

The Polygon Predicament

Topic: Patterns, Algebra & Geometry This problem connects many strands of the maths syllabus as it

challenges students develop students' problem-solving skills, communication and ability to reason.

Year Group: 5th Year Level: Leaving Certificate Higher

How many diagonals are there in an n-sided polygon?





Presenting the Students Work



Reflecting on the Lesson



There are many ways to solve this problem but interestingly, the student in the research lesson all approached the problem in the same way, using quadratic

patterns. We feel this was due to information highlighted by one student during the prior knowledge section of the lesson. No student remembered what a diagonal actually was, and this had to be teased out during the prior knowledge section. This has highlighted for us the need to explicitly teach this in Junior Cycle. For effective teaching and learning to occur, it is essential that students are motivated and engaged in their lessons. *Lesson Study* has contributed hugely to this, and made us more intentional in our teaching.



Developed by Fiona McAvoy, Sandra Byrne, Claire Holton and Audrey Carty MDT. Thanks to the students from Santa Sabina Dominican College, Sutton, Dublin 13.

To download this lesson plan visit www.projectmaths.ie/mc2017





Maths Counts 2017 Engaging teachers in Lesson Study

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