

Subject leader impact

Presentation to
Staff and
Governors 2022
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ASHTON KEYNES
Church of England VC Primary School



SHINE BRIGHT ★ REACH FOR THE STARS



Science intent

“Enabling life in all its fullness”

“I came that you may have life, life in all its fullness” (John10:10)

Our **Core Christian values** for our school are: *Perseverance, Creativity, Trust and Friendship.*



The most important thing about Science is being curious

We observe

We question

We hypothesise and investigate

And we gain knowledge of the workings of the world around us

But the most important thing about Science is being curious

“Equipped with his five senses, man explores the universe around him and calls the adventure Science.”

Edwin Powell Hubble

My intent last year was to...



raise the standard of Science teaching across the school and increase the number of children achieving mastery (GD) in science.

Provision



- *detailed curriculum and progression maps*
- *emphasis on increasing the inclusion of 'working scientifically' in lessons*
- *knowledge mats*
- *purposeful feedback following monitoring activities*
- *the continued use and availability of high quality teaching resources online - Tigttag and Explorify*

Impact



From 2021 end of year data

- *more children at GD, fewer at BARE*
- *more children with SEND at ARE.*

Evidence

2021 report data



SCIENCE (2020 REPORTS)		
Y 1 - 6 (185)	Total	%
BARE	14	8%
ARE	148	80%
GD	23	12%

Note: Assessment of Mastery in Science shown as GD.

SCIENCE (2021 REPORTS)		
Y 1 - 6 (187)	Total	%
BARE	10	5%
ARE	144	77%
GD	33	18%

More children at GD, fewer at BARE.

SCIENCE (2020 REPORTS)		
SEND (25)	Total	%
BARE	9	36%
ARE	15	60%
GD	1	4%

SCIENCE (2020 REPORTS)		
PPG (18)	Total	%
BARE	2	11%
ARE	14	78%
GD	2	11%

SCIENCE (2021 REPORTS)		
SEND (30)	Total	%
BARE	12	36%
ARE	21	64%
GD	0	0%

SCIENCE (2021 REPORTS)		
PPG (8)	Total	%
BARE	2	16%
ARE	8	67%
GD	2	16%

More children with SEND at ARE.
More children with PP at GD as a %.

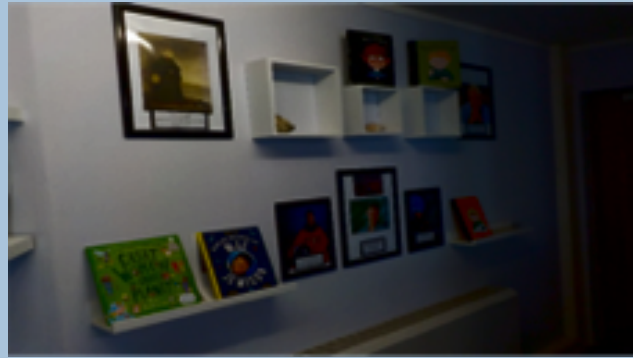
I am hoping this trend will continue as I have seen good progress in children's learning during this year 21/22. In particular the focus on the lowest 20% has enabled me to be optimistic that there will be improvements again this year.

My intent last year was to...

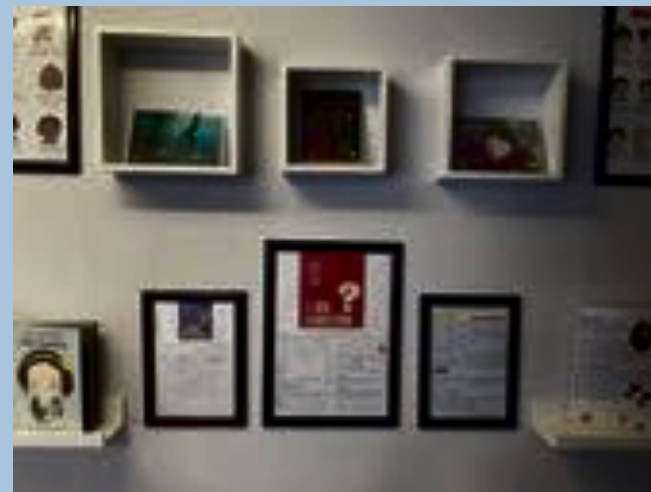


enhance the provision of learning about, and celebrating 'real life' scientists and their work with an emphasis on diversity.

Provision



- the inclusion of the requirement to specifically teach about diverse real life scientists on curriculum provision maps
- an accessible, informative display including children's learning, books and information about careers in science.
- a variety of high quality books
- an increased awareness amongst staff



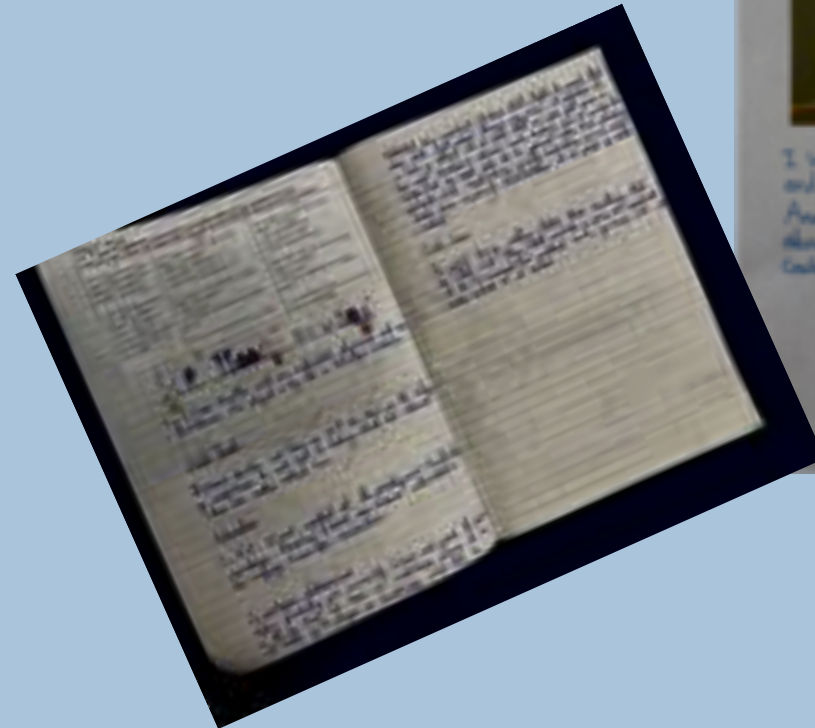
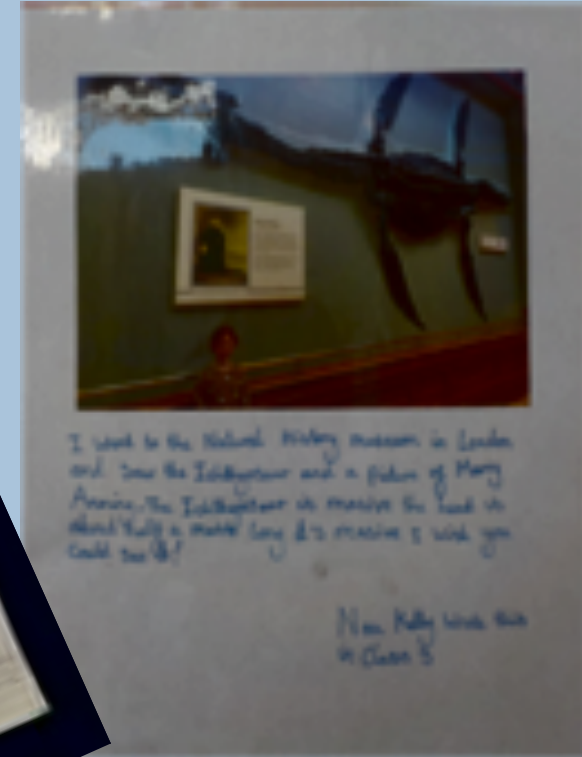
Impact



- *increased teaching and learning about real life scientists*

Evidence

- examples of work in books across the year groups.
- pupils referencing their learning on family trips – Mary Anning at the Natural History Museum
- overheard discussions near display about the scientists featured.



My intent last year was to...



begin to develop and embed the working scientifically aspect of the curriculum.

Quick reminder!

One of the aims of the National Curriculum for Science is to:

develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them

The nature, processes and methods of science

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand....

... focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

....types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing; and researching using secondary sources.

Pupils should seek answers to questions through collecting, analysing and presenting data.



Provision



- *more guidance on provision maps including progressive skills.*
- *zoom presentation given June 30th 2021 with information and guidance. This can be accessed on staff server Subject Leaders of Shine Curriculum 2021 - science week 2022- science- zoom working scientifically 30 June*
- *Science week 2022 focus being on using scientific enquiry and skills appropriate to each year group.*

Impact

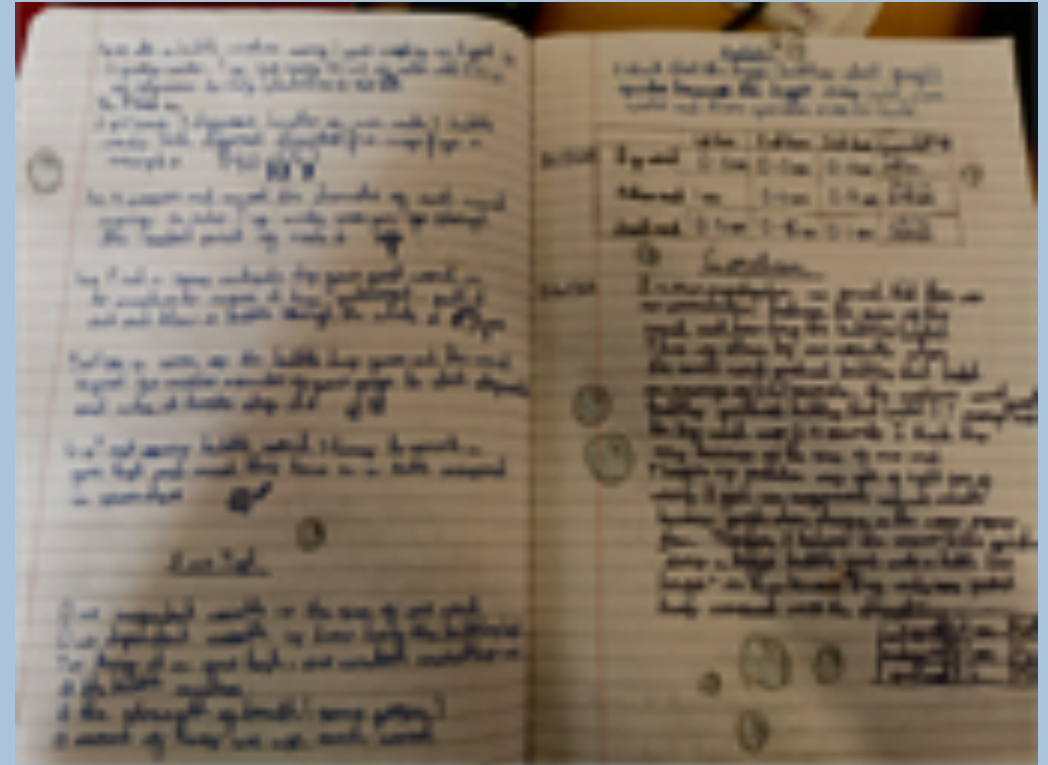


- *children are learning and using these skills in more and more science lessons*

Evidence



- examples of work in books
- observations of practical investigations
- photos from classes showing day to day lesson activities
- science week activities
- anecdotal evidence from staff sharing successful lesson outcomes



Intent for 2022/23



- My primary focus for next year, along with building on this year's successes, is to achieve the PSQM for our school. I am very much looking forward to starting in September and giving the process the time and priority it deserves.

What is PSQM?

Primary Science Quality Mark is a one-year school improvement programme for primary science, which provides professional development for around 600 new and experienced subject leaders each year. PSQM enables confident, knowledgeable, reflective leadership which results in an improvement in the way in which science is strategically planned and taught across the whole school.

The best training I have ever received. It moved science teaching and learning on rapidly.

Science subject leader - Oct 20



SPARE SLIDES



As a result of last year's data ... drill down data?

Any evidence of impact through progress for any specific lowest 20% children?

Science week activities KS2



Science week activities EYFS/KS1



<https://explorify.uk/en/activities/zoom-in-zoom-out/spring-clean>



Using bubble mixture they had made, children were asked to explore ...

the bubble that floats highest, travels furthest, lasts longest or is simply the biggest.

Their investigations linked to the working scientifically skills specific to their year group.

	EYF5 (3-5 years)	K1A (5-7 years)	Lower KS2 (7-8 years)	Upper KS2 (9-11 years)
PLAN Set a question, make predictions, decide on the method and equipment	<ul style="list-style-type: none"> ask questions and respond to what they hear with relevant questions 	<ul style="list-style-type: none"> ask simple questions and recognise that they can be answered in different ways 	<ul style="list-style-type: none"> ask relevant questions and use different types of scientific enquiries to answer them set up simple practical enquiries, comparative and fair tests 	<ul style="list-style-type: none"> plan different types of scientific enquiries to answer questions, including comparing and controlling variables where necessary
DO Carry out an enquiry using equipment	<ul style="list-style-type: none"> show an ability to follow instructions involving several steps or actions be confident to try new activities... use a range of small tools... safely use and explore a variety of materials, tools and techniques 	<ul style="list-style-type: none"> observe closely, using simple equipment perform simple tests identify and describe 	<ul style="list-style-type: none"> make systematic and careful observations and, where appropriate, take accurate measurements using standard units, and a range of equipment, including thermometers and stop logs 	<ul style="list-style-type: none"> take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
RECORD Use drawings, tables or graphs to note observations and measurements	<ul style="list-style-type: none"> explore the natural world around them, making observations and drawing pictures of animals and plants 	<ul style="list-style-type: none"> gather and record data to help in answering questions 	<ul style="list-style-type: none"> gather, record, classify and present data in a variety of ways to help in answering questions record findings using simple scientific language, drawings, tables, diagrams, flow charts, and lists 	<ul style="list-style-type: none"> record data and results of increasing complexity using scientific diagrams and tables, classification keys, tables, scatter graphs, bar and line graphs



Photo of
display,
books and
eggs of
children's
work

