

The Perimeter Stays the Same

Materials: String or rope about 40 feet long

1. Present an over view of what students will be doing prior to moving to a large open area. (Have students take paper and pencil with them.)
2. Ask 4 students to use the 40 feet of string to form a long narrow rectangle (about 1 person wide) holding the string about chest high.
3. Explain that students will be the area unit, and have students fill the rectangle and count the number of units (people) needed.
4. Ask participants to sketch the rectangle, record the perimeter (40 feet) and the area (number of people inside).
5. Form a new rectangle that is wider than the first, again filling it with people, counting them, sketching the rectangle, and recording the perimeter and area.
6. Repeat a few times, each time making the rectangle closer in shape to a square.
7. Ask participants to use their sketches to record what they learned about perimeter and area on paper.
8. Follow with a discussion of how the perimeter remained 40 feet but the area (number of people) varied depending on the shape.
9. Ask what they notice about the shapes and area (The closer the shapes comes to a square, the larger the area.)