

Lesson Study Project 2020

School: **Gneeveguilla National School**

Co. Kerry.

Team: Gerardine Shanahan, Teaching Principal; Katherine Reidy, Deputy Principal, 5th/6th Class Teacher; Michelle Culloty, PDST Advisor



Our School Context

Gneeveguilla National School is a Catholic Co-Educational School situated near Rathmore in Co.Kerry. It operates under the patronage of the Bishop of Kerry. The mission statement of the school is to commit to developing the full potential of each individual pupil in a happy, secure environment.

The school has 5 Mainstream class teachers, and 2 Special Education Teachers, and currently has an enrolment of 120 pupils.



Teachers' Reflections on the project

Key learning

We found that the children really enjoyed working in groups together, and we hope to use this methodology more regularly in the teaching of Maths.

Providing opportunities for working with concrete materials resulted in a marked improvement in pupil's enthusiasm for and disposition towards the lesson.

The skill of communicating and expressing is one which we hope to plan further focus on, as children were quite reluctant to communicate their thinking at times during the lesson.

Implications of Lesson Study for whole school teaching of mathematics

In a multi-grade setting, we feel that lesson study could be a valuable process for sharing practice and collaborating as a staff. We acknowledge expertise in certain areas on staff, and see the process as being pivotal in opening opportunities for peer learning and capacity building. There were definite areas of learning for us as teachers, and how we explain tasks to children. It was very interesting to see how the pupils approached the problem, communicated with each other and utilised a step by step approach to solve the problem. We consider the lesson study project to have provided us with a great basis for future work in this area, as we continue to develop higher order problem solving skills across all areas.

Opportunities

The Lesson Study process gave us an opportunity as colleagues to reflect on how we teach Mathematics. We moved away from the textbooks when planning this lesson and took the opportunity to focus implicitly on the skills of the Maths curriculum.

Challenges

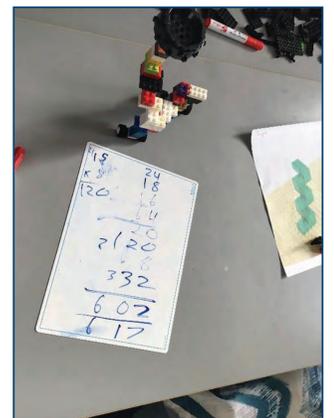
We encountered a number of challenges when planning the lesson;

- The varying levels of ability within the class required careful differentiation
- Class size
- Availability of suitable concrete materials
- Time to collaborate with colleagues

Possible solutions

Lessons involving concrete materials require careful planning. On reflection, we could have organised the materials in a more efficient way for this lesson.

The opportunity to collaborate with colleagues is hugely beneficial, and something we will need to afford more time to, possibly during Croke Park meetings.



Our Goal

Our Goal was to examine different ways that we could ensure that all children in a mixed grade 5th/6th class, would have an opportunity to work collaboratively at their own level using concrete materials. We wanted to focus on the skills of Mathematics – applying and problem solving, reasoning, communicating and expressing, integrating and connecting, implementing and understanding and recalling.

Research Question

How can we plan a differentiated Maths lesson, where all pupils in a multi-grade setting could experience success and use a variety of skills to express their mathematical thinking using concrete materials?

Planning Process

Our planning process involved looking at the needs of the class in question, and the challenges presented by teaching in a multi-grade setting. We spoke about the various ways to overcome these, including the various groupings, learning experiences and pupil disposition. We looked at various research papers on planning meaningful STEM lessons to explore different integrated approaches to the teaching of mathematics. We examined the skills of the Maths curriculum, and how we could best plan a lesson that would require students to use a variety of skills to express their mathematical thinking. We discussed what content area we would focus on, and it was decided that multiplication was an area where the children would benefit from different learning experiences. In examining what concrete materials we would use, we looked at the use of lego bricks as a way of making the abstract concept of multiplication tangible for the children. Given the variety of bricks available, we thought they would provide huge opportunities for differentiation of task.

