

If we allow the children to formulate their own questions will they be able to lead their learning in order to answer them?



Introduction/Context:

St. Paul's is a one form entry primary school in Worsley, Salford catering for children age 3-11.

We carried out our research with a group of Y4 Pupil Premium children.

Government research shows that these children perform less well at school than their peers.

Focusing on science lessons we looked at how the children could be more proactive in their learning .

Our issues to address

- Our Science lessons are delivered based on pre-planned lessons to cover the curriculum rather than considering what the children already know or want to learn.
- The teachers took the lead by asking the key questions so the children didn't see themselves as scientists.
- We wanted to improve the children's ability to formulate their own questions, and answer them by leading their own learning.

Intervention:

- Six lessons taught on the topic, 'Living Things and their Habitats'.
- We first allowed the children to sort pictures of living things. They completed a 'What we want to know, What we wonder, How we will find out and What we learnt grid (KWHL)' to identify what they already knew and what they wanted to discover.
- The children's questions informed the content of our next lesson. We continued in this way throughout the intervention, considering the children's prior knowledge and enquiries before each task.
- Peer teaching took priority in every lesson.
- Children had the opportunity to research independently and as a group and present their findings to others. We acted on suggestions such as going out into the school grounds to find out more about invertebrates and their habitat.



Review of current practice and literature

- Children want their own thoughts and opinions to be considered when planning the lessons.
- Van Zee et al (2001) argue the importance of allowing children to formulate their own questions in the classroom stating that when they do this, 'students are actively engaged in making sense of what they are learning' (p.160)
- Scamp and Preston's (2015) research also recognises that children engage in science when they have ownership of the subject with opportunity for investigation and enjoyment.

Findings after intervention

- 100% of children said they were able to find out the things that they wanted to know and answer their own questions.
- Most children agreed they preferred going out to investigate and gathering the information they needed, rather than looking at pictures or reading from a sheet.
- "We can do more than you talking to us at the front. I think it is better to find out myself then someone tell me the answer."**
- "It has been more fun. Instead of the teacher telling us, we went and found the information. We also went out to find real animals."**

Research methods:

- Seven Y4 Pupil Premium children pre and post intervention were interviewed through discussion groups
- Children were asked about their attitude towards science - what they enjoyed learning and whether they felt they had the opportunity to answer their own questions.
- Photographs and notes were taken of the children carrying out their investigations.

Implications for future Practice/ Lessons Learned

- "Lots of questions were answered in class and I also read some books at home."**
- The main challenge is finding the balance between what the children need to be taught to meet National Curriculum requirements and what they want to find out in six lessons.
- Team teaching is more satisfying. It enables us to discuss and share ideas and keep us focused on our research question.
- This approach allows us to enhance relationships with the children and find out what they are interested in. We would use this to inform future lessons.
- The enthusiasm for learning increased throughout all lessons during the intervention and the whole class became more engaged.
- Children also sharing their learning at home was an unforeseen bonus. **"I went home and tried to make a snail city in my garden."**
- Our findings will be discussed with other teaching staff at our school to find ways that they can incorporate child led learning into their own teaching.

Findings before intervention

- Medium term Science plans and pre-planned lessons are standard to meet National Curriculum requirements. We asked how our focus group felt about this.
- Pupils wanted to do more experiments and 'real life' science.
- Some children found it challenging and boring using a worksheet and preferred working practically to find out what they needed to know.
- The children had unanswered questions that they were not given the opportunity to investigate.

"Teach me what I want to know."

"More experiments to see how things work."