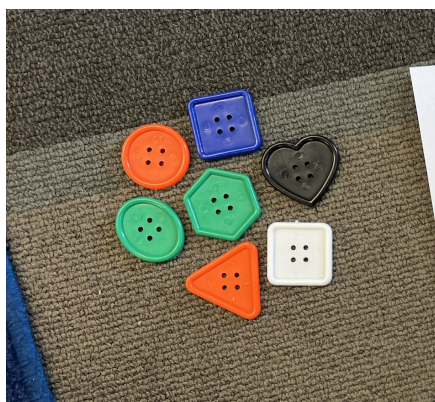


What are counting collections?



Students are tasked with counting a collection of objects in any way that makes sense to them. Some students, like we saw Hazel do, will dump out the collection and start counting. Some students might select to use tools, perhaps arranging their collections on paper plates, cups, bowls, or in egg cartons. Some students organize their counts, some group items, the key is that students have agency to count in whatever way makes sense to them.

CORE COUNTING PRINCIPLES		
DREME (Development and Research in Early Math Education)		
<p>Counting Sequence There is an ordered sequence of number names. Counting involves using the same sequence each time, starting with one. Extending the counting sequence is accomplished by repeating certain aspects of the previously used numbers in a structured way (according to our base-ten number system).</p>	<p>One-to-One Correspondence Exactly one number from the counting sequence is assigned to each object in the collection.</p>	<p>Cardinality The last number assigned to an object in counting the collection indicates the total quantity of objects in the collection.</p>

Big ideas to think about as you support young students to engage in counting collections from DREME (Development and Research in Early Math Education):

- Recognize and support the counting principles
- Identify how children’s counting ideas develop
- Develop pedagogical moves that support children to share their thinking
- Develop pedagogical moves to provide support for children without telling



Bridging Counting Collections to Problem Solving

<p>Questions facilitator asked after Dominik had counted a collection of 13 people:</p>	<p>Questions facilitator asked after Dominik had counted a collection of 12 people:</p>
<ul style="list-style-type: none"> • How many were there? <p>Question based on an attribute of the collection:</p> <ul style="list-style-type: none"> • Could you give me all the blue people? • If you give me all the blue ones, how many people do you have left in your collection? (subtraction problem) <p>*Dominik counts up 9</p> <p>Next question facilitator asks based on problem solved:</p> <ul style="list-style-type: none"> • Oh, you have 9 people..what if I gave you back 1, how many would you have? (adding just 1 more) <p>*Dominik responds "10", pausing but not having to recount from one again</p> <p>Next question:</p> <ul style="list-style-type: none"> • How did you know that? How did you know it was going to be 10? 	<p>Facilitator pays attention to how student is counting and says "there's 12".</p> <p>Question to bridge to problem solving:</p> <ul style="list-style-type: none"> • What if you and I want to share them so we have the same number? (sharing among 2 people- division problem) <ul style="list-style-type: none"> ◦ How many can I get and how many will you get? <p>*Dominik responds "1 and 1" (just gives 1 each)</p> <p>Facilitator responds: What if we want to share all the people? After counting after equally sharing facilitator asks:</p> <ul style="list-style-type: none"> • So how many do you have? How many do I have? <p>*Dominik double checks his counts and sees there is the same amount</p> <ul style="list-style-type: none"> • Is there a way we can now share them so Mr. Drake can have some too? (sharing among 3 people- division problem)

Resources

