



Transcript for the [video](#):

## ***Supporting Mathematical Development in Young Children: Cardinality***

*This video has captions. You can turn them on by clicking the captions icon at the bottom of the video.*

**Dr. Sudha Swaminathan, Eastern Connecticut State University:** Cardinality basically means that you count out a set of objects to determine the total quantity, and as you recite the number words, you understand that the last number word you used tells you the total quantity in the set.

**Child:** 1 block, 2 block, 3 block, 4 block, 5 block, 6 block, 7 block, 8 blocks.

**Dr. Sudha Swaminathan:** Now, that's a difficult concept. We see a lot of children counting out, maintaining one-to-one correspondence, but not knowing that the last number word they said is the total amount.

**Child:** 24, 25, 26.

**Teacher:** You have how many?

**Child:** 46

**Teacher:** 46?

**Dr. Sudha Swaminathan:** When we ask them, "What is the total number? How many did you count?" Some of them go back to counting, "One, two, three," and some others will just look at you. And while all of those tell you that they can count, it doesn't tell you that they can recognize the total quantity by the act of counting.

**Dr. Sudha Swaminathan:** Sometimes children count out, and we hear that the last number word, they have a little rise in their tone.

**Child:** Two, three, four.

**Dr. Sudha Swaminathan:** And that gives you a sense that they realize that, "I've come to the end of my number sequence. This number word is special. It tells me something about the quantity." And from that realization, they eventually get to a point where they realize that the last number word is the total object.

**Teacher and Child:** Five, six, seven.

**Child 2:** There's seven.

**Narrator:** Adults can support children's understanding of cardinality throughout the day.

### **Supporting Math during Routines (2:17)**

**Narrator:** Teachers frequently ask children to count how many other children are in school that day. This provides an opportunity to emphasize the total number in the group.

**Teacher:** My friend Stephanie just counted our friends. Look, I'm going to write the number eight.

### **Integrating Math Learning in Play (2:37)**

**Narrator:** Opportunities for supporting cardinality can also come up naturally during children's play.

**Teacher:** How many people are going with you?

**Child:** My whole family. Grammy, and this baby.

**Teacher:** We have to know how many tickets to buy. So should we make a list of everybody?

**Child:** My sister's number one. My baby's number two. 1, 2, 3, 4, 5, 6, 7.

**Teacher:** Seven. So we need...

**Child:** Seven people.

**Teacher:** Seven people. Seven tickets you need to buy, then?

### **Explicitly Teaching Math Concepts (3:14)**

**Narrator:** It's easy to assume that children have cardinality when they count correctly, but in order to check their understanding, adults can ask them how many in all.

**All children:** Six, seven, eight.

**Teacher:** So how many cubes are in the cup?

**Children:** Eight.

**Teacher:** Eight. There were actually eight.

**Narrator:** It's also important for adults to be deliberate in stating the total number.

**Child:** Four, five, six.

**Teacher:** Six. Six blocks you used...

**Dr. Sudha Swaminathan:** Cardinality develops gradually and over repeated counting opportunities. You can support children's understanding of cardinality by modeling it for them. And by questioning and prompting them to state the total quantity of their counting.