

Math-Ese Cover Sheet
Ellen Montgomery
Boise City Schools
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Lesson Plan 2: Using Venn Diagrams in Geometry--Quads Not Wads

Students were asked to develop a Venn diagram extension of the diagram given in the textbook on parallelograms, to include quadrilaterals. They worked at the chalkboard with a partner.

Name: Ellen Montgomery

Grade Level/Subject: Geometry

Topic: Quads, Not Wads

Objectives (P.A.S.S.): Content Standard 2c

Develop and apply the properties of quadrilaterals to solve problems (e.g., rectangles, parallelograms, rhombi, trapezoids, kites).

Introduction: We had been covering the chapter on Quadrilaterals--polygons, parallelograms, rhombuses, rectangles, and squares. The textbook had an excellent Venn diagram showing the relationship of parallelograms, rhombuses, rectangles and squares. We had gone over the diagram, discussing the relationships, showing how the diagram pictured these relationships. I had mentioned at the end of the class period to consider how quadrilaterals fit into the picture.

Instructional process: At the beginning of the next class period, the students were told to find a partner and sketch on the chalkboard a Venn diagram, picturing the relationship between parallelograms, rhombuses, rectangles, squares, and quadrilaterals. If they desperately needed it, they could use the book.

Closure: I used this opportunity to introduce trapezoids and kites.

Assessment: This was, in fact, an assessment in and of itself.

Modifications/Accommodations: By pairing them with a partner, and doing the work on the chalkboard, they had ample opportunity to see what others were doing.

Reflection: Wow, was I ever surprised to find out what they did not know! Though they appeared to understand the concepts of the Venn diagram, several of them did not have a clue of what the diagram itself was expressing, let alone the relationships we had been talking about. Even when some were getting the diagram correct, most still did not fully

understand that parallelograms were just a part of the fuller picture of quadrilaterals, as distinct from other polygons. They were now ready to learn--the discussion began!

Their plea at the end of the class period as I briefly began introducing kites and trapezoids was "Please don't make us learn anything else, our brains are fried!"

I took that as success. They had actually been using their brains!