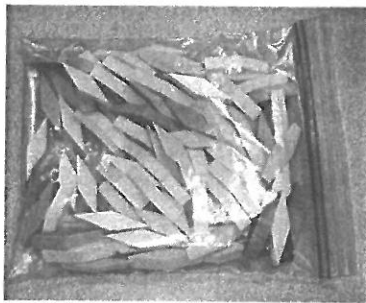


Counting Collections

Tips for Getting Started

Creating Counting Collections

- Gather a variety of items to count. Examples: bottle caps, pasta, birthday candles, stones, glass marbles, hair ties, playing cards, game pieces, buttons, beads, craft sticks, foam stickers, pom poms, game pieces, paper clips, crayons, tiles, cubes, pattern blocks, etc.



- For experienced counters, gather collections that come in packages that can't be opened. (boxes of 100 paperclips, 12 pencils, 8 crayons, mini boxes of candy, reams of paper, etc.)
- Put each collection in a ziplock bag or plastic container.
- The size of your collections will vary with your students. For example: Kindergarten collections might range from 25 (in September) to 150 or more later in the year. First graders may begin with counts of 50-100 and later to count 200 as they transition to counting by tens and ones. Second and third graders may begin counting 100-150 objects by ones. They will transition to counting large numbers (300 +) of objects by tens and ones and counting sets of various sizes (eg. boxes of 8 crayons).

Preparing Other Materials

- Gather a collection of cups, bowls, egg cartons, etc. for students to use to organize their counts.
- Have hundreds charts available for younger students.
- Print recording sheets for students.
- Print anecdotal record sheets for teachers.

Getting Started

- Consider how to group students. Students can work individually, in partners, or in small groups. You know your students best!
- Give students a set of items to count. Try not to provide teacher direction on how to count the items. Students will get different ideas on how to group and count from listening to their peers.
- Ask students to show you how they counted. Showing might mean to leave out the items before they put them away so that you or others can see groupings, how they lined up the items, etc. Showing might mean writing down how items were counting on a piece of paper. (Students will have many different ways of doing this.) Eventually students may use number sentences to show how items were grouped and combined when counting. In order for students to use formal mathematical notation to record how they counted, you will have to introduce some conventions.

Attending to students' thinking during counting collections

- Pay attention to how students are or are not keeping track of what has been counted and what hasn't been counted.
- Try to remain open to various types of groupings. It is tempting to give preference to students who count by base ten units because groups of ten, hundreds, thousands and so forth are often the most powerful grouping. However, it is also important to understand that numbers can be decomposed into other groups. For example, to solve $277 \div 25$ (either in a story or number sentence); it is more useful to know how 275 can be decomposed into groups of 25 than it is to know that 277 is the same as 27 tens and 7 ones.
- Are students flexible in their grouping? When other students group items differently do they recognize that the ending quantity will stay the same? For example, do they recognize that 235 is the same as 23 groups of 10 and 5 ones and also that 235 is 2 hundreds, 3 tens and 5 ones and also....
- Look to see if students are able to combine like groups to make composite groups. For example, do students combine groups of tens to make a group of 100 and then work with that group of 100?

A Sampling of Questions You Might Ask During Counting Collections

- How do you know which items you have counted and which ones you have not counted?
- What were you doing yesterday to keep track?
- Why did you switch strategies today?
- Why did you decide to put those into (cups of 15)?
- How many cups did it take to get up to (150)?
- What are you going to do with all those loose ones?
- It looks like the two of you are using different strategies. Do you have a plan for how you will add your totals together?
- Why did that turn out to be a tricky collection to count?
- What will you do differently next time?

