Paper Folding Fun

This is a Youcubed favorite. Thank you Mark Driscoll for such an engaging task that blends Number Sense and Geometry through paper folding. Many Youcubians enjoy starting out their school year with this task in order to build classroom collaboration.

Material:

- one square sheet of paper per group

Task Instruction

For each part of the problem, start with a square sheet of paper and make folds to construct a new shape. Then, explain how you know the shape you constructed has the specified area.

1. Construct a square with exactly ¼ the area of the original square. Convince yourself that it is a square and has ¼ of the area.
2. Construct a triangle with exactly ¼ the area of the original square. Convince yourself that it has ¼ of the area.
3. Construct another triangle, also with ¼ the area, that is not congruent to the first one you constructed. Convince yourself that it has ¼ of the area.
4. Construct a square with exactly ½ the area of the original square. Convince yourself that it is a square and has ½ of the area.
5. Construct another square, also with ½ the area, that is oriented differently from the one you constructed in 4. Convince yourself that it has ½ of the area.

Reference

Driscoll, 2007, p. 90, http://heinemann.com/products/E01148.aspx