

## FREE RESOURCES

The Why and  
How Challenge

The 'Why and How' Challenge is intended to be **something for the staffroom table** that lots of teachers will want to try. The idea is to motivate the children to work scientifically, to design and make something, or to solve a problem.

This issue's Why and How Challenge is based on **open-ended** exploration and can be run as a **whole school challenge**.

## Do Science with me!

### You will need:

- **White A5 cards – one per child – with “Do Science with me!” printed across the top.**
- **Masking tape**
- **A selection of objects (e.g. coin, pipe cleaner, cork, feather, piece of felt/other material, velcro, button, drinking straw, bamboo, clothes peg .....). You need enough objects for one per child but NB they don't all have to be different.**

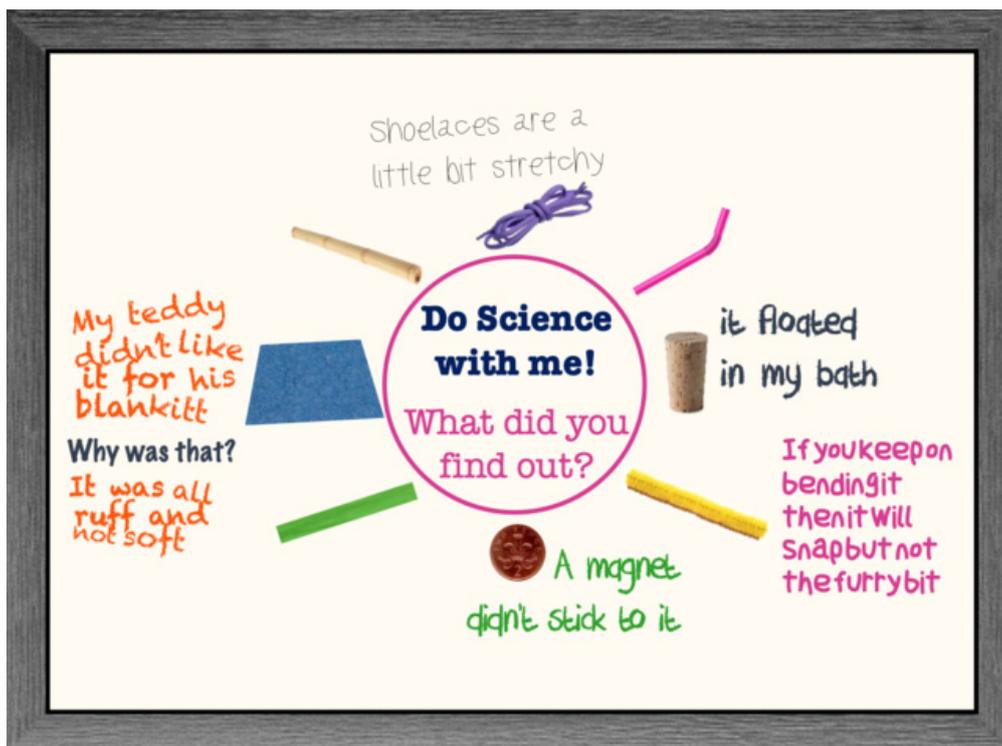


## WHAT TO DO

1. Tape one object to each card.
2. Give the children a card each – ideally they will take this home, but it can also be done in school. Either way, give them enough time to explore different scientific things they could do with their object. Note that this is very open-ended and allows children to be creative and diverse with their thinking and with what they do.
3. Ask the children to write and draw on the card what they did/observed/found out and bring it back with the object.
4. When the children have brought back the objects, use them to make a display, either leaving the objects on the cards or transferring them to the display and getting the children to write or draw what they did/observed/found out straight onto the display board (NB health and safety note – an adult may need to do this for the child).



You might end up with something like this:



The display can be built up by adding questions for the children to answer, or by asking the children to respond to each other's ideas.

## Ideas for making this into a whole school challenge:

### Morning

Give every child/pairs of children an object on a card in the morning and encourage them to explore how they could do science with the object during that day. This could be done at playtime or lunchtime, or some class time made available for it. Remind them to write or draw on the card what they did/observed/found out.

(NB this could also be done as a homework task and send the children home with the cards for the weekend.)

### After Lunch

Share the ideas as a class, maybe creating a wall or table display.

Discuss with the children:

- How many different ideas have they had?
- What questions do they have?
- What do they want to find out next?

Decide with the children on one or two of the most scientific, interesting or unusual ideas to share across the school. Take a picture of these cards.

Collate the pictures from each class into a slide show to share with the whole school in an assembly. Children can tell the school about their idea.

Ask each class to count how many different ideas they had had about the science they could do with their objects – how many in total is this across the school? Did anyone have the same ideas as other people?

This activity was developed from an idea by PSTT Fellow Rufus Cooper. It was included in the child-led enquiry workshop he delivered with Ali Eley at ASE 2018. If you would like to see more ideas from this workshop, please visit <https://pstt.org.uk/what-we-do/news/child-led-enquiry-what-does-it-look-practice> to download the **Frameworks and practical ideas to support child-led enquiry in science** guide.