TRACY LEWIS: So, Cindy was having a ...?

STUDENTS: Party.

TRACY LEWIS: And what did she do? One person.

STUDENT: Invited guests?

TRACY LEWIS: She invited guests, and we were trying to figure out what? What were we trying

to figure out? Who remembers? Shawani?

STUDENT: How many people were at the party.

TRACY LEWIS: How many people were actually at the party. And so the last time you all worked on this, we stopped and we came up with, possible answers were 9, 18, 22, 35, 11, 16, and 17. So some answers are more accurate than others. Today you're going to get an opportunity to work on it, because how many people finished? Or how many people didn't finish?

STUDENT: I don't remember.

TRACY LEWIS: You don't remember or you're not sure? Okay.

STUDENT: I didn't finish.

TRACY LEWIS: So, before you go back to your work, what are some things that mathematicians look for? What do mathematicians always look for? Because we do want to figure out how many people Cindy actually invited to this party. So, when someone gets your work and they pick it up, how are they going to know what it is you're thinking? What are mathematicians going to look for? Giovanni?

STUDENT: They look for evidence.

TRACY LEWIS: They're looking for evidence. What kind of evidence? What kind of evidence? I mean, are they going to look for fingerprints?

STUDENTS: No.

TRACY LEWIS: No, are they going to find an apple on your paper?

STUDENTS: No.

TRACY LEWIS: What kind of evidence are they going to find? Erin?

STUDENT: Pictures?

TRACY LEWIS: Some pictures. Shawani?

STUDENT: Words.

TRACY LEWIS: Some words. Dewan?

STUDENT: And numbers.

TRACY LEWIS: And some numbers. What kind of numbers? What kind of numbers? Yes?

STUDENT: Labels.

TRACY LEWIS: Maybe some labels. Some numbers, some pictures, some words. Diamond?

STUDENT: A number sentence.

TRACY LEWIS: Maybe they'll find a number sentence. Victoria?

STUDENT: They'll find probably like, something like an answer to the what you're looking for.

TRACY LEWIS: They'll find an answer to what it is we're trying to figure out. So today you're going to get an opportunity to finish that up. When you are done with that, Ms. Lewis has a new challenge for you. Are you ready?

STUDENTS: Yes.

TRACY LEWIS: All right. So, what I'm going to do is I'm actually going to hand you out what I'm going to read to you. And this is what you're going to work on. And then, we're going to get started on it. There we go. So, I want you to take one, that's right, take one and pass it. Thank you. Take one and pass it, in the back. No, just pass it straight down. Good job, thank you, London.

That's excellent, I hear one person starting to look at the problem. They're trying to figure it out, or just see what the words are. Raise your hand if you don't have one. Thank you for waiting patiently.

Okay, everybody has one. Let's start at the top. What's the title on the page?

STUDENTS: Level C.

TRACY LEWIS: Okay, let's read it together.

TEACHER AND STUDENTS: Mia, Jake, Carol, Barbara, Ford, and Jeff are all going to a costume party. Figure out which person is wearing what costume and when they arrived at the party.

TRACY LEWIS: Oh, now stop. That is the scenario. That's what's going on. We're supposed to figure out who's coming to the party, and what costume they were wearing, and what order they came in. So, let's find -- we're going to read on and find out some clues. Here are out clues. Let's go, let's start with the first one.

TEACHER AND STUDENTS: The person that arrives fourth was wearing the bathing suit. Barbara was the last to arrive. Jake and Mia arrived and stayed together. The first person was

dressed as a French maid. Superman arrived right before Barbara. The Potato Heads were always together at the party. Ford was a surfer dude. The French maid was not Carol. The vampire arrived after Superman.

TRACY LEWIS: Wow. Was that a lot of clues?

STUDENTS: Yes.

TRACY LEWIS: Okay. What do you think the first thing we can do to figure this out? First of all, do you remember what we're supposed to figure out? What are we trying to figure out? Sarah, what are we trying to figure out?

STUDENT: The order they came in. What they were wearing. And who was who.

TRACY LEWIS: And who was who. The order they came in. And what they were wearing. What information do we know for sure? Can you figure that out? What information do we know for sure. Isaiah?

STUDENT: That the Potato Heads was all together, always together.

TRACY LEWIS: The Potato Heads were always together. They were always together. So, what do you think that means? If we're supposed to figure out the order, and the Potato Heads were always together. You think that means something? You think that's important? Kinda, sorta, not sure yet? Okay. Victoria, what do we know for sure?

STUDENT: I know that I looked on line three.

TRACY LEWIS: Mm-hmm.

STUDENT: And I saw "Jake and Mia arrived and stayed together," so I think that the Potato Heads can be like Jake and Mia.

TRACY LEWIS: You think that -- why do you think that?

STUDENT: Because they said, "The potato heads were always together at the party," and "Jake and Mia arrived and stayed together."

TRACY LEWIS: Oh. They arrived and stayed together. So, what words let you know that that was Jake and Mia? Are there some clue words in there?

STUDENT: Yes.

TRACY LEWIS: What are the clue words?

STUDENT: Stayed together.

TRACY LEWIS: Stayed together. Are there clue words in the other one?

STUDENT: Um.

TRACY LEWIS: So, everybody look on line 3. She said she's looking at line 3, it says "Jake and Mia arrived and stayed together."

STUDENT: It says "always together."

TRACY LEWIS: Oh, stay together and always together. Okay, that's a clue.

STUDENT: And they both had "together."

TRACY LEWIS: Okay. Sarah, I'm going to give you an opportunity to share with the whole group, and then I want you to talk to your partner, or someone that's close to you, to see what else -- what other information do we know for sure. Sarah, what did you want to share?

STUDENT: I think the, the person who arrived fourth, who was wearing a bathing suit -- bathing suit, was Ford because he was a surfer dude and surfer dudes usually wear bathing suits.

TRACY LEWIS: Oh, okay. So, you're using some information that you already know. You know something, how many of you have seen a surfer before? Kind of doing this thing. Are they wearing a suit?

STUDENTS: Yes.

TRACY LEWIS: They're wearing a suit? Like a suit and a tie?

STUDENTS: No.

TRACY LEWIS: Are they wearing a school uniform?

STUDENTS: No.

TRACY LEWIS: No, they're wearing a ...

TEACHER and STUDENT: Bathing suit.

TRACY LEWIS: So -- Or, okay, so you're thinking that Ford was the surfer dude. Is that what you said?

STUDENT: No. Ford -- we know Ford is the surfer dude.

TRACY LEWIS: Oh, you know. You know Ford was the surfer dude.

STUDENT: Which means he's the fourth person.

TRACY LEWIS: Ah, okay. So, I want you to take a minute and talk with someone who is next to you about the information that we know for sure. What do we know for sure? Go ahead.

STUDENT: The information that we know for sure is that they were going to a costume party.

STUDENT: The first person was dressed as a French maid.

STUDENT: So that's what we know for sure.

Inside Mathematics

STUDENT: Well I think, it's the two Potato Heads, that's what I think.

STUDENT: So, Jake and Mia, you think they're the two Potato Heads?

STUDENT: Yes, I do.

STUDENT: And the Potato Heads were always together at the party. So, Barbara was the Potato Heads.

STUDENT: Wait, where?

STUDENT: Barbara --

STUDENT: Superman. That's what it says, Superman.

STUDENT: Yeah, so Superman arrived right before Barbara. So that means Barbara was the Potato Heads.

STUDENT: Yeah, and I think um, what's her name? Mia was the um, was the Potato Head with Jake. That's what I think.

TRACY LEWIS: One, eyes up please. Okay, so we've been using a lot of words. I've been listening to some friends share. You've been listening to some friends share. We have some paper right here that has some words on it. So, that's one way of learning. What happens if we actually do what we did for the first problem? Do you remember what we did for the first problem? For Cindy's birthday party? Or -- what did we do, Isaiah? Do you remember?

STUDENT: We tried to figure out how many people was at the party.

TRACY LEWIS: We did, but how did we do it? We did it on paper, and we did it another way, where we had something happening over here. What else did we do?

STUDENT: We placed people on, on top of the tables.

TRACY LEWIS: Right, so one person actually got to be Cindy, and actually invited two friends, and we actually acted it out. Do you think it would help if we tried to act this out?

STUDENTS: Yes.

TRACY LEWIS: Okay. Let's try to act it out with what we know for sure. What do we know for sure?