## Adding Tens, Place Value

Have children sit in a circle in the meeting area. Ask one child to choose a number between 1 and 9. Write it at the top of a large sheet of chart paper. Go around the circle having each child add 10 to the previous number. Record the results on the chart. For example, if a child chooses 3, you would be recording 13, 23, 33, 43, 53, etc. Discuss the pattern: the number of tens increases by one each time, while the number of units stays the same. Ask: Will this always happen? Try a few more numbers. For example, start with 7 or 8, adding 10 repeatedly, as before. Ask children why they think the pattern is occurring.

### Behind the Numbers

This minilesson was designed to support the development of an understanding of place value. Discuss how the pattern continues past 100 — for example, 93, 103, 113, and 123. Help the children notice that the pattern is continuing — the number of tens increases by one each time, while the number of units stays the same. Do *not* focus on the columns or ask: How many hundreds, how many tens? Thinking of 113 only as 1 hundred, 1 ten, and 3 units obscures the increasing tens pattern. Establish that 1 hundred has 10 tens, so 1 hundred plus 1 ten makes 11 tens. Develop the idea of equivalence: that 113 can be thought of as 11 tens and 3 units, and also as 1 hundred, 1 ten, and 3 units.

## A Portion of the Minilesson

*Inside One Classroom*

**Joan** (the teacher): So let's see what we have so far: 3, 13, 23, 33, 43, and it's your turn Natasha....what comes next?

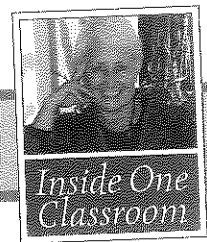**Natasha:** *(Counting on her fingers by ones.)* Fifty-three. *(Joan adds 53 to the list.)*

**Ricardo:** Hey! There's a pattern.

**Joan:** What are you noticing? Tell us more.

**Ricardo:** It's going 1, 2, 3, 4, 5, like that. It's going up.

**Erika:** Yeah. And the other number is staying the same. It's always 3.

### Author's Notes

*After several numbers are listed Joan repeats the list. Sometimes just hearing the list aloud can help children begin to notice patterns.*

*Joan does not explain the pattern. She invites the young mathematicians to examine it. Noticing patterns and determining why they are occurring is an important aspect of mathematics.*

**Joan:** That's interesting, isn't it? Hmmm. Let's see if it keeps happening.
  *(Several more numbers are added, 63, 73, 83, 93, 103.)*

**Natasha:** It's not happening. Now it's 0.

**Ricardo:** No it still is...it went from 9 to 10.

**Joan:** What will the next one be?

**Natasha:** Oh yeah...113. Now it is 11.

**Joan:** So what's going on here? What is this 11? Turn to the person next to you and discuss this for a few minutes. *(After several minutes of pair talk, the whole group conversation resumes.)* Sue...what did you and Rodney talk about?

*Pair talk is used as a way to focus everyone on the issue at hand.*

**Sue:** We think it's because we are adding a ten...so the tens are going up.

**Natasha:** But the tens aren't always going up. See... it's 9, then 0 *(referring to 93 and 103)*.

**Ricardo:** Yeah, but the number of tens is going up. Before there were 9 tens, then 10 tens.

*Children are encouraged to make sense of place value for themselves.*

**Joan:** How many groups of ten are there in 103?

**Ricardo:** Ten tens in 100...so 10, and 3 left over.

**Joan:** So we could think about 103 as 1 hundred, 0 tens, 3 ones. I think that is how you are seeing it Natasha? Or as 10 tens and 3 ones like Ricardo is seeing it. Are they both right? Talk to the person next you about this.

*Pair talk is used again to focus on equivalence.*

# Around the Circle · A2

## Adding Nine by Adding Ten and Subtracting One, Place Value, Equivalence

This minilesson is similar to A1, but 9 is added instead of 10. Adding 9 is equivalent to adding 10 − 1. As with A1, focus on the total number of tens, not the digit in the tens place. See page 12 for further information.

### Behind the Numbers

This minilesson was designed to support the development of an understanding of place value, equivalence, and particularly the strategy of adding 9 by adding 10 and then subtracting 1.