CGI Math: Counting Collections Bundle
Kindergarten - 1st Grade
Counting Collections Bundle Includes:

1. Getting Started:
   - Why count collections?
     (How this meets CCSS standards)

2. Setting Up Your Collections:
   - How does counting collections work?
   - What does counting collections look like? (Photos)
   - 40 different labels for your collection bags
     **Labels are on an attached document.**
     They can be printed on 2x4 in. labels such Avery 8163 shipping labels.
   - Labels for your collection containers
   - Letter to parents requesting items collections
   - Tips for setting up your collections

3. 2 Student Recording Sheets:
   - 1 sheet for counting independently
   - 1 sheet for counting with a partner

4. Counting Collections Assessment
**Why Count Collections?**

Students who lack number sense fall further and further behind their peers every year because number sense is the number one thing that students need to have in order to understand addition, subtraction, multiplication, division, estimation, rounding and algebraic thinking.

So, how do we develop number sense? Research says that one of the best ways to develop number sense is by counting, counting, counting and more counting…this is why counting collections is so important!
How Counting Collections Works

What you need:

- Clear zip top bags (quart and gallon sized bags work best)
- Items for your students to count
- Baskets, tubs or containers to store your collections in
- Tools for assisting with counting (i.e. cups, trays, bowls)
- Student Recording Sheet

Steps for Setting Up Counting Collections in your classroom

1. Create bags of items, such as popsicle sticks, paper clips, marbles, etc. for your students to count (check your cupboards…they are full of unexpected goodies!).

   **You can also send a letter home to parents along with a baggie requesting that they send a collection of things to count to school with their kid(s).**

2. Separate your collections into 3 - 4 different containers, based on the size of the collection. For example: The first container may have baggies containing 0-10 items, the second container may have baggies with 20-50 items, and the 3rd bin may have baggies with 50-150 items, the 4th bin may have baggies with 200+ items.

   ***These are just suggestions; the amount in each container/baggie should be based on your students’ needs. Your students may need more/less in each container. Listen to your students count to determine what amounts would be best suited for your group of students. Remember, if they can count to 1,000 let them count to 1,000!**

3. Below or beside the bins with the counting collections you will want to have items that students may use to assist them with counting: cups, bowls, trays, plates, 120’s charts, ten frames, etc. Students may use these tools to organize their collections and keep track of groups that they may be making. Invite students to try these tools but DO NOT insist that they use them.

4. The amount of time you spend on counting collections will vary based on your students. Teachers may use counting collections 1-3 times a week, while others (especially in Kindergarten) use counting collections daily. Still others do a counting collection unit in which student use counting collections daily for up to 6 weeks.
Counting collections can be time consuming, so you may need to dedicate most of your math block, if not your entire math block, time to counting collections. Depending on the size of the collection it may take students awhile to count them all.

5. Once you have the materials ready and you have created time in your schedule to support the development of student number sense, you are ready to get started!!!

**What Counting Collections Looks Like in a Classroom**

**What students do:**

1. Students may work in partnerships or on their own. If you pair students up there are some factors to consider:

   **Ability levels:** Do these students have similar ability levels? (i.e. you do not want to pair a student who is learning to count to 10 with a student who is counting into the hundreds)

   **Language:** Does one of these students have stronger language skills than the other?

   **Behavior:** Is one of the students more vocal and outspoken than the other?

   **Organization:** Do these students have an organized system for counting (i.e. do they make rows as opposed to a scattered bunch)?

   **Counting ability:** Is one student able to count a little higher than the other?

   **Unitizing:** Is one student able to put items into a group and count by (2’s, 5’s, 10’s) as opposed to counting one by one. Just because they can say the words orally does not mean they can put it into application while counting. Listen in and ask them to count for you.

2. Students may sit at their desks, on the floor, or scattered around the room alone or in pairs (this is your personal preference) but they will need space for counting their collections…the bigger the collection the more space they may need.

3. Students place their bag of items next to them and begin. First you will want them to estimate how many items are in their collection. This will help them to build their mathematical reasoning. Then they will begin counting to find out the actual amount of items they have. Students can use the student recording sheet (in this packet) to show record how they counted their collection. Finally they will be able to compare the actual amount with their estimate.
4. Both students will have their own sheet to record how they counted. The recording may be difficult for some students. If so, let them concentrate on their counting and give them more time to develop their counting ability before expecting them to record. **Partners may take turns counting, one may record while the other counts, one may verify the accuracy of the others total count, etc.**

**What the teacher does:**

1. Troubleshooting- there are going to be a number of learning opportunities for both you and your students as you go through this process. Teachers learn just as much as kids do during counting collections.

   This is your opportunity to be a researcher ask, ask, ask questions as opposed to providing more instruction. “Can you count that another way?, Did you make any groups?, Could you group it another way?, What do the circles on your paper mean?, What is a tool you could use to help you count?, How many do you have?, Can you count that again? What would happen if there was 1 more/less, ten more/less, 100 more/less?”

   Often when kids are stuck it means that they need more opportunities to practice, they may need a new partner, a smaller collection of items to count, or they may need to see or talk to another student who has figured a particular challenge out. Do not worry if there are kids who have misconceptions or errors on any given day. You cannot fix it all in 45 minutes. Look for growth over time. If you do not know what to do ask another teacher but refrain from telling kids how to count, where to put their objects, and how they should record. Ask them instead, if they can answer the question for themselves, you know you are developing a lifelong learner.

2. Use this time to collect information about your students’ abilities and misconceptions. Use the Counting Collections Assessment (in this packet) to help you see where they are in their growth towards meeting grade level standards.

****Based on research by Julie Kern-Schwerdtfeger and Angela Chan-Turrou****
What Counting Collections Can Look Like

Student is using a variety of strategies and/or tools for counting & recording their collections...some are counting 1 by 1 others are making groups of 5s or 10s.

Collection Tubs:
Each bag is labeled & collections are sorted based on amount of the collection
Dear Family,

We are developing our number sense in class by counting, counting, counting! We are requesting that each family please fill this bag with anywhere from 100 – 1,000 objects that can be counted safely in the classroom. Examples of possible items to bring include: buttons, rocks, pennies, beans, popsicle sticks, paper clips, plastic spoons, etc. Please do not send any edible items. Also, please know that if you have limited supplies to donate a counting collection will be provided for your child.

Thank you,
Counting Collections

I counted a collection of ___________________________.

My estimate is ________________.

The actual amount of my collection was ________.

The total was __________________ the estimate.

(greater than, less than, or equal to)

Compare your estimate and your total amount. Use >, < or =.

_____________            _______________
Estimate                Actual Amount
Counting Collections with a Partner

We counted a collection of _____________________________.

Partner #1's Estimate ________  Partner #2's Estimate ________

The actual amount of our collection was ________

Record how you counted your collection:

<table>
<thead>
<tr>
<th>Estimate #1</th>
<th>Actual Amount</th>
<th>Estimate #2</th>
<th>Actual Amount</th>
</tr>
</thead>
</table>

How did you and your partner count this collection? ________________________________

The total was ______________ our estimate.

(greater than, less than, or equal to)

Compare your estimate and your total amount. Use >, < or =.

_________________________  __________________________
Counting Collections Assessment Tool

This product is designed for teachers to use as a data collection tool to assess students’ abilities with counting collections. It is a way to gather information about a student’s ability to:

* count items accurately
* group items for effective/efficient counting
* understand base 10 number concepts
* represent mathematical thinking
* work and/or record their work in an organized manner.

This product has been created to be used as an ongoing assessment tool. It allows for a teacher to track each student’s growth across time as they work towards mastering grade level standards.

Counting Collections Meets The Following Common Core Math Standards

Kindergarten
K. CC – 1, 2, 3, 4 a. b. c., 5
K NBT – 1

First Grade:
1 NBT – 1, 2 a. b. c.
1 OA – 4, 5, 6
# Counting Collections Assessment K-1

<table>
<thead>
<tr>
<th>Student</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Counting one to one? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>2. How many objects can they count accurately? _____ (cardinality)</td>
</tr>
<tr>
<td></td>
<td>3. Making reasonable estimates? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>4. Making groups? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>Grouping by 5’s? ____ 10’s? ____ other _______</td>
</tr>
<tr>
<td></td>
<td>5. Recording accurately? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>6. Labeling amounts with numerals? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>7. Recording in an organized way? ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>8. Can they compare amounts of physical items accurately? (i.e. which groups are greater, fewer or equal?) ____yes ____no</td>
</tr>
<tr>
<td></td>
<td>9. Can they identify:</td>
</tr>
<tr>
<td></td>
<td>____ 1 more? ____ 10 more?</td>
</tr>
<tr>
<td></td>
<td>____ 1 less? ____ 10 less?</td>
</tr>
<tr>
<td></td>
<td>10. Can they put ten groups of ten together to make one group of 100? _______</td>
</tr>
</tbody>
</table>

Additional Notes: ____________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Credits

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