STUDENT: We made it right now and then we used the end points of the blue and yellow sticks. Then if you connect the dots...

STUDENT: Oh, so it's kind of like making a kite but it's not perpendicular.

STUDENT: It's kind of like making a rhombus but it's not congruent. The sides are not congruent, see.

STUDENT: Does it have to be in the middle?

STUDENT: Yes, I am pretty sure it has to be in the middle.

STUDENT: Because it has to be both equal distance.

STUDENT: Oh, actually it might not.

STUDENT: I think it does. These have to be equal distance from these.

STUDENT: See, these two sides are parallel.

STUDENT: Yeah, it wouldn't work if it was in the middle. These two sides are not the same.

STUDENT: That's how we make a...

STUDENT: Like this one would be a parallelogram because the distances are not equal.

STUDENT: Okay, so we have rhombus. Do we have all the shapes now? Wait I have a question? Do you want to ask Ms. Humphreys if we have to show trapezium, no right?

STUDENT: Wait, what do I write for a parallelogram? It has to be in the mid-point?

STUDENT: It has to be the blue stick and the yellow; the short stick and the long stick have to be put together at the mid-point of both sticks.

STUDENT: At the mid-point and any angle except for the perpendicular or parallel.

STUDENT: No, say "use short stick" not blue because blue it could be red or yellow. Just say short stick.

STUDENT: What's the word for moving them? If you connect the short and long sticks at their mid-points and move them or...

STUDENT: Or angle them?

STUDENT: So if you connect the short and long sticks at the mid-points, any angle you put them in except for perpendicular or parallel, will create a parallelogram. Wait, isn't a rhombus

technically a parallelogram? Because two sides of...look. Yeah, so it could be parallel too. So it could be a parallel too.

STUDENT: Yeah, except for parallel.

STUDENT: Wait, do you want to ask her if we have to do trapezium...to show a trapezium?

STUDENT: Okay, hold on. Except for parallel... Are there any other shapes we can do it with?

STUDENT: We have rhombus, we have parallelogram, we have rectangle, square; we have kite and we have trapezoid.

STUDENT: Are there any other shapes?

STUDENT: Trapezium, that's it. That's it.

STUDENT: So that can be like anything.

STUDENT: Exactly, that's why…

STUDENT: So is there any other options we can do?

STUDENT: Other than trapezium, I don't think so. I think we did...

STUDENT: I don't think you can define trapezium because any other... So there is no specific definition.

STUDENT: It depends on what kind of trapezium you want to do.

STUDENT: So how about we don't do…wait, do we have it…everything we have right? Is that it?

STUDENT: Wait, for the kite it has to be the short and the long sticks and they are perpendicular in the middle; and one has to cross at the mid-point or does it matter which mid-point on the other ones?

STUDENT: Except for the end points right? But wait, we have to do... Do we have to explain each one or can we...? Do we have to, wait…since we each explained our own and we put it together, do we have to write a copy of each other's work? No right?

STUDENT: No, we have to turn it in together. So did we do the rectangles?

STUDENT: Yeah.

STUDENT: I made a rectangle.

STUDENT: You noticed if you put the pin in the middle of the two sticks and… Oh, I need to make this clearer because this doesn't make sense. If we put the pin in the mid-point of both sticks, of both of the long sticks, and make them perpendicular then the shape that will be created is a square. And if the angles are not right angles then a rectangle will be created.

STUDENT: Yeah.

STUDENT: Be sure you're like...oh, what's it called? Specific, be specific on your explanation.

CATHY HUMPHREYS: So you're thinking that you can't make a parallelogram with what you've got, is that right?

STUDENT: We've been trying.

STUDENT: We keep getting squares.

STUDENT: And trapezoids and pretty much every other thing you can think of but we just can't seem to get the parallelogram.

CATHY HUMPHREYS: Huh! Are you keeping track of every single thing you are writing down and in order?

STUDENT: Well, I have them in the order of when I wrote them. All information I just wrote down, I just categorized them with what I thought they pertained to. So this would pertain to squares and rectangles and what I wrote down here about the kites.

CATHY HUMPHREYS: Excellent, excellent! So are you keeping track of what you're trying as you are trying to find a parallelogram? So keep track of the things that aren't successful as well as things that are. Alright? So why don't you work together as a group and see if you can do it to get a parallelogram.

STUDENT: Do you think we can get a parallelogram?

CATHY HUMPHREYS: Do I think you can? Yes, I think you can.

STUDENT: Wait. Oh no, we need more rhombuses.

STUDENT: So a kite with two long?

STUDENT: One long and one short. Wait, a rectangle, I mean a square is a rhombus right?

STUDENT: Yeah.

STUDENT: What?

STUDENT: I was asking if a square was a rhombus. And it's also a kite right?

STUDENT: Yes.

STUDENT: No, I think you can make a rectangle out of it.

STUDENT: That's what I was saying but I wasn't sure. I didn't count on that. No, that would make a kite.

STUDENT: Isn't that what I'm making?

STUDENT: Yeah, sure.

STUDENT: Okay, so this makes a kite.

STUDENT: Because a kite is shaped with two sets of parallel lines right?

STUDENT: I know, I know.

STUDENT: I can't make a rectangle out of this.

STUDENT: Me neither.

STUDENT: Okay then…

STUDENT: I made a parallelogram.

STUDENT: Then a rectangle. Oh, it is a rectangle.

STUDENT: Wait, do we have a parallelogram with the short one? Did you write it?

STUDENT: Yeah. Okay.

STUDENT: I think a rhombus is a kite.

STUDENT: But that...what did you make that one with?

STUDENT: A long stick and a short stick.

STUDENT: That one looks kind of equal.

STUDENT: If it was equal, it would be more square because the...yeah.

STUDENT: But you can't really tell which one. Like with this one, you can tell. This one is the short side and this one is the long side.

STUDENT: It could be like this?

STUDENT: Yeah.

STUDENT: When you go by the circles, the short one matches up right here. Yeah. Could you ask Ms. Humphreys if a rhombus is a kite?

STUDENT: I can but what do you want?

STUDENT: Could you ask if a rhombus is a kite?

STUDENT: So if that rhombus is a kite?

STUDENT: Yeah.

CATHY HUMPHREYS: You have a question?

STUDENT: Would that rhombus also be a kite?

CATHY HUMPHREYS: Would this rhombus also be a kite? That is where you need this.

STUDENT: Good idea. The convex quadrilateral in which two pairs of adjacent sides are equal, the opposite sides are not parallel. Oh! Okay, so it is not a kite.