

The Problem with **Cats and Dogs**

Topic: Venn Diagrams

This lesson is designed to encourage students to use Venn diagrams as a problem-solving tool to compare and contrast data.

Year Group: 1st Year Level: Mixed Ability

Presenting the Problem



There are 20 students in a class. 17 have a dog and 13 have a cat. There may be some students that have both a cat and a dog. There

may also be some students that have neither.

What is the maximum number of students that could have both a cat and a dog?

Solve this problem in as many ways as possible.



The Board Plan



10 minutes





5 minutes



Reflecting on the Learning

Students preferred method was split between the use of Venn diagrams and bar charts as you could see the information clearly using either of these approaches. Students enjoyed the fact there were so many ways to solve this problem.



The language used in the explanation was of a high standard with students being able to

explain their methods and reasoning clearly. One key observation was that several students answered the question but also made a deductive statement that we agreed is an excellent skill for the first years concerned.





Mahon, Deirdre Newell, Margaret Tighe to the students of St Louis Community School, Kiltimagh, Co. Mayo.





Maths Counts 2017 Engaging teachers in Lesson Study

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