

Explicit Teaching in Problem-based Mathematics Be Present to the Learning

NARRATOR 1: Be present to the learning.

NARRATOR 2: Follow the thinking of individual and/or groups of students as they problem solve. Listen, observe, touch base, probe. What impact is the learning having? For which students? And why?

STUDENT 1: 7, 8, 9, 10 [INAUDIBLE] because 10 [INAUDIBLE]

BRENDA KRESS: Can you tell me which one is the smallest perimeter? Can you find one that has the smallest?

STUDENT 1: Well we're thinking that these two are smallest 'cause it's 10.

BRENDA KRESS: These two are 10 so they have the smallest. Why do you think that is?

STUDENT 1: Because they're both the same shape and both the same size so they're-

BRENDA KRESS: So they're both the same size and shape.

STUDENT 1: But they're just turned a different way.

BRENDA KRESS: So what I noticed with this group is that they in fact found the smallest perimeter of the shapes, however when I questioned them, why they weren't really sure as to why that arrangement had the smallest perimeter. So that's something I'll definitely come back to when we consolidate the lesson.

ALLISON BERSCHT: So when I was checking in with this group it wasn't immediately apparent that they had any sort of organizational structure. Some of the other groups were grouping according to one side, and they were putting circles around them, or lining them up. This group originally appeared to be kind of all over the place and I wondered if they were simply guessing at different shapes.

So I noticed that you seem to have found a large number of arrangements already. How could you tell that your arrangements were unique and that every one you got so far was different?

STUDENT 2: Well, we started off by doing this shape and then we found out other ones that were related. So for this one was the first one and then this was--

STUDENT 3: The second one.

STUDENT 2: The second one.

ALLISON BERSCHT: Could you number this number one so I can see what you mean here? So if this was number one what did you compare it to next?

STUDENT 2: We compared it to this one which was this just slid over one square.

ALLISON BERSCHT: Okay, so that would be arrangement number two?

STUDENT 2: Yep.

ALLISON BERSCHT: In fact they did have their own method of organization that I wouldn't have realised or uncovered had I not probed deeper.