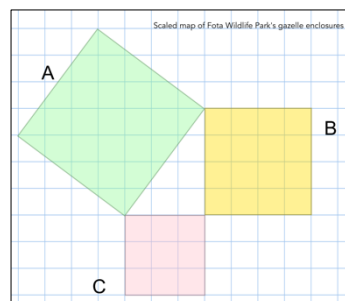# Grazing Gazelles

Topic: Geometry, Trigonometry & Area

This lesson is designed to introduce to help students develop a conceptual understanding of Pythagoras' Theorem.
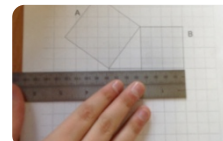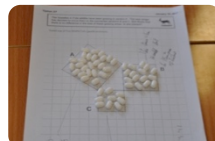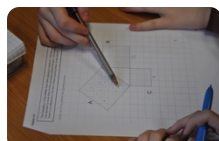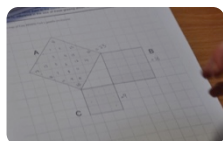
Year Group: 2nd Year
Level: Ordinary Level

Presenting the Problem

Gazelles in Fota wildlife graze in square enclosures. The new ranger has decided to move them from section A to the connected sections B and C. She thinks that there is no difference in the size of these grazing areas. Is she correct?

Scaled map of Fota Wildlife Park's gazelle enclosures

Preparing for Student Responses

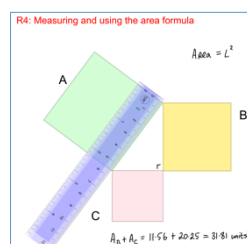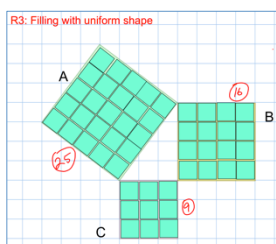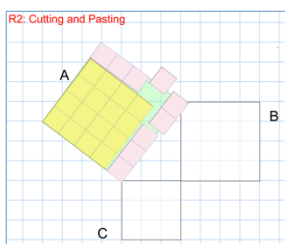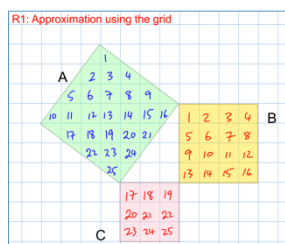R1: Approximation using the grid

R2: Cutting and Pasting

R3: Filling with uniform shape

R4: Measuring and using the area formula

If areas are the same how are the sides related?
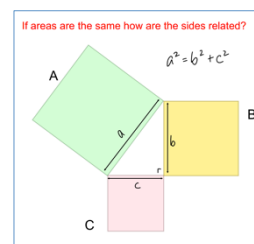
| Prior Knowledge & Posing the Task 10 minutes | → | Students working on the problem 15 minutes | → | Presentation of Solutions & Ceardaíocht 15 minutes | → | Summing up & Reflection 5 minutes |

Reflecting on the Learning

The benefits of using a problem-solving approach are definitely worthwhile and for the most part engaging to students. It allows students to share knowledge and learn from their peers. It lays a good foundation for students from a conceptual viewpoint before building on concepts using a purely numerical approach.

Through planning of the lesson we experienced the importance of formulating a clear and meaningful problem. This allows students to extend their knowledge and share this knowledge with their peers. Team work and communication are central and paramount in this process.
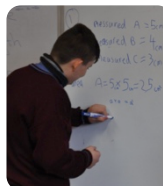
Developed by Shaun Halley, Don O'Shea (Kinsale CS), Niamh O' Flynn (Carrigaline CS), Dee Cahill (Edmund Rice College) and Iris Graham MDT, with thanks to the students from Carrigaline CS.

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

Maths Counts 2017
Engaging teachers in Lesson Study

Maynooth University, 3rd-4th March 2017

DRUMCONDRA

Foireann Forbartha Mata
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