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About the project:

This project was a partnership between HFL Education and Rethinking Assessment and focused on collaboration in the classroom with Year 5 pupils. It aimed to support and develop approaches to assessment and pedagogy which promoted equity and a sense of belonging to all children. Over the course of one academic year, schools worked to deepen approaches to pedagogy and the assessment of collaboration, with the aim of designing and piloting a digital learner profile to capture and evidence learning and achievement beyond a narrow set of academic outcomes.

Who are we?

We are a one form entry primary school based in Hemel Hempstead. We are a very well established school with consistent staff and leadership and are over subscribed. We pride ourselves on doing the best for the children, and we work on learning behaviours and the relationships we have with the pupils, parents and the community.

What did we do?

We consistently achieve very good results and it's a very settled school, but we always like to evolve and improve and we like to be quite innovative in our thinking. We wanted to develop

collaboration in the classroom, and although we did collaborative activities across the school, it wasn't formalised. We chose to focus on a high-impact subject area and decided to choose Year 6 and Year 2 Science curriculum for the pilot. Science is one of our strength areas and so we had the foundation to be quite radical, and move away from the traditional approach we've had previously and our goal was to develop scientific inquiry.

Through this project we developed a creative approach to teaching Science where children were no longer working solely in individual books and instead were working in groups, documenting their inquiry in group floor books, with a short amount of time at the end of lessons for individual reflection in their books.

We use the Hertfordshire planning scheme for science criteria, meeting the national curriculum, and for this project we focused on the pedagogical aspect, teaching science creatively, to encourage the opportunities for collaboration and inquiry. For example, one lesson involved exploration of the fossilisation process by using different layers of bread, the sedimentary rock, and inserting fruit gummy bears, so that the children could see the separate layers and investigate this together. It's something we never would have considered, but we tried it and the children loved it and were highly engaged with the task and with each other.

We selected the pupil groups at random with lolly sticks, in front of the children, and in year 6 the children worked in groups of 3. **Each group had a floor book to record their inquiry and the focus was on practical scientific understanding. The teaching followed a normal sequence in terms of modelling and scaffolding of the task at the beginning, and the groups then worked together to conduct and record what they did. The only aspect of non-collaboration time was the last 5 minutes of the lesson when they reflected individually on their learning in their own books.**

We used the assessment framework to help support the children's understanding of successful collaboration. After CPD sessions with Rethinking Assessment and Professor Bill Lucas, we used the framework developed by the Holy Catholic Family MAT, based on the 5 Habits model developed by Lucas, Spencer, and Claxton (2013), and we adapted it to our school to focus on confidence, conflict resolution and contribution.

Collaboration

Contribution – Communication - Conflict resolution

Collaboration	Red (Starting Point)	Orange (Emerging)	Yellow (Developing)	Green (Deepening)	Blue (Expert)
Contribution -body language -resources -division of labour -listening Body language Vocabulary tone	I can smile when listening to the ideas of others (in acknowledgement).	I can listen to the ideas of peers. I show positive body language and facial expressions when working in a group. I know that each person in a group has a different role.	I listen attentively to others in my group. I can tell my group which role I want.	I can coordinate dividing my group into different roles. I know that resources need to be shared among the group. I willingly try different roles in a group. I build on other people's ideas.	I listen and respond to the members of my group. I know that I can't always have the role I want and make sure that I am positive in any role. I choose the right resources that will work with the strengths of my peers.

Collaboration	Red (Starting Point)	Orange (Emerging)	Yellow (Developing)	Green (Deepening)	Blue (Expert)
Communication - feedback -confidence when sharing ideas -talking to people Body language Vocabulary tone	I listen to feedback but don't give feedback to others. I am not always confident to share with others. I complete my work for the teacher to review.	I share my work with my teacher and peers I understand the importance of sharing my learning more widely I listen to feedback and I act on it I begin to give feedback to others	I share my work/products with larger groups or the class I am open to feedback and actively listen to what is said I can give constructive feedback to others and am sensitive when doing so	I can confidently share my work/product for evaluation by others I can confidently share learning to a wide audience including experts outside of school I actively seek feedback from others and I use critical feedback positively I give precise feedback to others that brings about change	I confidently share my work/product to a wide audience, including experts I can assess the quality of work based on checklists/self-generated success criteria I can provide challenging feedback with empathy I create positive conditions for feedback to be given and received I ask for clarification of key points

Collaboration	Red (Starting Point)	Orange (Emerging)	Yellow (Developing)	Green (Deepening)	Blue (Expert)
Conflict Resolution - not always right	I work on my own I am not always confident to work in a group situation	I respect others I understand roles when working in a group	I respect what other people say and respond appropriately. I participate in all necessary activities in simple tasks. I identifies what needs to be done for a successful 'team' outcome.	I see things from other people's point of view. I coordinate effort, inclusion and participation by all members of a group. I know that I will not always be right and am able to continue working positively in a group setting, even if I'm upset.	I participate throughout tasks and try alternative strategies or multiple attempts during difficult tasks. I effectively address and resolve conflict in a group. I build confidence in others.

We created a child friendly version with rainbow colours so that the children could understand what each element of the skill meant and what success looks like. We used this as a tool in Science lessons, related to the investigation task; for example, if the focus was on contribution, we discussed what good contribution looks like and we returned to this at the end of the lesson for the children to reflect in their individual books. Both on the curriculum content learned, and on the skills they used in that lesson: 'I learned that…(curriculum content) And I developed my contribution skills by ….'

What did we learn?

The impact on learning and engagement was noticeable and we found that the children have made more progress with their learning in Science during this project. We found that group working, particularly, developed the children's science vocabulary and scientific skills,

particularly with the lower ability pupils who might previously have been quite passive. The higher ability pupils also improved because they had to include their team members and explain their rationale and it really improved their skills. We will not be going back to what we were doing previously after seeing the impact.

We also found it to be a more powerful way to assess what children have learned in a lesson. The short individual reflection at the end of a lesson was more effective to demonstrate understanding than a contrived task in an individual book. This new system has also cut back on feedback and marking time as the teacher has a set of group books to record scientific inquiry, and the individual short reflections to assess knowledge and understanding with less content to mark, but a more accurate reflection of understanding.

The developing dynamics of the group work was interesting to see. We noticed that the children naturally collaborated without too much teacher direction and they assigned roles to each other on their own. We had considered assigning the roles, but we felt that giving the groups a sense of freedom to actually just collaborate and work together was important to test. We had predicted that there would be certain dominant children, and there were, but they were very inclusive, because they have an immense sense of what is fair, and they didn't want certain children not to participate. At the end of the project as part of our Pupil Voice evaluation we captured the children's thoughts. They were very positive, sharing that they felt they learned a lot more. Teachers also really enjoyed the creative approach and this has now become the way forward.

Our next steps

A collaborative approach has become the way we now teach Science at Gade Valley. Every single lesson the pupils are now working in collaboration with each other. In terms of next steps we want to refine our approach so that we focus less on explicitly teaching the areas of what good collaboration is; we want to focus on providing opportunities for group collaboration in every lesson as a non-negotiable, and to slowly drip feed the skills alongside the Science input, without taking time away from curriculum content.

An additional next step is to explore how to capture the learning in terms of digital evidencing. We are investigating tools and platforms outside of Google Sites for a learner profile which are closer to learning journey books so that all the science learning can be captured. We are keen to investigate a new platform but need to find the one that is right for us.

References:

Guy Claxton, Bill Lucas and Ellen Spencer of the Centre for Real World Learning at Winchester University (2013) 'Progression in Student Creativity in School: First steps towards new forms of formative assessment' OECD Education Working Papers No 86. Paris: OECD Publishing