

Leaders in Mathematical Thinking

Alex Lawson - Constructing a Math Environment

>> It changes the math classroom in that if I'm the teacher in the classroom, I have constructed what's going to happen. I am running the show. I am asking some of the questions. But everybody is involved and accountable. And so if one child's explaining their ideas, and I think it's an important idea for many of the other kids to get in on, then they are responsible for actually explaining to the rest of the children in a way that the rest of the children who are at about that level can understand it themselves. So it becomes a classroom when I go and film, where I see them talking to each other mathematically, even when the teacher's not there, which for me is part of the litmus test, if I mic them and leave them, or put a mic in a basket and go away and see what kind of conversation did they have in their pairs, in strong classrooms, they actually have mathematically conversations where they try and convince each other of a method, or adopt it together. And the teacher might be somewhere else. And that's how it's -- that's one of the ways it's different, when kids own their own math. It's a very common characteristic of many of the classrooms I've been in where there's good instruction going on. And in fact, it's one of the measures that some researchers use. How much time did children actually engage in profitable conversation, conduct a conversation with each other, without anyone else present. Well, if we go back to the notion of children owning their own math, it would be at least -- I mean, there's so many things going on in that classroom. But part of it is that they would be interested in the math; not just when they're discussing it with their teacher, but actually outside of classroom, that those conversations carry on. And again, I've seen that in my research, where they go out, they have recess, they come back in, and they are pumped about some question that they want to discuss further, so that math is part of their life, and something that they can do, rather than something that sits in a text and is just something they have to do in the class, but it's actually not related to the rest of their life.