

smart cookies!

Digestive, rich tea, hobnobs or ginger nuts... which type of biscuit would you like to be?

This was the question set by Sheffield teacher Emma Wildman for her class of Year 5 children to encourage them to work collaboratively and on their own initiative to develop their own activities and investigations.

Fun experiments with biscuit dunking, inspired by Emma's involvement in the *Smarter Schools* initiative, helped them to discover for themselves how scientific enquiry can be entertaining, exciting & exuberant ... not to mention, edible!



who's eaten all the chocolate hobnobs?



Emma's story...

With the intention of developing my class' key skills of collaboration and self management, I designed a cross curricular mini-project based around Ann Pilling's *The Big Biscuit*.

The children were to design and complete an investigation to find out about the **dunkability** of some of the nation's favourite biscuits. After discussing the soggy dilemmas faced by Terence Bott throughout the story, the class were grouped and then provided with a box of potential equipment. This was as far as my input went!

Nervous and apprehensive as a recently qualified teacher, I was aware of the risk I was taking in giving the children freedom and ownership of a scientific enquiry. Still, I am pleased to say this

risk paid off and I could observe the children working together using impressive collaborative skills.

Seeing my class operating in this way was something I'd never allowed myself the opportunity to experience before. Taking on the role of facilitator rather than instructor in the classroom gave me the time to question the children and find out much more about their skills and understanding of key skills, scientific enquiry and fair testing.

The self-belief which gave me the confidence to devise this project came as a result of my journey as a 'science hub teacher' in the Smarter Schools initiative

Emma Wildman
Monteney Primary School
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CRIME SCENE-DO NOT ENTER

Dervla Higgins, a teacher at St. Thomas More School in Sheffield, has recently enjoyed using *Smart Science* resources with Year 5 & 6 pupils whilst involved in the Smarter Schools initiative.

Hedgehog Crime Scene is one of the Smart Science resources which focuses on the skills of creativity and problem solving. The science investigative skill behind this activity is to encourage and enable children to make comparisons between pieces of evidence.

Dervla sets the scene with her pupils...

I began the lesson with a short warm-up related to the key skills and got the children to jot down all the skills they used when they solved problems. I then moved on to set the scene by telling the story of Norman who was a fun-loving and adventurous hoglet who spent his days exploring my Dad's garden until one day he was found, flat on his back, dead!



Running the activity

The children were organised into teams and encouraged to work collaboratively to mind map all the possible causes of Norman's death, being creative but also realistic!

They used the zone of inference model to sort out ideas, so that they ended up with a couple of viable causes of death. The children came up with really unique and thought provoking possibilities.

After much discussion and acceptance of others opinions, the children realised that, with many problems, there is not just one specific 'answer' to the question and that we will never know for sure, how Norman actually died!



Extending their learning

The children in my class adored the hedgehog activity and as a result I extended the learning across the curriculum. In DT we made cornflake hedgehog buns, in RE we created epitaphs for Norman's gravestone and in science we made a hibernation fact file.



What we've gained as teachers.....

- a more creative approach to teaching Science
- ideas on how to teach & embed the key skills for learning.
- a class of eager young scientists!

What is Smarter Schools?

The Smarter Schools project (2009) is funded by the AstraZeneca Science Teaching Trust, developed and managed by the Centre for Science Education, Sheffield Hallam University. It has been successful in working with a family of 5 inspirational primary schools in North Sheffield. This cluster aspires to be the first Primary Science Specialist Schools and is the first of its kind supported by the Specialist Schools & Academies Trust.

Teachers within these schools work together to improve learner's achievement by innovative approaches to a Creative Science curriculum, infused with a range of 'Skills for Learning'. Much work has centred around quality CPD underpinned by a bespoke teacher Collaborative Coaching programme. *Smart Science* has been identified as a vehicle to help develop children's personal skills and capabilities through exciting contexts for scientific enquiry activities.

The project continues with a new area of development - *Smart Kids* - which focuses on establishing peer coaching networks for primary school children.