



LET'S COUNT!

TEACHER VERSION

Subject Level:

Elementary School Math

Grade Level:

K-1

Approx. Time Required:

35 minutes

Learning Objectives:

- Students will be able to use a data table to organize information.
- Students will be able to analyze and make comparisons with their data.

Activity Description

Students will count items in their classroom, record this information in a data table, and analyze and understand uses for such data.

Suggested Grade Level:

K-1

Approximate Time Required:

35 minutes

Learning Objectives:

- Students will be able to use a data table to organize information.
- Students will be able to analyze and make comparisons with their data.

Topics:

- Counting
- Data tables

Skills Taught:

- Analyzing data
 - Comparing numbers
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Materials Required

- The student version of this activity, 2 pages
- Teacher computer with Internet access and speakers and a projector to display web sites

Activity Items

There are no separate items for this activity.

For more information to help you introduce your students to the U.S. Census Bureau, read "[*Census Bureau 101 for Students*](#)."

Standards Addressed

See charts below. For more information, read "[*Overview of Education Standards and Guidelines Addressed in Statistics in Schools Activities*](#)."

Common Core State Standards for Mathematics

Standard	Domain	Cluster
<p>CCSS.MATH.CONTENT.K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).</p>	K CC - Counting & Cardinality	Know number names and the count sequence.
<p>CCSS.MATH.CONTENT.1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	1 MD - Measurement & Data	Represent and interpret data.

Common Core State Standards for Mathematical Practice

Standard
<p>CCSS.MATH.PRACTICE.MP5. Use appropriate tools strategically. Students will collect information in a data table and discuss ways to use this tool.</p>

National Council of Teachers of Mathematics' Principles and Standards for School Mathematics

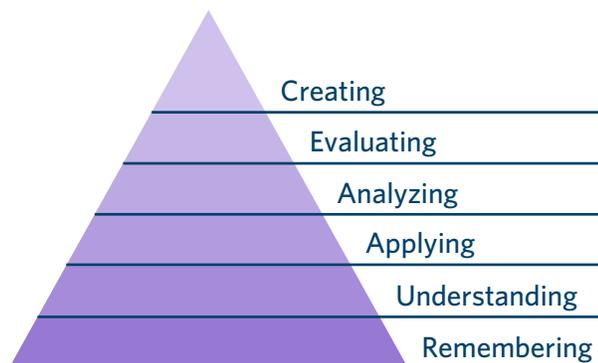
Content Standard	Students should be able to:	Expectation for Grade Band
Number and Operations	Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	Count with understanding and recognize "how many" in sets of objects.

Guidelines for Assessment and Instruction in Statistics Education

GAISE	Level A	Level B	Level C
Formulate Questions	X		
Collect Data	X		
Analyze Data	X		
Interpret Results	X		

Bloom's Taxonomy

Students will **apply** their skills to record information in a data table and **evaluate** that information.



Teacher Notes

Before the Activity

Students must understand the following key terms:

- **Data** – facts usually represented by numbers
- **Least** – the smallest amount
- **Less than** – when one amount is smaller than another amount
- **Most** – the largest amount
- **More than** – when one amount is larger than another amount

Students should have the following skills:

- Ability to count up to 30 from any number
- Ability to write numbers
- Verbal and written number recognition

Teachers should project this animated Census Bureau web site on the screen:

www.census.gov/programs-surveys/sis/resources/games/counting-way.html. (The song “I Count” will play automatically, so teachers should have the sound on their computers turned up.) Then teachers should explain what the Census Bureau does, referring to the *one-pager* mentioned earlier.

Teachers will then lead a class discussion, asking questions like: How does the U.S. Census Bureau make sure that it counts everyone? How does the Census Bureau keep track of all of those numbers?

Teachers will explain that a data table is a tool used to organize information. Teachers should briefly review the key terms mentioned earlier, telling students they will use these words to compare the data that they collect during the activity.

Teachers should review how to compare two numbers and how to determine the value difference between two numbers. Teachers should go over multiple strategies for comparing numbers, such as subtracting and “counting up” from the smaller number.

During the Activity

Teachers will divide students into small teams and walk them through the activity, offering assistance where necessary.

Teachers should remind students to use the comparison strategy that works best for them, whether that's subtracting, "counting up," or another strategy.

Teachers should move around the room, asking students questions like: How do you know? How can you prove your answer?

After the Activity

Teachers will lead a class discussion about possible uses for the data that students collected. For example, school staff may want to know how many light bulbs are in a classroom so that they know how many replacement light bulbs they need to buy. Teachers should also encourage students to think broadly about other ways that data tables can be used, focusing on how a data table helps organize information. As an example here, a teacher could use a data table to record students' ages so that the teacher knows how to plan lessons appropriately.

Extension Idea

- Teachers could have students gather data about something outside of their classroom, such as doors, lockers, and lights in a hallway.

Student Activity

Click [here](#) to download a printable version for students.

Activity Items

There are no separate items for this activity.

Student Learning Objectives

- I will be able to use a data table.
- I will be able to learn from my data.

You are going to pretend to be Census Bureau agents today! Working with your team, pick three things in the classroom that you want to count and write them in the blanks in the data table below. Then count those things and write the numbers in the table.

Data Table

Student answers below will vary based on what students choose to count.

<u>Tables</u>	<u>Lights</u>	<u>Chairs</u>
10	8	23

1. What thing did you count the most?

Chairs

2. What thing did you count the least?

Lights

3. Fill in the blanks and answer the questions below:

- There are more tables than lights in my classroom.
- What is the difference?

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- The number of lights is less than the number of chairs in my classroom.
- What is the difference?

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