Introducing cutting-edge research to primary children

Alison Trew, PSTT Fellow

Why introduce contemporary scientists' work to primary age children?

Teachers who have used these articles with primary age children have found there has been a positive impact on children's learning:

- increased engagement with practical science activities
- more independent questioning
- a deeper understanding of science concepts
- an appreciation of the impact of science on real life.

The children saw how science could really input into real life situations and affect all of us. They were really engaged by the practical aspect of the unit and recognised how it was demonstrating a real-life action. Children who previously have been less engaged in science were very much more so, as they understood the relevance of the lesson to them.

Primary teacher & PSTT Fellow, Devon

The children were fascinated by the idea that new skin could be grown and this concept led to very interesting discussions on why this might be necessary. They took the idea of calculating their own skin's area very seriously, as they understood the actual importance of it.

Primary teacher & PSTT Fellow, Cornwall

Having read the articles, when they carried out their investigations, the children showed more commitment than I've seen in previous enquiries because they felt like they were carrying out 'real' research. Additionally, pupils who did not normally join in science discussions ventured suggestions.

Primary teacher from Kent

I bet you didn't know... resources could be an early step towards addressing the inequalities that currently exist in those who participate in science post-16 and those who do not.

My Year 2 class loved the activities suggested in the IBYDK article and really felt like they were scientists themselves when we were doing them.

Teacher, Whitnash Primary School

What do the resources look like?

PSTT has created freely downloadable ***I bet you didn't know...*** resources which are linked to the primary science curriculum. Teachers and interested adults can use these to introduce young children to cutting-edge science research projects.

I bet you didn't know... **articles** explain what scientists have done in language that children can understand and suggest questions for children and teachers to consider in the classroom.

Teachers could use these articles with children in different ways:

- Read the article with the whole class in a science lesson or circle time and discuss the questions presented in the article.
- Give the articles to children to read for themselves (recommended reading age upper primary).
- Use parts of the articles for Guided Reading sessions.
- Use all or parts of the articles as secondary sources for children's research in science topics.
- Provide copies of articles in the library or on a science display to raise awareness of science research.

Accompanying **Teacher Guides** (slideshows) include information on what scientists already know, what they wanted to find out, what they did, and what they found out. There is a **Quick Activity**, a **Longer Investigation** or related practical activity that children can do to mirror or explain the research. More activities are suggested for those wishing to take the learning further. Links are made to the **maths** and **literacy/English** curriculum topics.

Teacher Guides can be adapted to use in different situations:

- Use the Quick Activity as a lesson starter to engage children in a related science lesson.
- Use the Quick Activity in an assembly to stimulate discussion about science research.
- Use the main body of the slideshow as a full science lesson (a starter, information about research linked to your science topic, related practical activities, and discussion).
- Use a variety of *I bet you didn't know...* resources (one for each class) during a science week to raise awareness of science research and science capital.
- Make links to real science research in maths or literacy/English lessons.

We have presented the Teacher Guides as PowerPoints so that they can be adapted to suit the ages and abilities of the children in your class.

We publish a new 'I bet you didn't know...' article describing cutting-edge science research at least every term on this webpage and in the PSTT's Why & How magazine.

How can I introduce cutting-edge research to children in my classroom?

When using I bet you didn't know... articles to introduce children to cutting-edge research, we suggest that you follow this sequence:

Provide some background information that will help children to understand the article.

Explain what the scientists already know.

Explain what the scientists wanted to find out.

Explain what the scientists did.

Explain what the scientists found out.

Discuss the impact of the scientists' findings.

Introduce an activity/investigation to mirror or explain the scientist's research which children can carry out in the classroom or at home.

Ask the children to explain what they have found out.

Tell the children about the scientists who carried out the research.

Note: this information could be shared earlier in this sequence. In the Teacher Guides which accompany all the articles, there is a slide at the beginning of the slideshow explaining who the scientists are and where possible there are photos.

We hope that you will enjoy using these resources and see the many benefits of learning primary science through the context of cutting-edge research. If you have any comments, please contact us through info@pstt.org.uk.