Geometric Measurement and Spatial Reasoning in Elementary Mathematics Teaching

**Session 1 Resource** 

## Handout: Wally and the Rug

From Paley, V. G. (1981). Wally's Stories. Cambridge, MA: Harvard University Press.

The class was about to act out "Jack and the Beanstalk" when Wally and Eddie had a disagreement about two rectangular rugs (Paley, 1981).

**Wally**: The big rug is the giant's castle. The small one is Jack's house.

**Eddie**: Both rugs are the same. **Wally**: They can't be the same.

**Eddie**: You have to measure it. You need a ruler.

**Wally**: We have a ruler.

**Eddie**: Not that one. Not the short kind. You have to use the long kind that gets curled up in a box.

**Wally**: Use people. People's bodies. Lying down in a row. **Eddie**: That's a great idea. I never even thought of that.

Wally announced a try-out for "rug measurers."

4 by 3 students. Everyone satisfied.

Next day, Eddie measured again. Himself, Wally, and 2 others, but it came up too short. **Wally**: You're too short. I mean someone is too short. We need Warren. Where's Warren?

(Wally was told that Warren was absent.) **Eddie**: Then we can't measure the rug.

**Teacher**: You can only measure the rug when Warren is here?

**Jill**: Because he's longer.

**Deana**: Turn everyone around. Then it will fit. **Eddie** rearranged the students. Surprise...unchanged. **Eddie**: No, it won't work. We have to wait for Warren.

Deana: Let me have a turn. I can do it.

Jill: You're too big, Deana. Look at your feet sticking out ....

**Teacher**: Is there a way to measure the rug so we don't have to worry about people's sizes?

**Kenny**: Use short people.

**Teacher**: And if the short people aren't in school?

**Rose**: Use big people.

**Deana**: Use rulers. Get all the rulers in the room. I'll get the box of rulers .... This isn't enough rulers.

**Wally**: Use the dolls.

**Teacher**: So this rug is ten rulers and two dolls long? (Silence.) Here's something we can do. We can

use one of the rulers over again, this way. **Eddie**: Now you made another empty space.

**Teacher**: Eddie, you mentioned a tape measure before...here.

(We stretch the tape along the edge of the rug, and I show the students that the rug is 156 inches long. The lesson is done. The next day Warren is back in school.)

**Wally**: Here's Warren. Now we can really measure the rug. **Teacher**: Didn't we really measure the rug with the ruler?

**Wally**: Well, rulers aren't really real, are they? (Paley, 1981, pp. 13-16)