

Lesson Study Project 2020

School: **An Grianán National School**

Mount Temple, Moate, Co. Westmeath.

Team: Our team consists of three SEN teachers and one mainstream teacher.

Áine Curran (SEN teacher), Ann Flynn (1st class teacher), Cathy Moran (SEN teacher) and Aiden Swords (SEN teacher).



Our School Context

An Grianán NS is a co-educational, vertical primary school under the patronage of the Catholic Bishop of Ardagh and Clonmacnoise. The school is situated in the village of Mount Temple, Co Westmeath and has an enrolment of 183 pupils.

There are eight mainstream class teachers, one administrative principal, four SEN teachers and seven SNA's on staff.

An Grianán opened its doors on its current site in 1964. Prior to this, the school was based in the local Community Centre in the village.



Since 1964 the school has grown in terms of numbers and size. In 2014 it celebrated its Golden Jubilee with a special Mass.

Our Goal

"For pupils to become confident communicators and active listeners. Pupils will have the confidence to express their thinking and reasoning, appreciate other pupil's views and strategies and ask questions."

Research Question

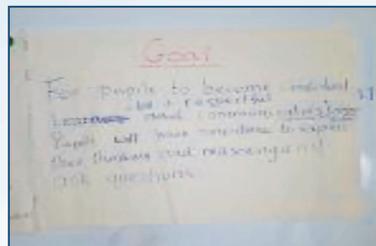
"How can we, as teachers devise a lesson where children will use concrete materials to help them understand abstract mathematical concepts, communicate their strategies and make the connection between concrete and abstract."

Planning Process

The planning process provides teachers with the opportunity to work collaboratively around a content area in maths that they felt that students in their classrooms were finding difficulty with. We decided to conduct a lesson on Number:

We held our Lesson Study throughout six meetings during November and December 2019.

During our first series of meetings, meetings two & three of the Planning process, we decided on our goal and our research question. Throughout sessions three to six, we began planning the research lesson, and we decided to work on an observation template in tandem with writing our research lesson. We conducted our research Lesson at our last meeting.



At each point of the lesson, we discussed the observer's role. Each observer focused on one table and observed this group during the experience. We planned the questions in each section of the lesson in advance. We looked at possible problem areas in advance of teaching the lesson. We had a good range of methodologies to deliver the lesson objectives. We always considered our overarching goal throughout all stages of the planning process. In planning our research lesson, we wanted to ensure that there were lots of opportunities for the students to communicate effectively and to work collaboratively.

It was then decided who would teach the lesson and in which class. It was decided to teach the lesson in First Class with the SEN teacher, Cathy Moran.

The Research lesson was conducted on Thursday, December 5th, 2019.

Our Lesson was:

Strand: Number

Strand Unit: Operations

Lesson Objectives: Develop and recall mental strategies for addition facts within 10.

We focused on the following objectives: Complement numbers to 10 ($3 + \square = 10$), Use concrete materials to count on, construct number sentences and number stories and record our answers pictorially.



Teachers' Reflections on the project

Key learning

At our reflection meeting after we conducted our research lesson:

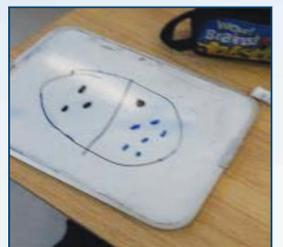
- We need to allow more time for the children to explore and investigate the concrete materials before the start of the lesson.
- How important it is to give them the options of what materials they would like to use (teddies, numberline, whiteboards).
- We need to allow more time for them to explain their reasoning.
- As teachers, we need to take time to reflect on our own teaching.
- The power of observation. Lesson Study allowed the teachers to observe how their pupils learn and for us as teachers to reflect on our teaching.
- We need to focus on the process rather than the end product. It was noted that we put too much emphasis on what we need to get done, not on the quality of the activity.
- The importance of stepping back as teachers and allowing the children opportunities to explain their mathematical thinking.
- All the teachers agreed that we tried to do too much in the lesson and did not allow enough time for their explanations.
- The end of the lesson was very active, and teachers felt that there was real value in sharing strategies.
- We need to ensure that there are more opportunities in our lessons to elicit more from the pupils to ensure that it is not all "teacher talk."



Implications of Lesson Study for whole school teaching of mathematics

All teachers involved in the Lesson Study Cycle agreed that they wish to carry on Lesson Study in their school as a form of CPD. The areas that the teachers were most interested in developing, which was highlighted throughout this process were:

- To provide more significant opportunities for talk and discussion and opportunities to work collaboratively.
- All teachers could see the benefit of engaging in active learning and the use of concrete materials to develop conceptual understanding in maths.
- All teachers agreed on the value of "stepping back" as teachers and allowing the children to discover for themselves.
- All teachers agreed on the importance of allowing more considerable time in class to enable their pupils to explain their mathematical reasoning more and to provide more significant opportunities for talk and discussion.
- More opportunities are needed for pupils to "Think, Pair, Share" during lessons.



Opportunities

- To provide more significant opportunities for talk and discussion and opportunities to work collaboratively.
- To make greater use of using more open-ended questioning in their maths class.
- All teachers could see the benefit of engaging in active learning and the use of concrete materials to develop conceptual understanding in maths.
- An opportunity to reflect and evaluate your teaching.
- An opportunity to observe the children and this informs our teaching.
- An opportunity to experience the difficulties pupils experience in maths.
- A chance to engage in Peer learning & support from colleagues.
- Courage to try out new methods and strategies.

Challenges

Lesson Study also highlighted many problems that need to be addressed:

- The role of the teacher in the class, "Teacher as Facilitator" and the need to step back a little.
- Allowing more time for talk and discussion and making our lesson plans less detailed to allow for this. The importance of not trying to do too much in a lesson.
- The role of the textbook and the pressure to get the book finished.
- We are extending the learning of children who need to be challenged and supporting the children who need support in a lesson.

Possible solutions

- Use of questioning to elicit ideas from the children.
- On reflection, this lesson would have worked better in a team teaching situation, where we reduce the number of pupils we have to work with and allow for more development of mathematical language.
- The availability of concrete materials & to make use of everyday materials to develop mathematical concepts, - items from the man-made environment and the natural environment.