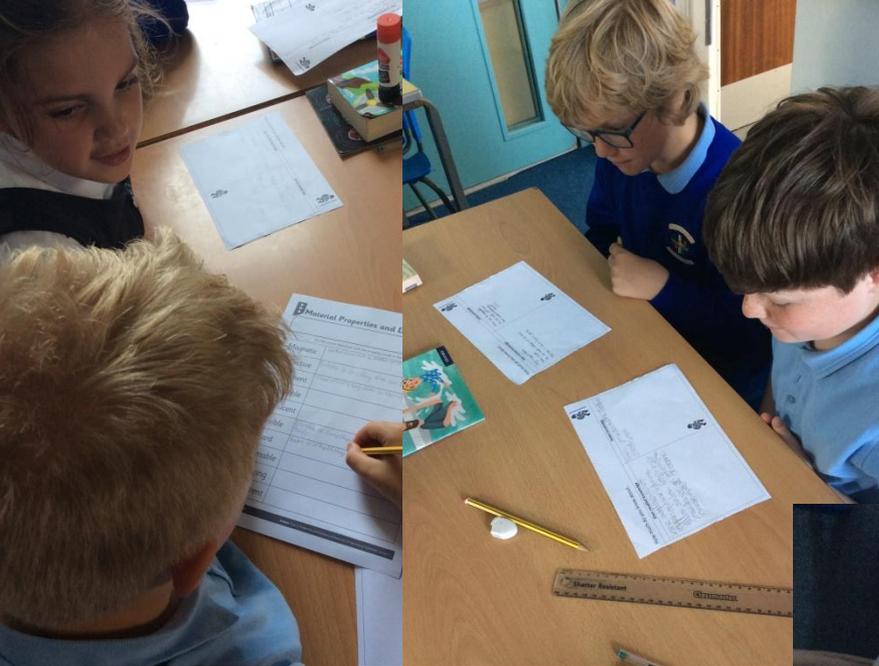


Science

Properties of materials

Summer 2
2022

Class Lynher



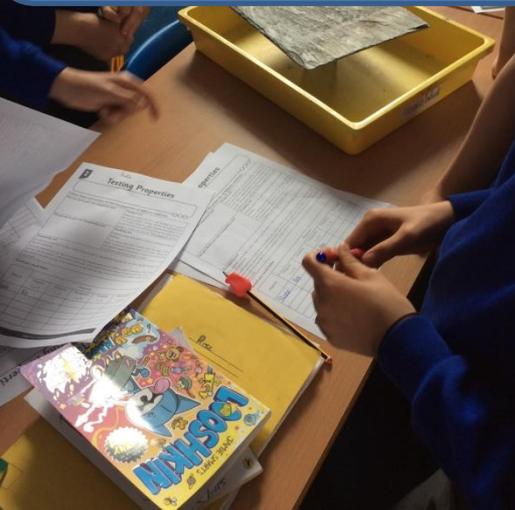
To start the lesson we recalled what we already knew about properties of materials and wrote definitions for some of the key vocabulary.

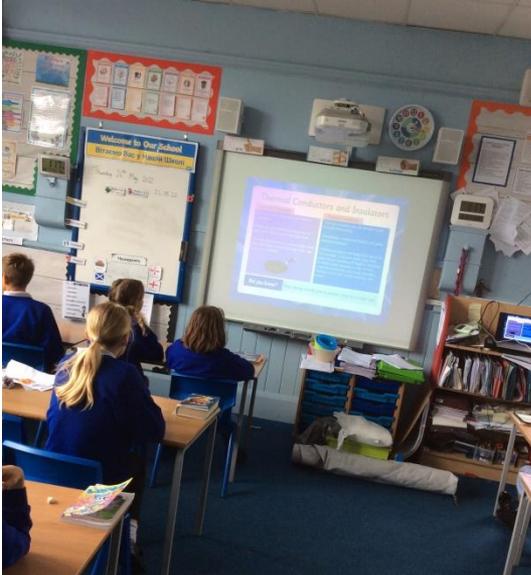


Most of the materials looked quite thin but it was surprising that they didn't let water go through them.



Then we used various methods to compare materials looking at properties such as magnetic, transparent and hardness.





For this lesson we focussed on the property of thermal insulation and did an investigation based on this.



It was weird how different materials worked differently to what I thought.

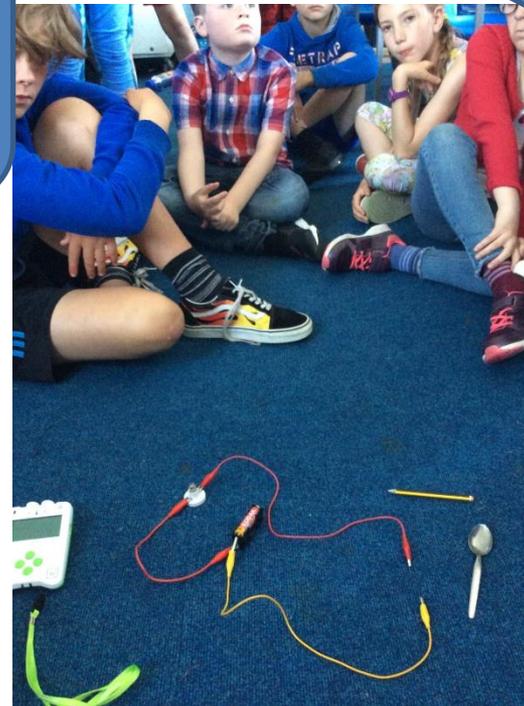




First of all we discussed the effect of resistance and did a practical demonstration to aid our understanding.

I was interested in how the light would shine at a different brightness depending on which material you put between the clips.

Then we designed an experiment to test how well different metals conducted electricity. We used a light sensor to help us get accurate results.

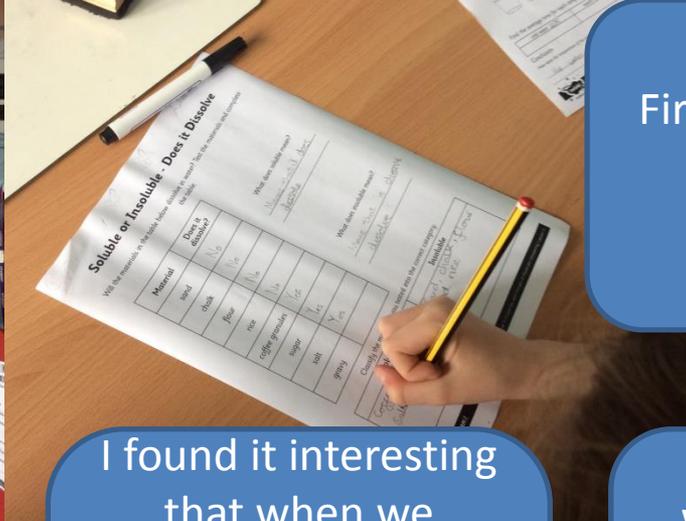
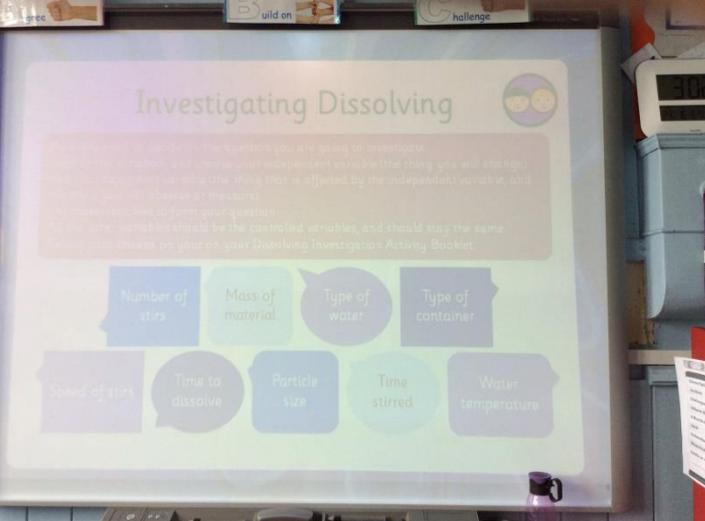


10.06

I can investigate electrical conductors

Teaspoon	150
split pin	250
paperclip	245
key	170
20p	160
gold ring	200
1p	160
silver ring	180
hook	180

Housepoints

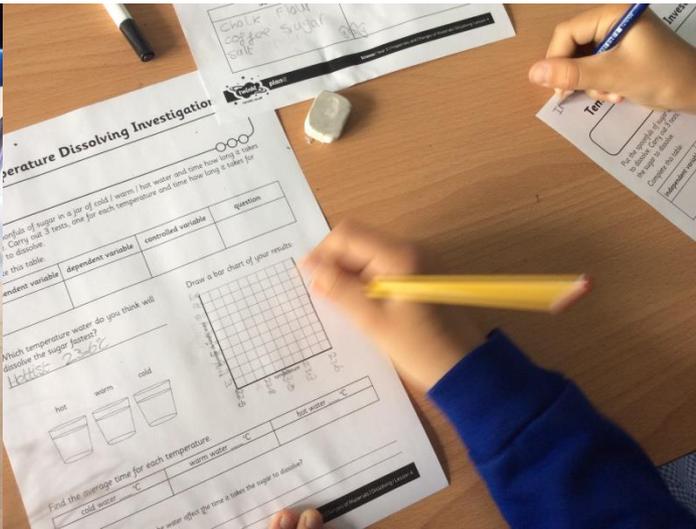


First of all we discussed the vocabulary of soluble, insoluble and dissolve.

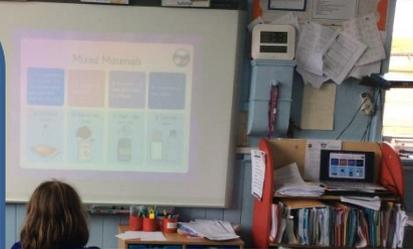
Then we designed and carried out an investigation about a factor in dissolving.

I found it interesting that when we changed the temperature at the hot end there wasn't a big difference but at the cold end there was.

We found out that the hotter the water was the quicker something dissolved.



We discussed the vocabulary for different mixtures – linking to the previous lesson on dissolving.



Then we used various processes to separate materials from each other including filtration, sieving and evaporation.



It was really interesting that when we used the filter paper the water went really clear.



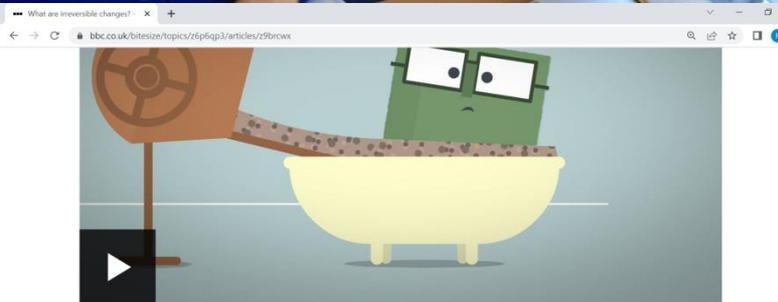
Thursday 23rd June 2022 E.g. 1

Process	Equipment	Explanation
Filtration	Filter paper, Funnel, Beaker	We poured the mixture into the funnel and the water went through the filter paper. The sand stayed behind.
Sieving	Sieve	We put the mixture into the sieve and the stones and pebbles fell through. The sand stayed behind.
Evaporation	Shallow Dish	We left the water to evaporate in the sun. The water will be left.

Good E.g. 1 in your explanation. SA Today I have used different ways of separating mixtures such as sieves and rice.

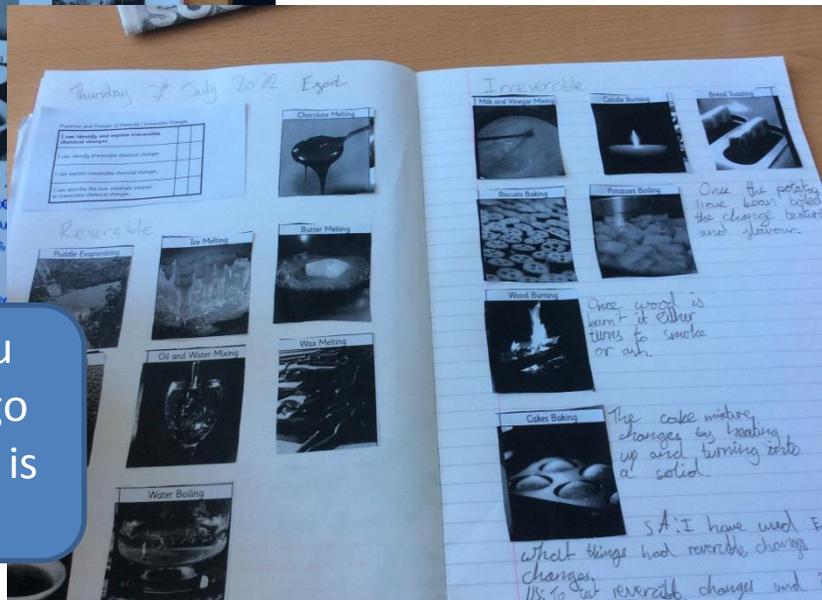
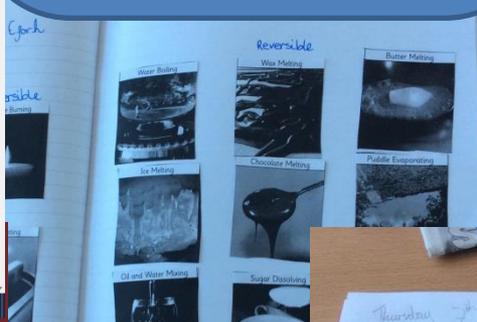
NS: Is to find a way to make sure that all the sand was filtered out of the water. so separating what could you do.

For our final session we learnt about irreversible changes and then identified them in real life explaining how we knew it was irreversible.



Irreversible changes

A change is called irreversible if it cannot be changed back again.



We found out that if you cooked an egg it would go hard but when it is raw it is liquid.

SA: Today I have learnt is when you can separate or make an object return to its original state and irreversible is to do any of that.
NS: Is to learn more about...

Once the potatoes have been cooked the change, texture and flavour.

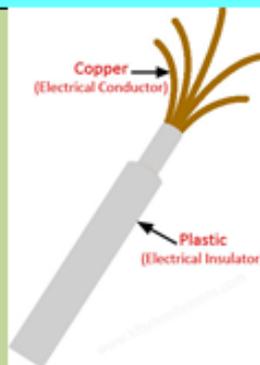
Once wood is burnt it either turns to smoke or ash.

The coke mixture changes by heating up and turning into a solid.

SA: I have used F which things had reversible changes.
NS: to get reversible changes and...

Cultural capital

Children see the real life value of science in life. Children are exposed to scientific vocabulary.
Real-life jobs it could link to: electrical engineer, electrician, waste management.



Skills

- Plan different types of enquiry to answer questions
- Use scientific evidence to answer questions and support findings
- Use test results to make predictions
- Present findings from enquiries
- Record findings in a graph

Forever Facts

- Most metals are both thermal and electrical conductors
- Wood and plastic are both thermal and electrical insulators
- In an irreversible change you cannot get back to the original materials
- Different materials are used for different jobs based on their properties
- Sieving separates small particles from larger ones
- Filtering catches solid particles and lets liquid through

What I have learnt before:

Magnetism, electricity, states of matter

Exciting Books



Our Endpoint

I can describe the properties of materials using scientific vocabulary

Subject Specific Vocabulary

materials	the substance something is made out of e.g wood, plastic, metal...
conductor	a material that heat or electricity can easily pass through
insulator	a material that does not let heat or electricity travel through
transparent	lets light through so the object can be looked through
soluble	will dissolve
insoluble	will not dissolve
evaporating	liquid turns to gas or vapour
condensing	gas cools and turns to liquid
melting	solid heats until it becomes liquid
freezing	liquid cools and turns into solid