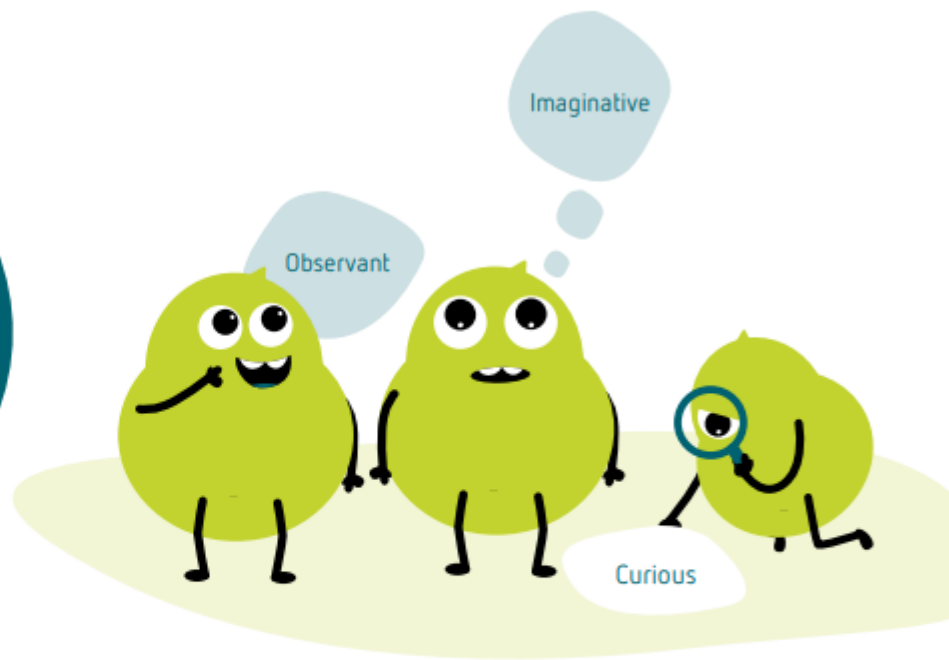


## UNLOCKING SKILLS



A fantastic way to encourage pupils to take an interest in STEM is to introduce transferable skills used by those working in STEM-related jobs.



Observant

Open-minded

Committed

Curious

Logical

Creative

Imaginative

Patient

Self-motivated

Collaborative

Resilient

Communicator

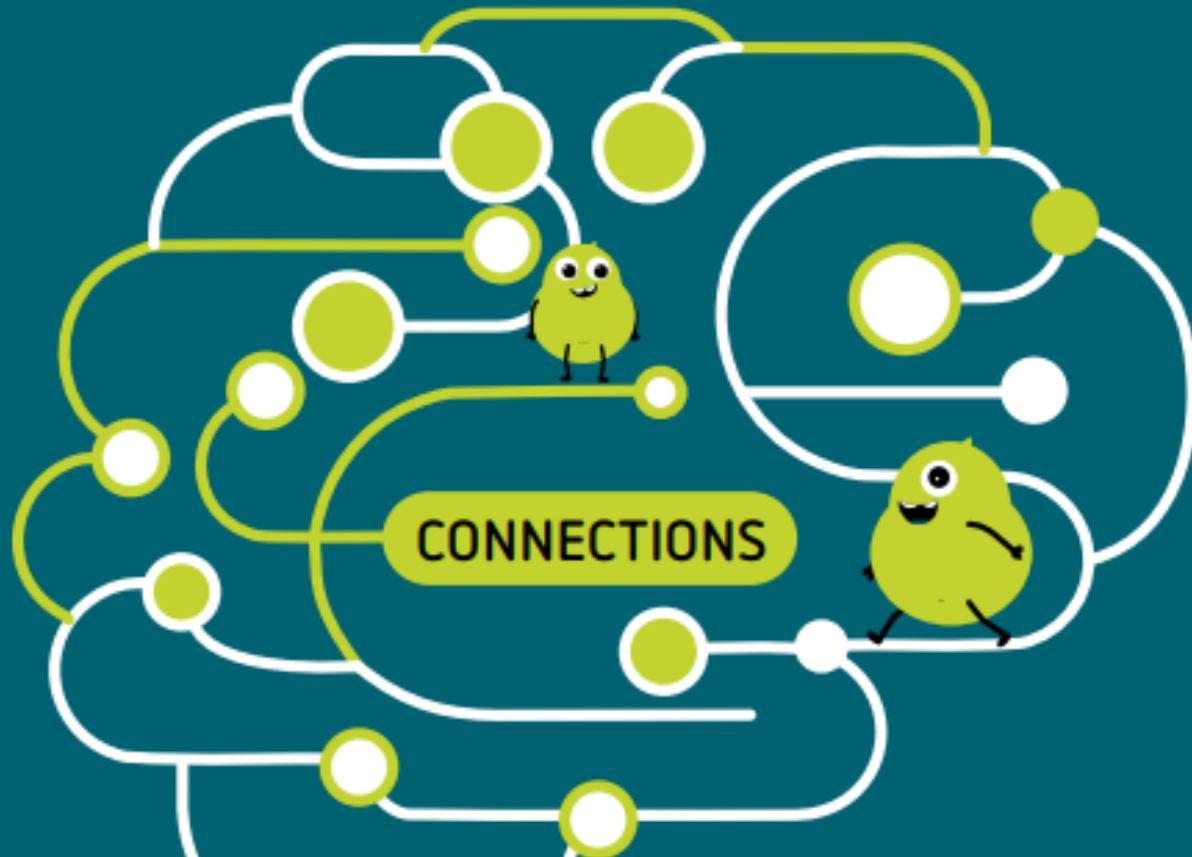
Passionate

Hard-working

Organised



10-19 March 2023

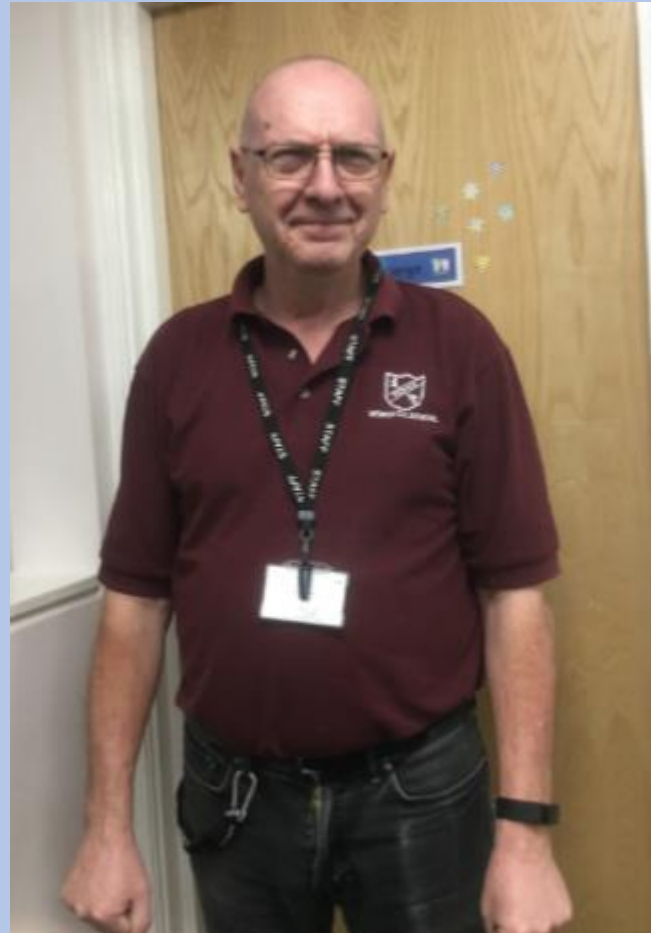


Here at Newick Church of England School our British Science week consisted of a variety of investigations based on the theme of connections.

- A forensic science investigation.
- Bridge building .
- EYFS- Wildlife faces/ Nature detectives.
- Year 1 Community connections.
- Year 2 Plant your pants.
- Year 3 Invent like a Victorian.
- Year 4 Nature connections.
- Year 5 Good vibrations.
- Year 6 Cells and microscope investigations.

# The case of the missing jam doughnut.

On Monday we arrived at school to discover that Mr. Barnes' Jam doughnut had been stolen.



We called in Mr Caulkett, a Crime scene investigator to help us.

Mr  
Caulkett  
taught us  
about  
forensic  
science!



We became forensic scientists for the week, and carried out our own investigations to find out which Teacher stole the doughnut.

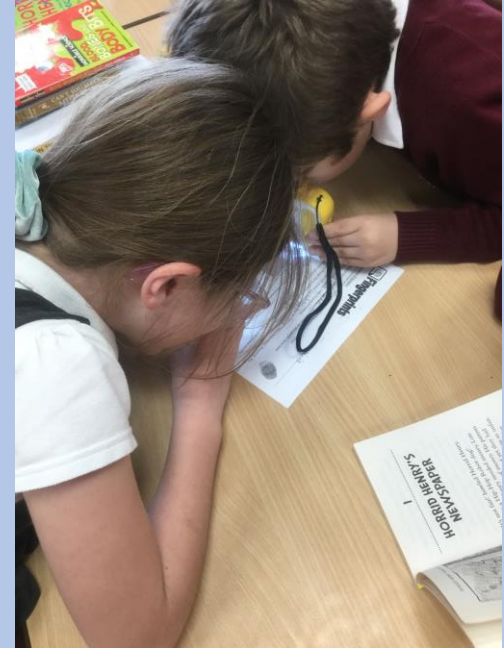






# Year 4 Science

Finger printing- who was the  
guilty person?



# Otters Bridge Building







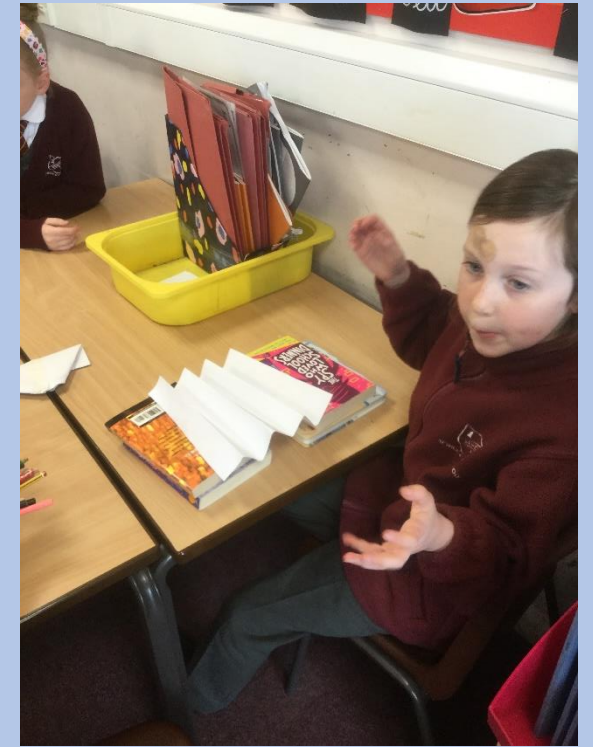
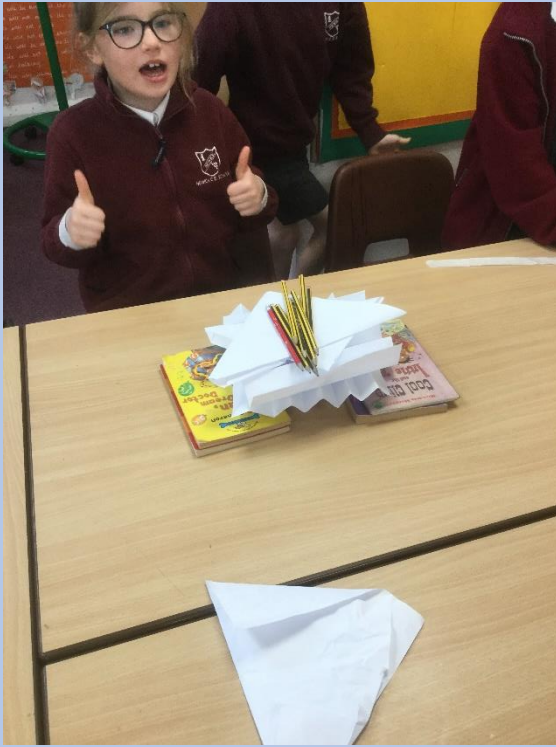








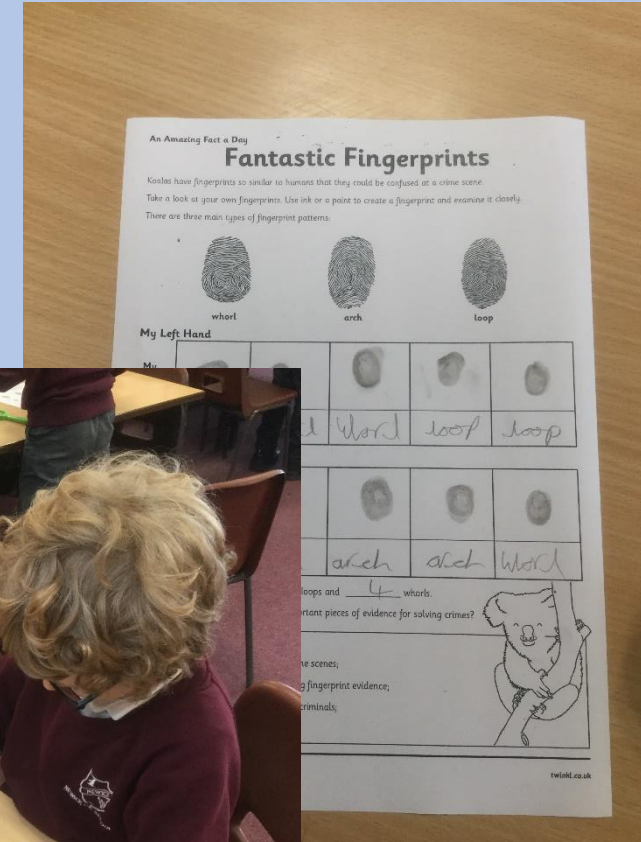
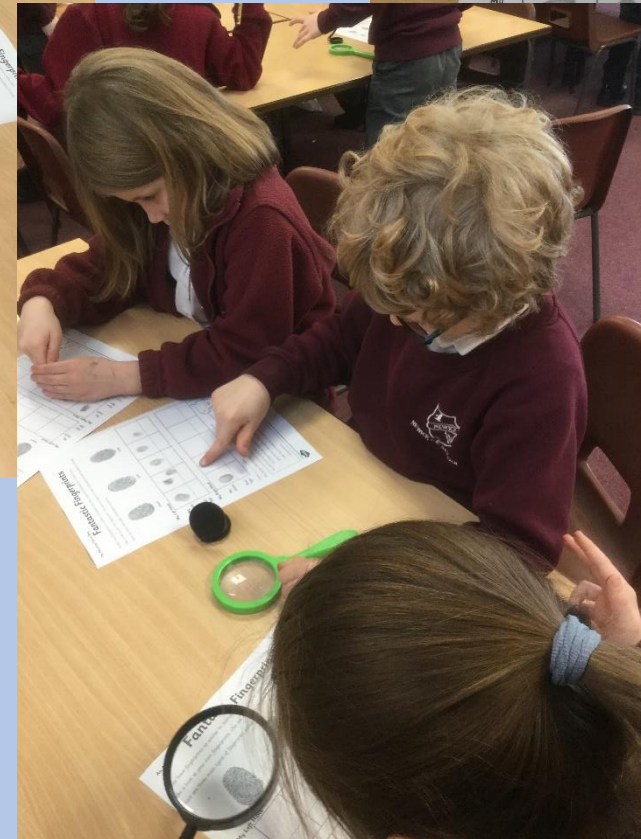
# Year 3



We built bridges using 5 pieces of paper and 1 piece of tape. We discovered that triangles were much stronger than other shapes and helped our bridges to hold more weight.



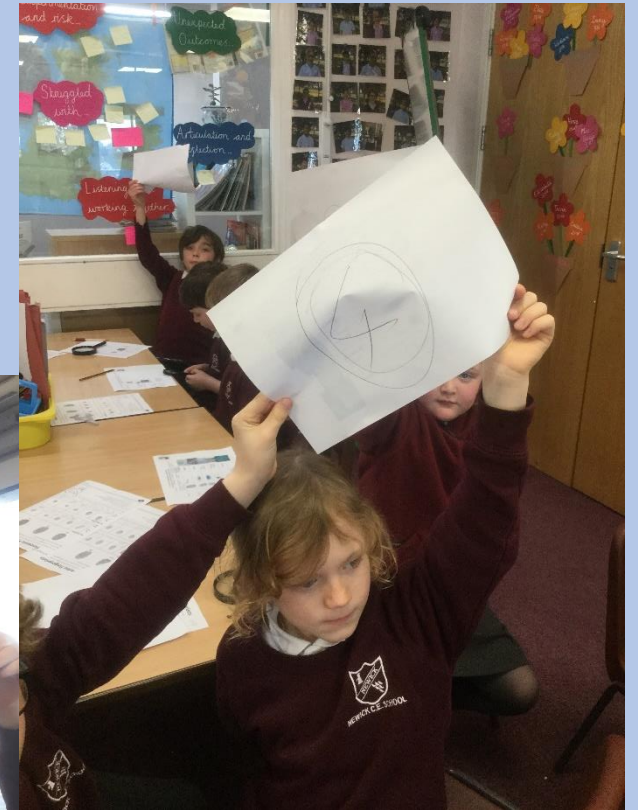
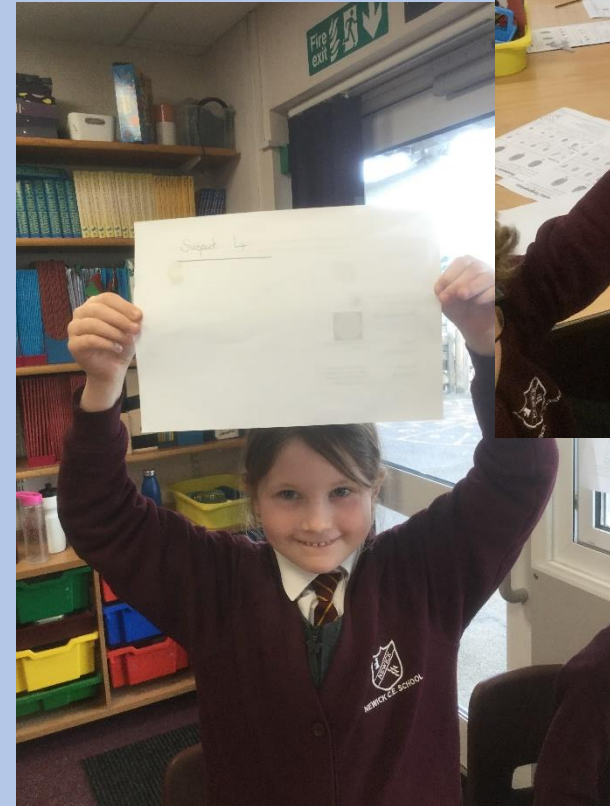
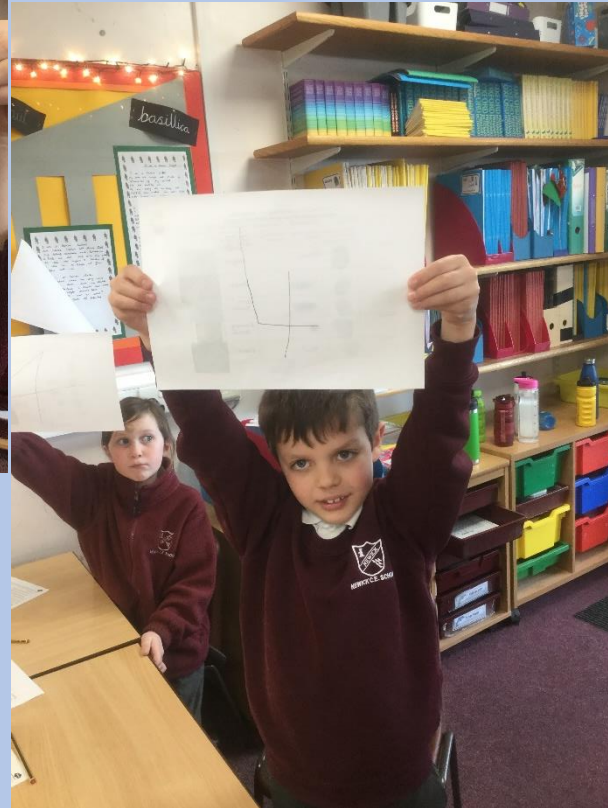
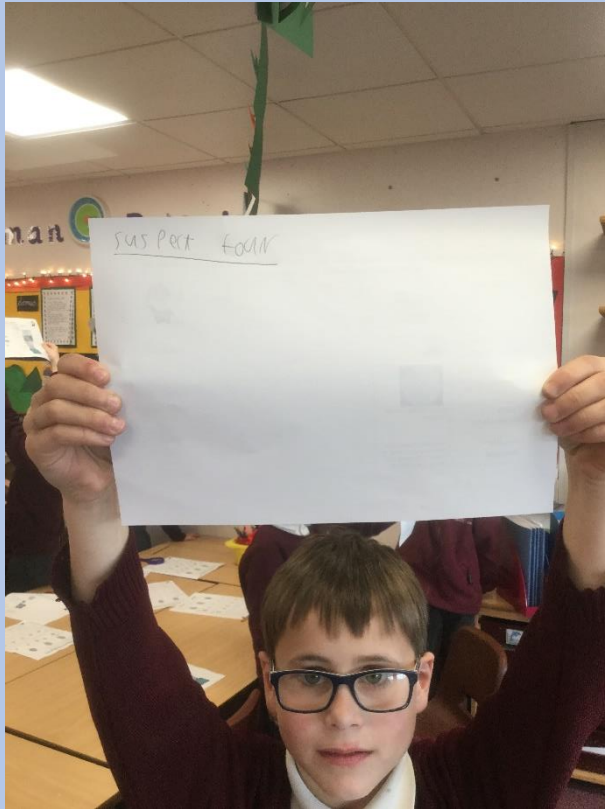
We looked at our fingerprints using a magnifying glass, and tried to work out if we had arches, loops or whorls.  
We printed our fingerprints and looked at the patterns in detail.



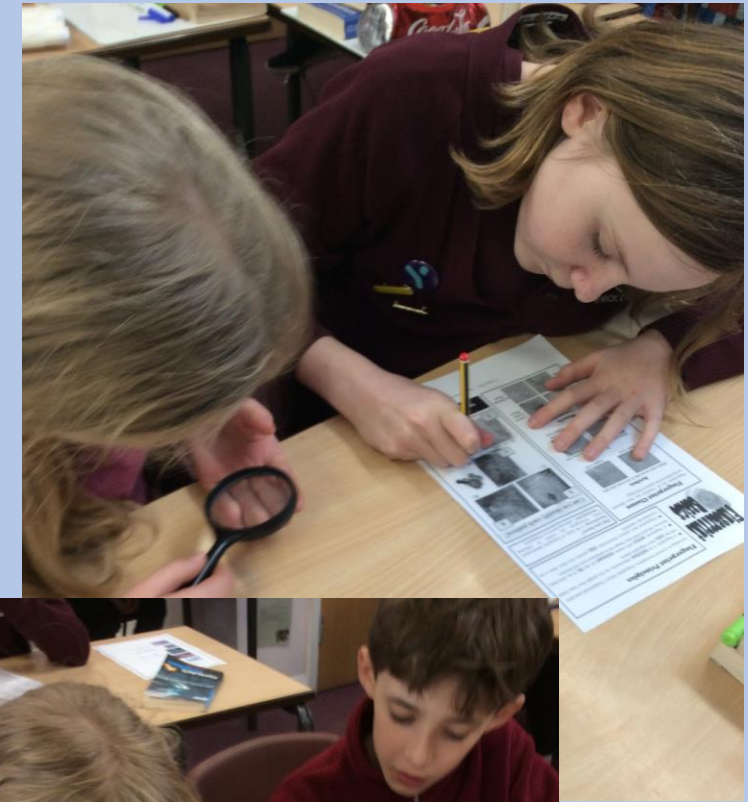
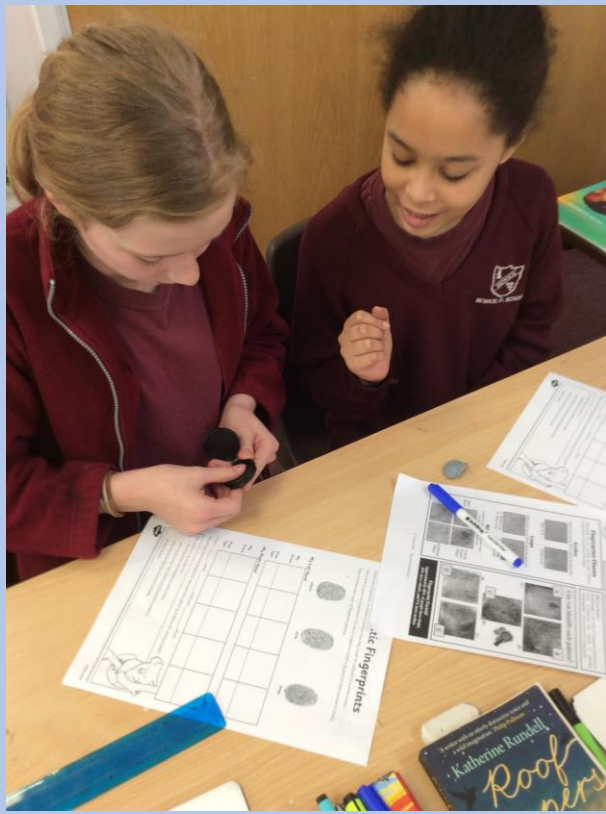


We looked at the fingerprints found at the scene of the crime, and compared them with the suspect list. We think the culprit is...

4

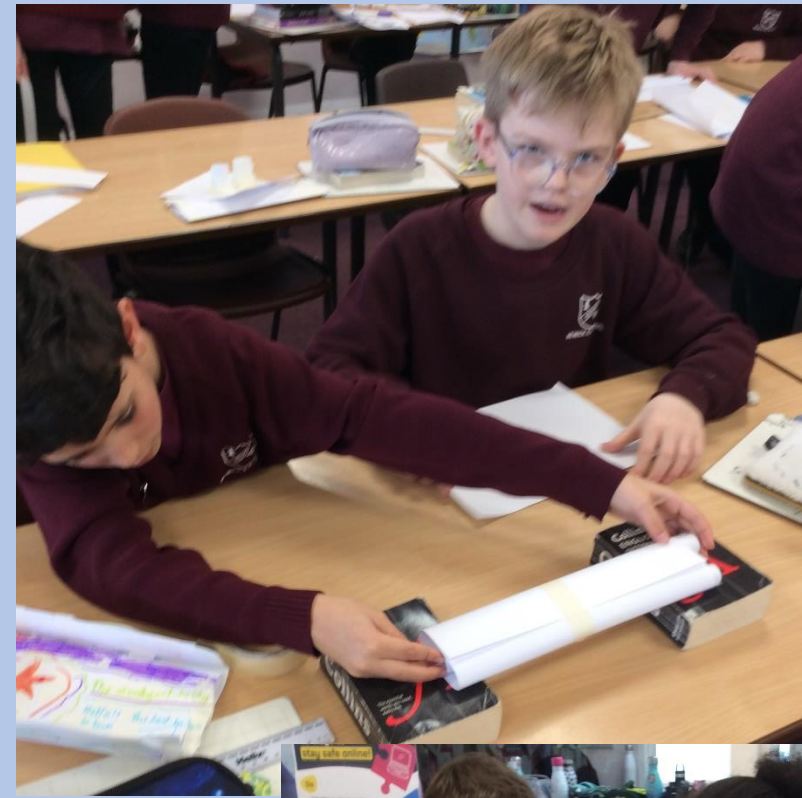
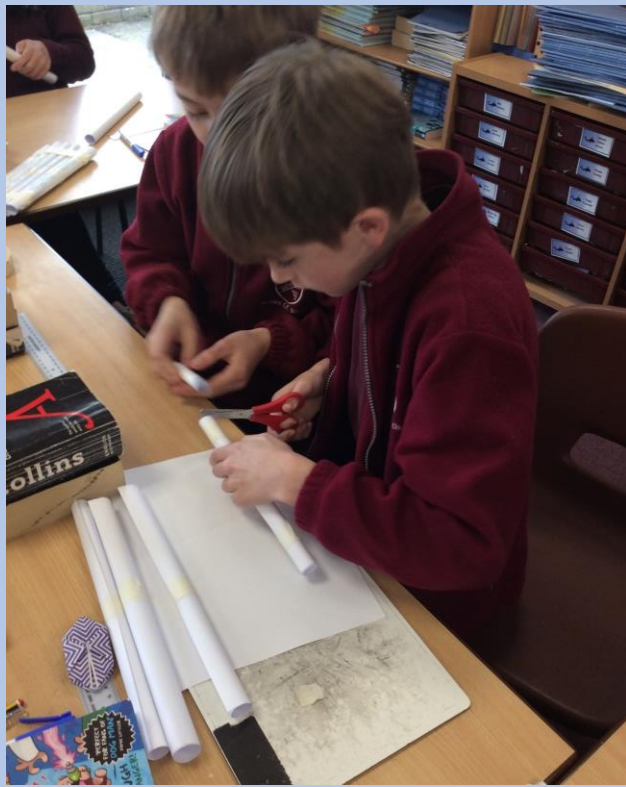






In Year 6, we carried out a fingerprint investigation comparing our own prints and identifying whether they were swirls, whorls or arches.





As part of the whole-school challenge, we designed and built bridges using a maximum of five pieces of paper. We spent time exploring different shapes to create the strongest bridge structure possible.







In small groups, we spent time looking at different fibres and cells. We reviewed how to use a microscope and then put our skills to the test. In doing so, we were able to identify the onion cells and identify suspect 4 as the culprit!





Turtle Class - Year 5

CHROMATOGRAPHY

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## paper chromatography

We used jars, water, blotting paper to test the pens





We put a pen line on each piece of blotting paper and suspended them in water for 5 minutes.



We took them out and left them to dry on the side of the table.

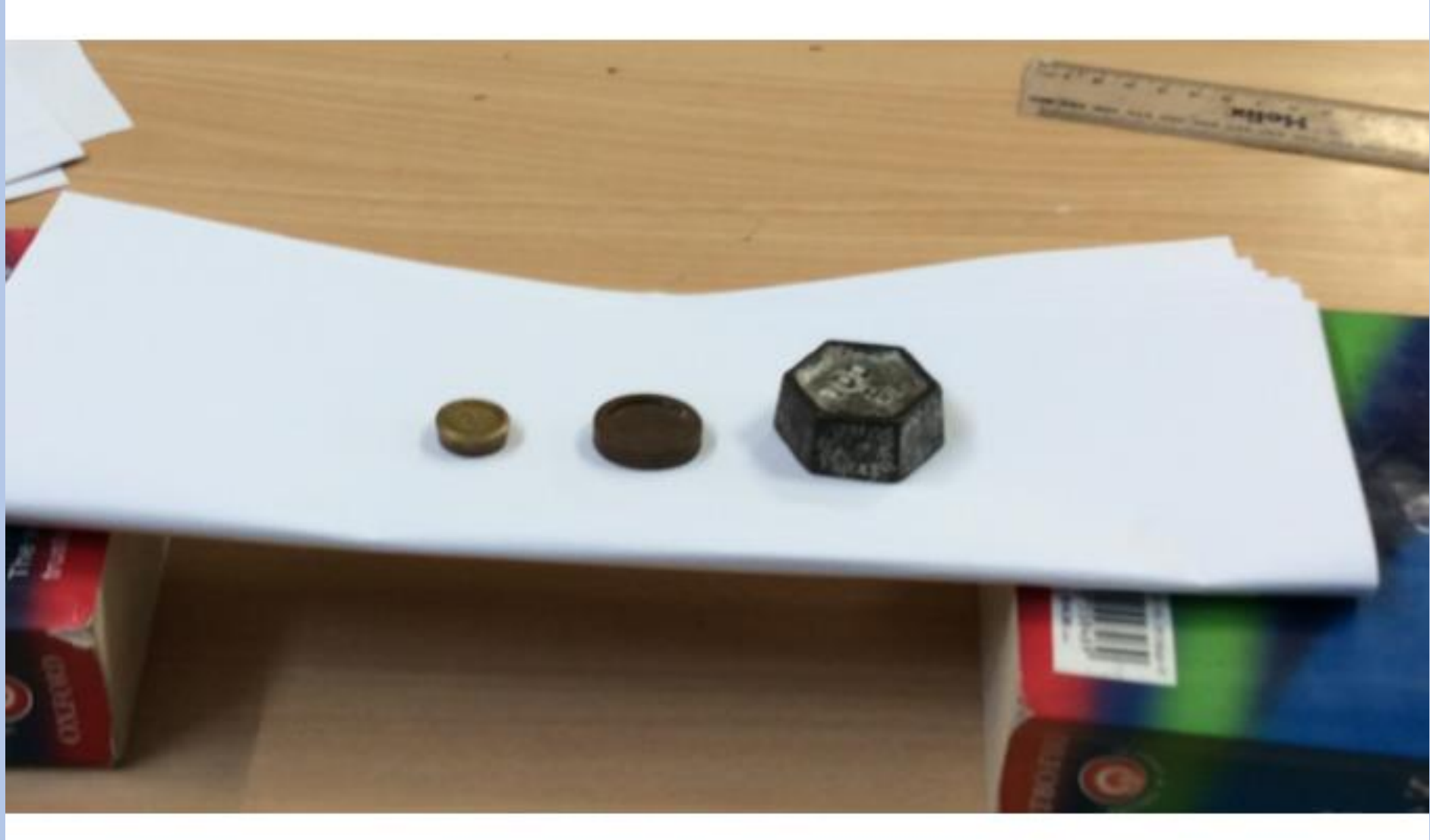


# Bridge Building













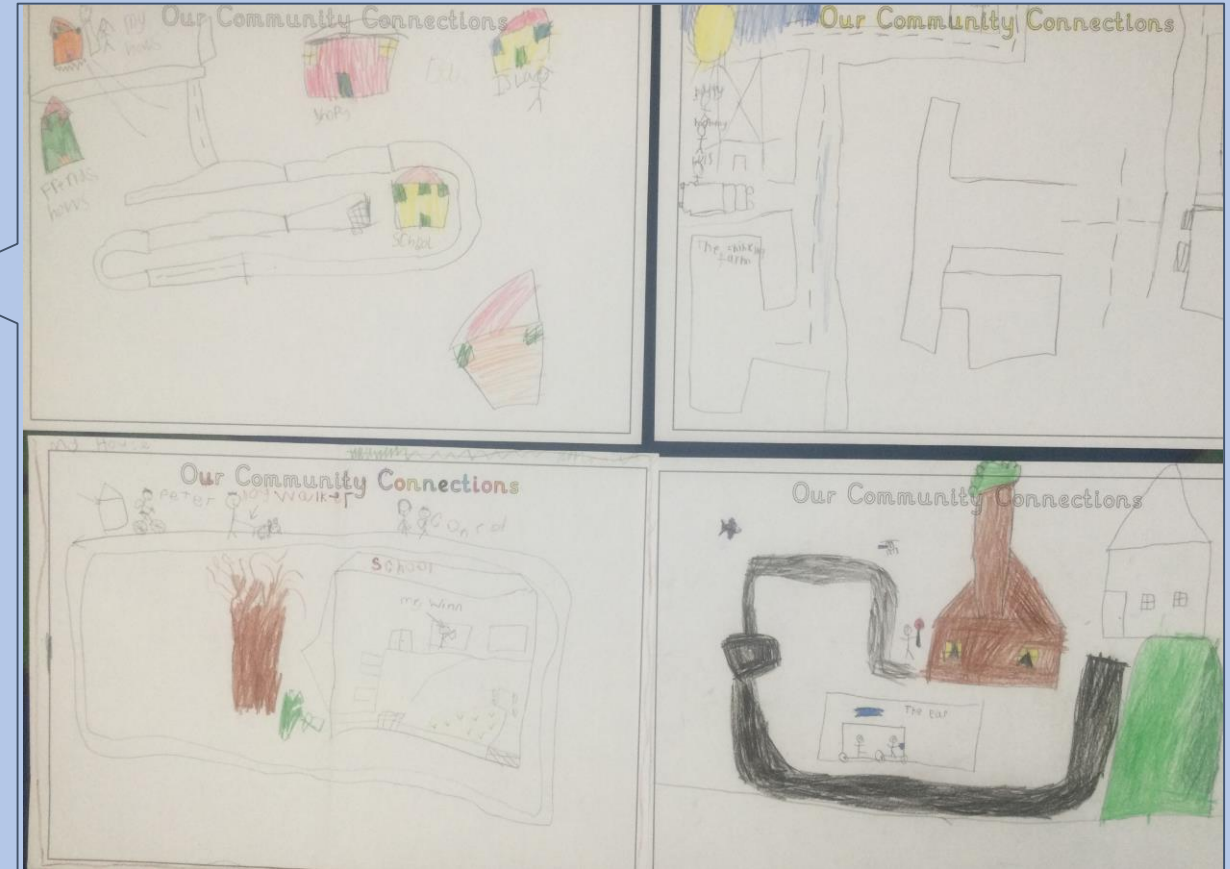
# Year 1 Penguins Science Week Activities

# Y1: Community Connections

We thought about all the people in our community and how we are connected to them.

We drew picture maps of our journeys to school and the people, places and things we see.

We thought about our school community and all the different roles and jobs people have. They are all important in their different ways.



# Y1: Habitat Connections

Then we thought about the connections between different animals in the habitats around our school.

We learned that all living things need food to survive.

Plants make their own food using energy from the sun, and all animals, birds and insects have to eat plants or other animals to get their energy.

We learned that this can be organised into a sequence called a food chain.

Lots of food chains fit together to make a food web.





# Y1: Bridge Building

We enjoyed using pieces of paper to make bridges.

We used multilink to see how strong the bridges were.

Some of us chose to fold the paper in different ways.



# Y1: Fingerprints

We talked about how each person has unique fingerprints.

We made our own fingerprints and then used magnifying glasses and microscopes to examine them carefully.

Some people had whorl patterns, some arches, and some loops.

We looked closely at the different suspects' fingerprints.



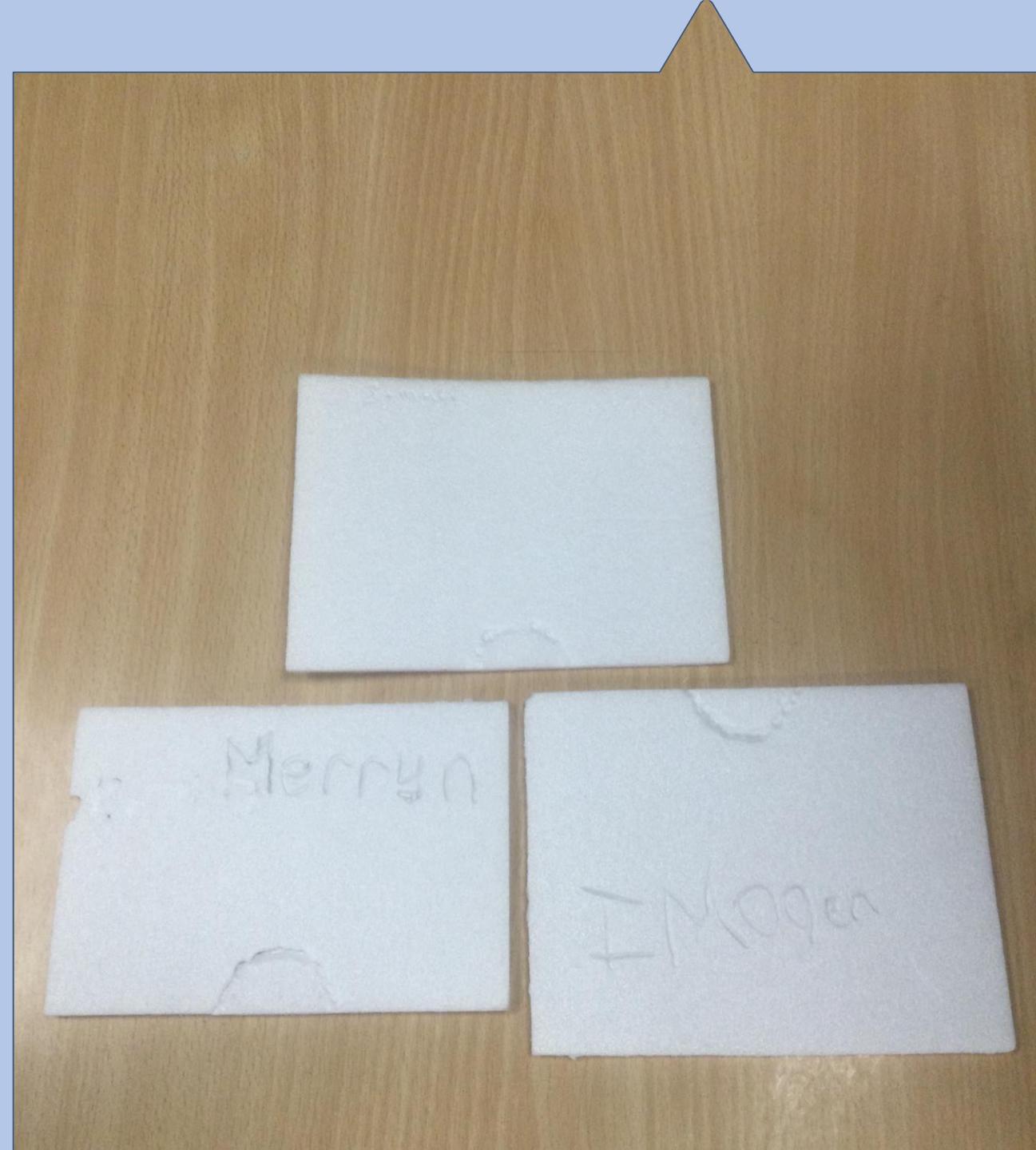


## Y 1: Teeth Impressions

We practiced making our own teeth impressions by biting a piece of Styrofoam.

Then we compared our teeth impressions to each other's and looked at how they were different.

Some of us have lost teeth recently so had gaps in our teeth impressions!



# Year 2 Science week.

## CSI Investigations

### Powder investigation with Year 5.



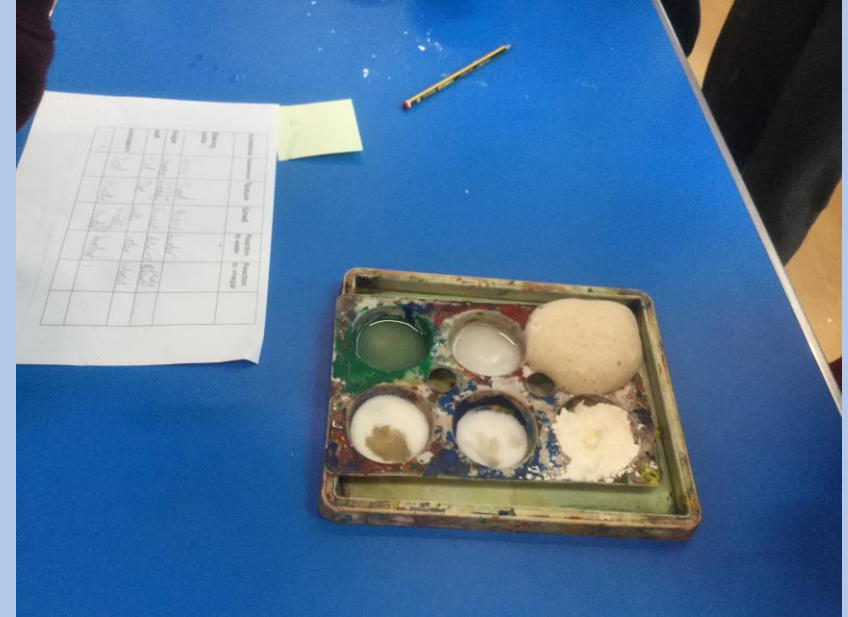
Which powder was left at the crime scene?

Clue- the mystery powder will fizz and blow up a balloon when vinegar is added.





# We found a chemical reaction!















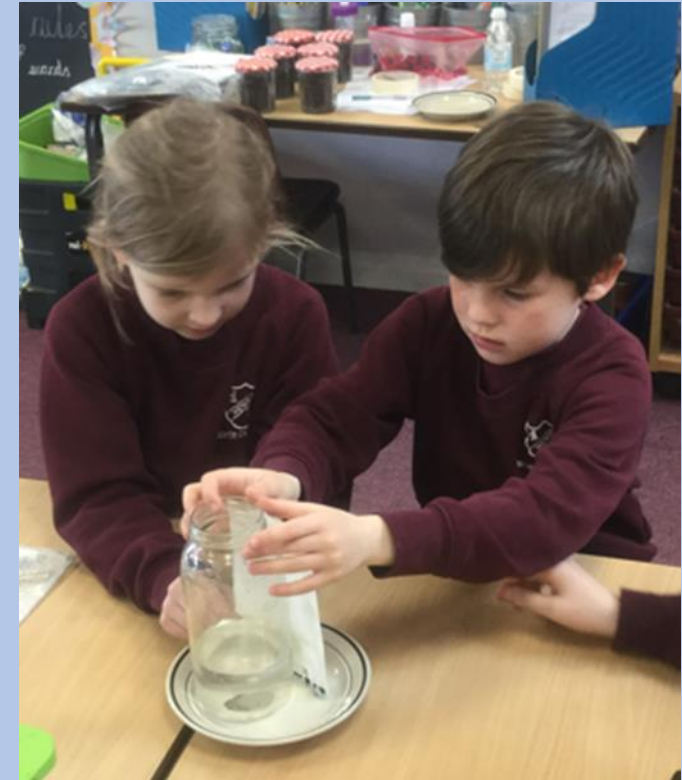
We know which powder was left at the scene of the crime!





# Year 2

## Chromatography- which pen wrote the letter to Mr. Barnes?





# Year 2. Finding the suspect's finger prints.





## Why is soil important?



Soil produces a whopping 95% of our food.



Soil locks away carbon and helps us to combat climate change.



Soil provides clean water and prevents floods.



Soil helps to control diseases and create new medicines.



It's a habitat for nature.



Without soil we couldn't build shelter as soil is what we build on.



Without soil there would be no trees or forests.

**Soil is vital for all living things!**

In Year 2 we learned how important healthy soil is.

**Plant Your Pants!**



**Country Trust**



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What has soil  
ever done  
for me?

 Produces  
95% of  
our food

 Stores  
carbon

 Helps  
create new  
medicines

 Prevents  
floods &  
provides  
clean water

Is a habitat



Stage 1: Bury your pants  
in the soil

**Soil Fact:**  
It can take 100s to  
1000s of years to  
create 1 inch of  
top soil.

Stage 2: Pants will  
start to decompose  
in the soil

**Soil Fact:**  
Healthy soils help  
to mitigate  
climate change.

Stage 3: In around 8  
weeks' time, your pants  
may have fully  
decomposed leaving  
only the elastic..

...The more decomposed  
the pants, the healthier  
your soil is!

**Soil Fact:**  
Healthy soil is key  
to feeding  
9 billion people by  
2050.

**Soil Fact:**  
Half our soils have been lost  
in the last 150 years.

**Soil Fact:**  
Every 5 seconds, the  
equivalent of one  
football field is lost due  
to soil erosion.

**Soil Fact:**  
Earthworms help  
to decompose two  
tons of dry matter  
per acre!

**Plant  
Your  
Pants!**



**Country Trust**

Connecting children with the land that sustains us all

How can I  
protect my  
precious  
soils?



Protect the  
topsoil with  
plants or mulch



Add compost  
to feed the  
soil



Plant peas  
or beans  
help fix  
nitrogen  
into the soil



Take care of  
worms and  
minibeasts

Tell everyone  
how important  
soil is

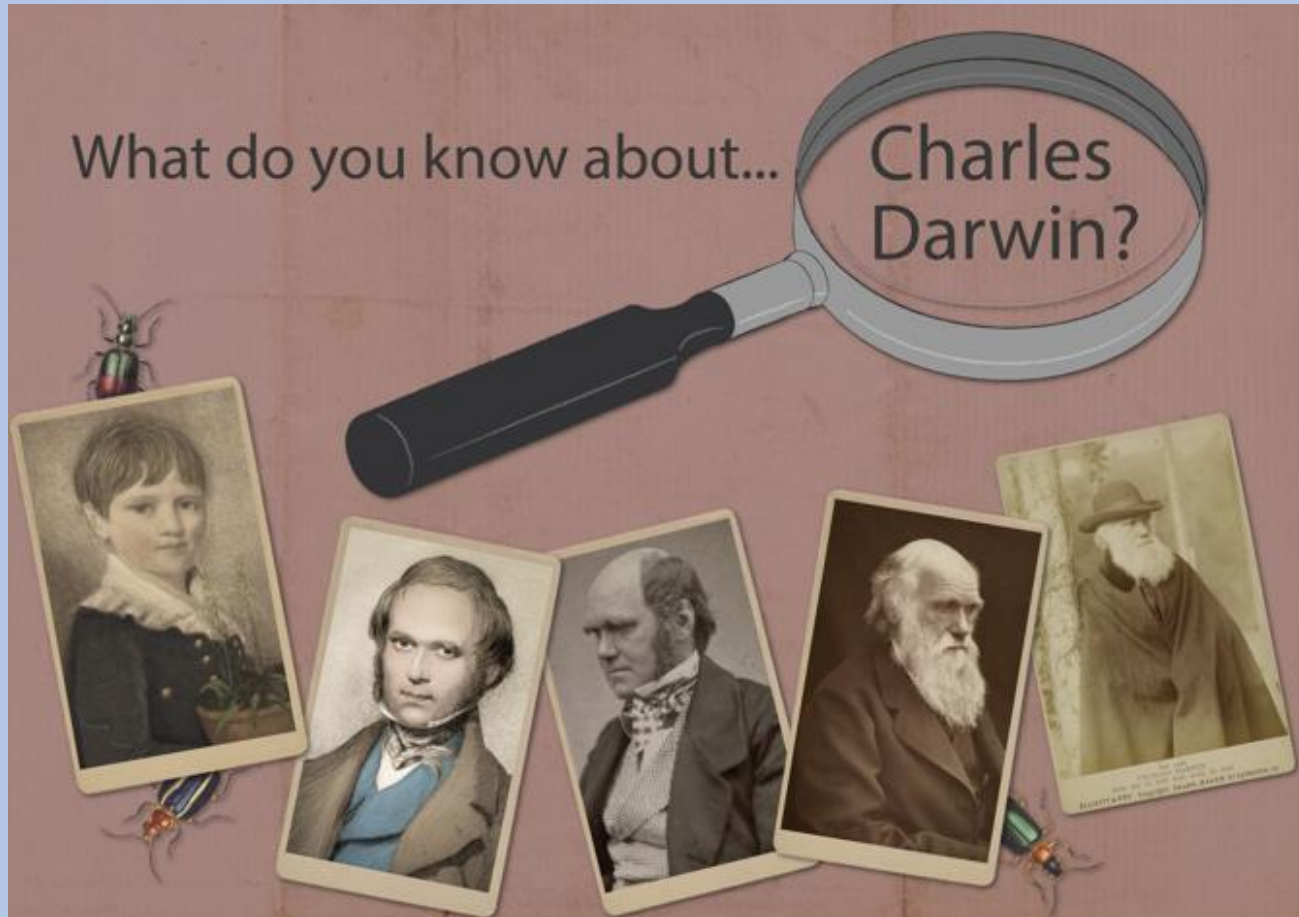
# Year 2 soil investigation.



We tested the soil we have and planted our pants to find out how healthy our soil is.

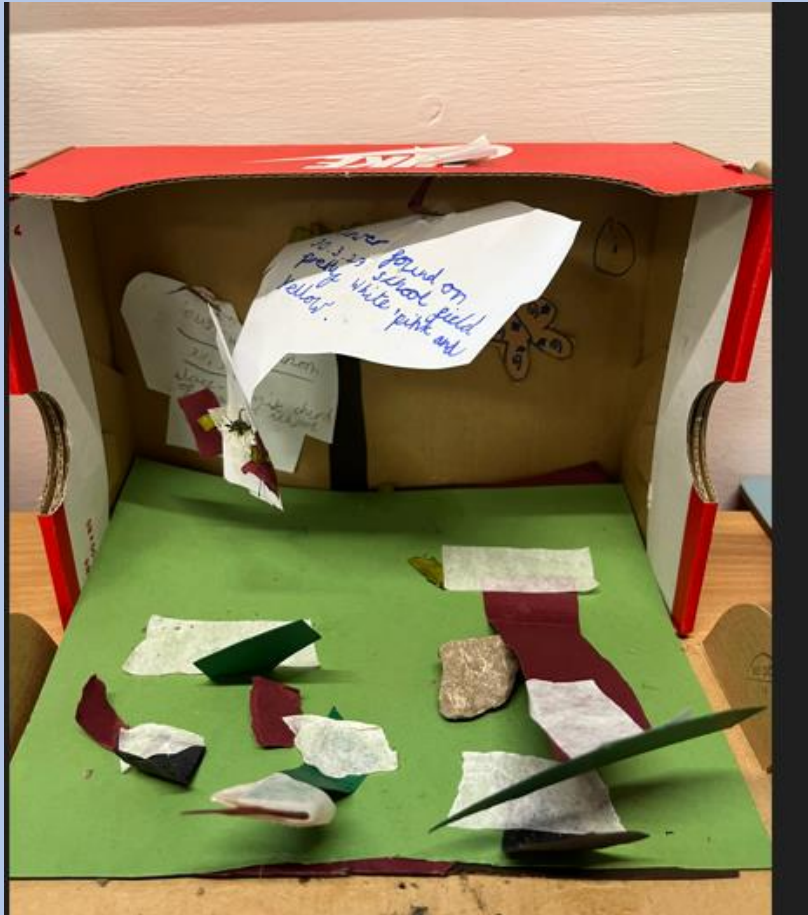
We will dig them up in 8 weeks to find out how well they have decomposed.





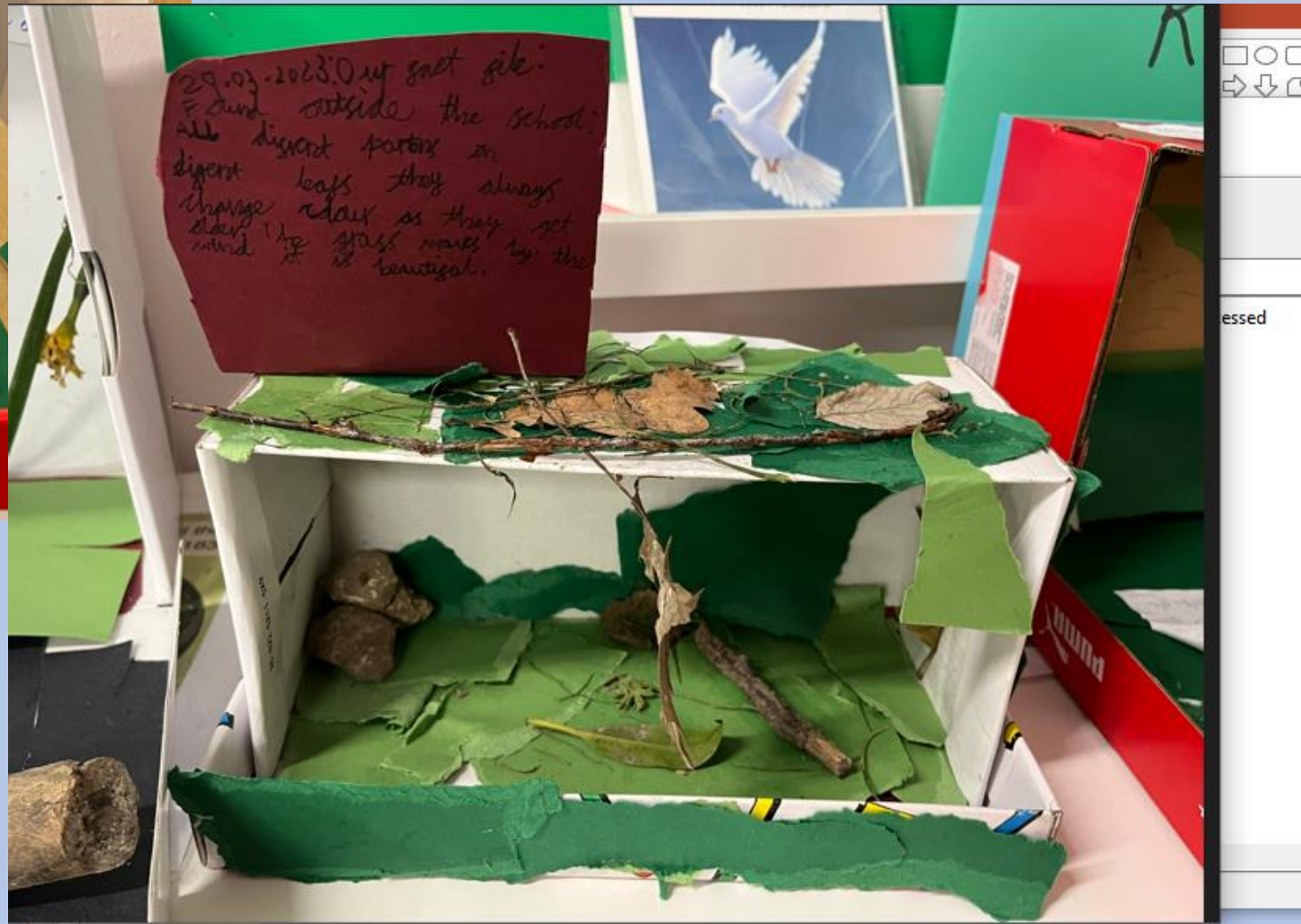
In Year 2 we have been learning about Charles Darwin. Darwin sent back hundreds of plant specimens as herbarium sheets from the Beagle voyage, so that the rare plants that he had found could be studied and better understood.

We collected different specimens outside and made our own herbariums like Charles Darwin.





# Year 2 Herbariums

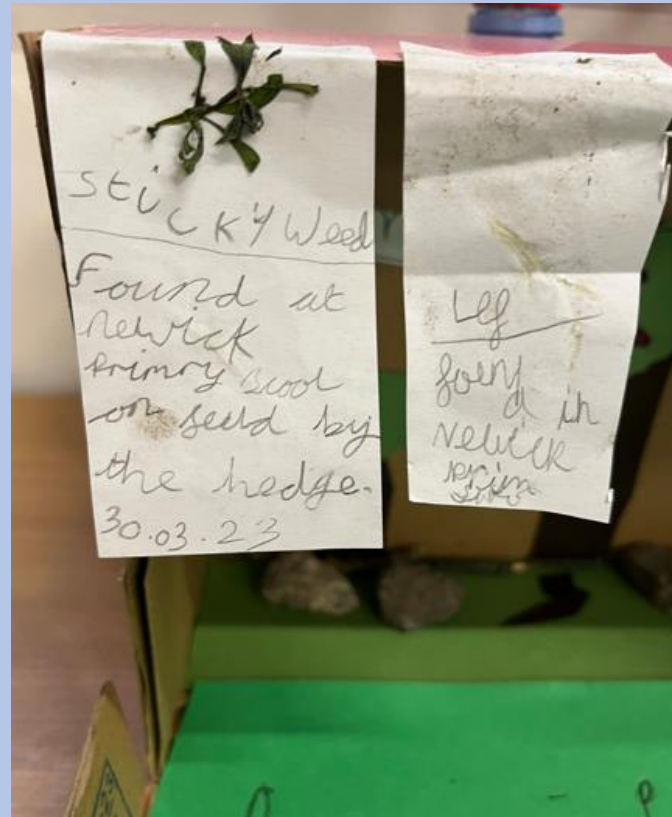
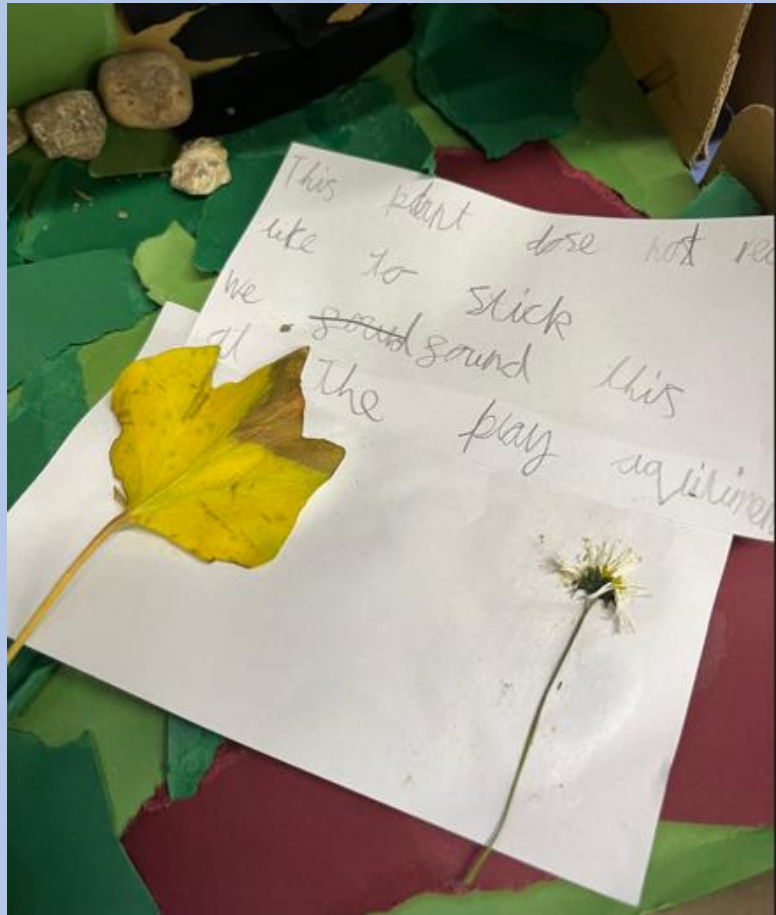


# Year 2 Herbariums





# Year 2 Herbariums



The whole school come together to present our findings.











# We present our findings to the school!



# A confession and an apology.





# What we thought about Science week.

*I enjoyed Science week because it was full of mystery.*

*Amelie Year 2*

*We had to find out who ate the jam doughnut and I learned what to do when there is a crime. Fliss Year 2*

*I enjoyed science week because it was fun, it was science and it made me curious to find out who was guilty. I learned that we can use finger printing and foot prints to catch criminals. Joshu Year 5*

*I loved all the experiments we did and also finding the hidden powder. I learned what forensic science is. Year 5*

# What we thought about Science week.

I enjoyed science week because we had a competition to see which group could build the strongest bridge.

I learned that to make a strong bridge you need to use triangles.

Year 3