

Case Study: Teaching Science at Selby using Talk for Writing

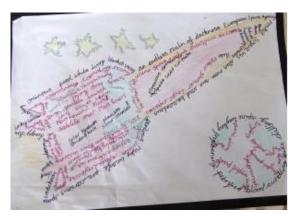
How the Talk for Writing approach can enhance learning in science and develop vocabulary across the curriculum, by Tom Wrigglesworth, Year 6 teacher at Selby Community Primary School, Yorkshire.

Our school has been using the Talk for Writing approach for some years now and has become one of the growing number of Talk for Writing training schools in England. The whole school community is very proud of this achievement. Through working closely with Pie Corbett, Julia Strong and a large number of skilled teachers based in other schools, we have greatly improved the whole writing experience for our children and furthered their better appreciation of English as a subject.



Throughout the school, writing in literacy has been and continues to be very strong. However, this same success had not been replicated in other subjects. This difference led us to consider the Talk for Writing approach in our teaching of science and, to this end, my class of Y6 children are now part of the Talk for Writing in Science pilot trial.

Julia provided an exemplar investigation text on which to model our planning and teaching. Sentence strings or starters (listed below), which have been designed to give scientific writing both purpose and structure, have proved to be versatile enough to allow the 'scientist' a degree of adaptation and manipulation that can reflect the individual experience of a variety of scientific concepts. This exemplar text of structured sentence starters forms part of the 'Imitation stage'.



The sentence starters:

- I am investigating what happens ...
- My hypothesis, what I think will happen ...
- To carry out an investigation, you must compare two variables: two things which charge or vary. For this investigation, I will compare ...
- However, it is important to make the test fair. To make this test fair, I must ...
- It is essential that all the other conditions remain the same because, otherwise, I wouldn't know if it was the or something else that was making the difference.
- The equipment I will need to carry out this experiment effectively will be ...
- My results tell me that...
- As a conclusion, I have learnt that...

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For each of these sentence starters, the children have created their own text maps and designed their own actions. Recordings are then made using iPads, which were then internalised by the whole class. A vote was then taken to decide which of these would provide the best model for future whole-class work.

Whilst encouraging all the children participate decision-making, taking ownership of their learning and giving the whole class the opportunity to be heard, this approach highlighted a weakness in the overall use of scientific vocabulary. This provided a focus for development and, subsequently, specific scientific words and phrases were being used repeatedly by teachers and thus became more familiar to the children who were also exploring their use through dictionary work and synonym searches. The picture here shows me holding up some of the spacerelated words and phrases we explored. In this way, the children have learned to discriminate between synonyms that are appropriate in the context of scientific reporting and those more suited to a narrative. Examples of this would be the word 'hypothesis' which would rarely be used conversationally, but is a common technical word within a written scientific format, and its synonyms 'guess', 'think', 'ponder', which are not appropriate in a formal scientific context but are perfectly acceptable in everyday parlance. This differentiation was eagerly discussed by the class and at length!

The 'Innovation' stage of our investigation took the comparison between the development of those plants grown from seed from two different environments i.e. those which accompanied Tim Peake, the ESA astronaut, on his journey in the International Space Station (ISS), and others which had remained on Earth. We used the same sentence starters as in the 'Imitate' exemplar to record our findings throughout the experiment, but we still felt the more specific vocabulary could be utilised further. The picture here shows some of the varied vocabulary that was used within this unit.



For 'invent', we decided to change the tenor of the science write-up and, instead, record our findings through a narrative format. We asked the children to write a first 'seed' recount of the journey of one of the space seeds on their epic mission from blast off to flowering when back on Earth. The children boxed up and text mapped their ideas as illustrated here. The children were still required to use the same, if not more, advanced vocabulary, but were also encouraged to be more inventive to produce writing that was informative and entertaining, funny and playful. The writing we received was very pleasing and imaginative. The children had obviously become immersed in the idea demonstrated their and complete understanding of the words they were using to tell their story and fully engage the reader.

Talk for Writing in science is now being used from Reception to Y6 and the development in the children's understanding of science is clear to see. The children and staff have developed whole-school actions for the key generic vocabulary of science investigations and images of the children demonstrating the actions that relate to the vocabulary are displayed on the classroom wall. For a Y1 example of this see the science vocabulary resource.

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