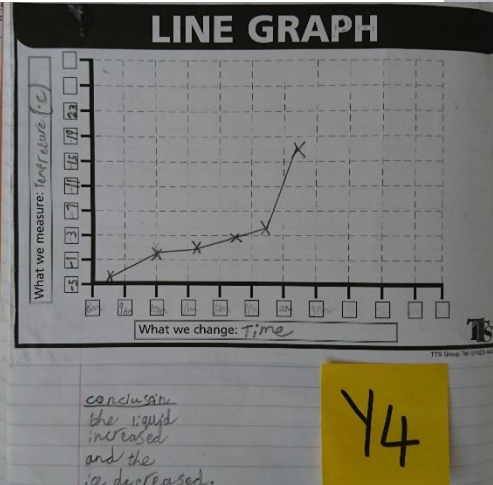


Making keys



# Progression in Pattern Seeking

## Pattern Seeking

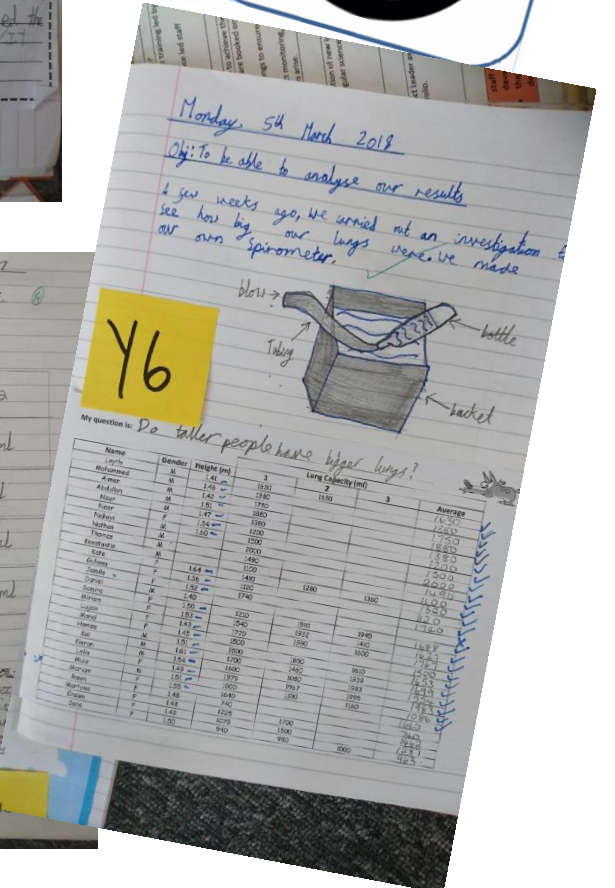
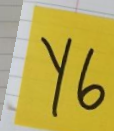
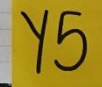
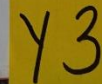
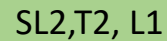


SL2,T2, L1





# Fair Testing







Stories are used to stimulate scientific understanding. Here the boy has grown a beanstalk.

Children are encouraged to think scientifically at home

SL1, SL2, T2, L1





# Key Stage 1 Science

Abby Carpenter @MrsCarpenter30 · Mar 7  
Year 1 have been using maths in science! We have sorting animals  
#smithdownsci #smithdownmaths



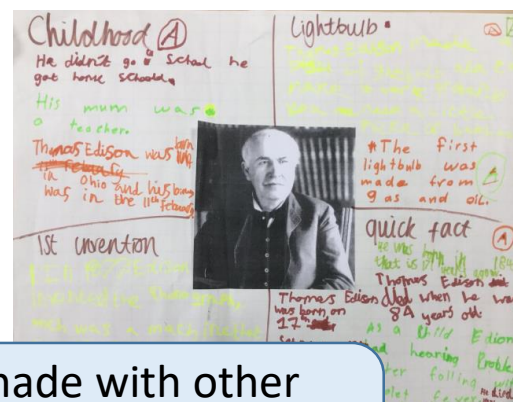
Miss Guy @MissGuy\_ · Apr 19  
We have been learning about the importance of a balanced diet and the five food groups. #smithdownsci @SmithdownPrimY2



Children are fully involved in investigations



Guy\_ · 24 NOV 2017  
are now superstars at identifying materials according to their  
ndownsci



Links are made with other subjects, here the children are drawing portraits of scientists



SL1, SL2, SL4, WO1, T2, L1





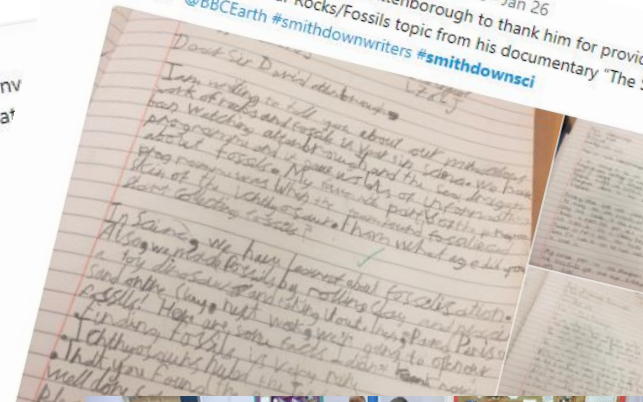


# Key Stage 2

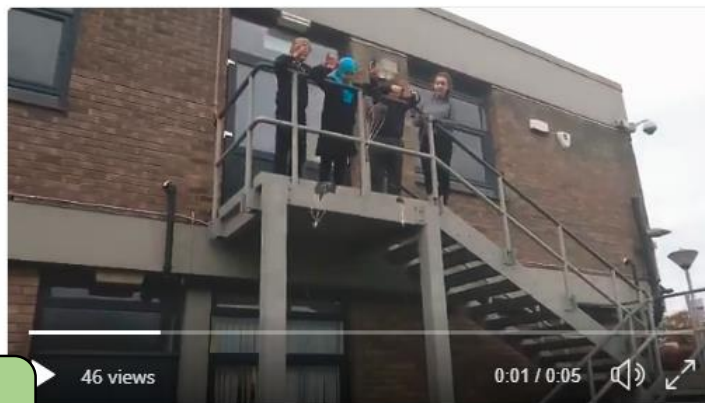
**Smithdown PrimaryY5** @SmithdownPrimY5 · 21 Nov 2017  
Year 5 had a busy afternoon of five different experiments to inv that affect dissolving. #smithdownsci while practicing accurat liquids #smithdownmaths



**Smithdown PrimaryY3BC** @SmithdownPrimY3 · Jan 26  
We have written letters to David Attenborough to thank him for providing us with so much insight to our Rocks/Fossils topic from his documentary "The Sea Dragon" @BBCEarth #smithdownwriters #smithdownsci



**Smithdown PrimaryY5** @SmithdownPrimY5 · 2 Nov 2017  
Why did the larger parachute take longer to reach the ground? Thinking&working scientifically @HopeTeachers @SmithdownPrimY5 #smithdownsci



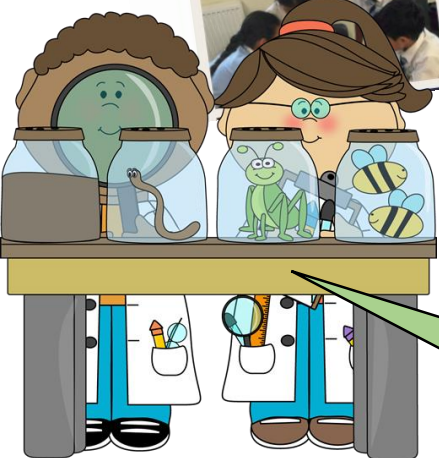
**Miss. Comer Y3** @MissComerx · Feb 9  
Fossil excavation this morning. We LOVED being archaeologists #smithdownsci



**Smithdown PrimaryY4** @SmithdownPrimY4 · May 8  
Investigating string telephones #smithdownsci



Does the length of string on a string telephone affect the volume of sound made?



SL1, SL2,T2, L1



