ACTIVITY 5.2

Groups of 10

Prepare bags of counters of different types. Bags may have toothpicks, buttons, beans, plastic chips, connecting cubes, craft sticks, or other items. Children have a record sheet similar to the top example in Figure 5.4. The bags can be placed at stations around the room, or each pair of children can be given one. Children dump out and count the contents. The amount is recorded as a number word. Then the counters are grouped in as many tens as possible. The groupings are recorded on the form. Bags are traded, or children move to another station after returning all counters to the bag.

If children have difficulty writing the number words, a chart can be displayed for students to copy from (see Figure 5.5).

Variations of the "Groups of 10" activity are suggested by the other record sheets in Figure 5.4. In "Get This Many," the children count the dots and then count out the corresponding number of counters. Small cups in which to put the groups of 10 should be provided. Notice that the activity requires students to address quantities in a way they understand, record the amount in words, and then make the groupings.

The "Groups of 10" activity and the variations in Figure 5.4 start where the students are and develop the idea of groups. "Fill the Tens" and "Loop This Many" begin with a verbal name (number word), and students must count the indicated amount and then make groups.

Bag of	Number word				1					
Dag of	Transcr Hora			_	+	ens	-	_	\neg	-
Toothpicks					- 5	1000	L		=	
					S	ingle	es L			8
Beans O					T	ens	[
Beans U					S	ingle	es [
					т	ens	ſ	_	\neg	
Washers 🔘	3.					ingl	ا م	_	=	
						nigh	35 [_	_	-
			1		_		.99	_		
Get this many.			Write	the	numb	er v	rord	i.		
			1							
		•	-			_			_	
	0 0		Tens			On	es .			
			10110		-	100000				
	000 00		10110		_	19551.0	10000		_	-
6 6 6	000 00	• • •	1000						_	-
Fill the tens.	•••		10.00							
Fill the tens.	eans.	•••	10110		_					
	eans.	••• ਜ		H	H	H]		
	eans.	···				Н]		
	eans.]		
Get forty-seven be]		
				∃ ⊟ ⊟		H]		
Get forty-seven be	Draw dots.					H]		
Get forty-seven be	Draw dots.									
Fill up ten-frames.	Draw dots.									
Fill up ten-frames. Tens Except being stated as a second stated stat	Draw dots.									
Fill up ten-frames.	Draw dots.			B B						
Fill up ten-frames. Tens Except being stated as a second stated stat	Draw dots.						-]		•
Fill up ten-frames. Tens Except being stated as a second stated stat	Draw dots.									
Fill up ten-frames. Tens Except being stated as a second stated stat	Draw dots.									

- Assessment Note

As you watch children doing these activities, you will be able to learn a lot about their base-ten concept development. For example,

how do children count out the objects? Do they make groupings of 10 as they go? Do they count to 10 and then start again at 1? Children who do that are already using the base-ten structure. But what you will more likely see early on is children counting a full set without any stopping at tens and without any effort to group the materials in piles. A second-grade teacher had her students count a jar of small beans. After they had recorded the number, they were to ask for plastic cups in which to make cups of 10. Several children, when asked how many cups they thought they might need, had no idea or made random guesses.

Number Words				
eleven	ten	one		
twelve	twenty	two		
thirteen	thirty	three		
fourteen	forty	four		
fifteen	fifty	five		
sixteen	sixty	six		
seventeen	seventy	seven		
eighteen	eighty	eight		
nineteen	ninety	nine		

From Van de Walle, J. A. & Lovin, L.H. (2006). *Teaching Student-Centered Mathematics Grades K* - 3. Toronto: Pearson Education, Inc. (p. 130 - 131).