

# Math Collecting Taste Test Data



**Jenna Mobley**

## Overview:

Students will conduct a taste test of kale with a random sample of students from throughout the grade level or school by asking students how they would rate the taste of kale from 1 to 10. Students will collect data on a number line dot plot and draw conclusions about the general population's opinion of kale based on their dataset.

Time Needed: Approximately 40 minutes plus additional time for data collection

## Common Core Math Standards:

- Measurement and Data
  - 6th Grade:
    - CCSS.MATH.CONTENT.6.SP.B.4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
  - 7th Grade
    - CCSS.MATH.CONTENT.7.SP.A.1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

## Objectives:

- Students can display numerical data on a scale from 1-10 in plots on a number line dot plot.
- Students can collect data from a random sample of students, representative of the entire grade or school population, and make generalizations about the entire population from that data.

## Materials:

From the Grocery Store:

- Baby kale, washed

From the Classroom:

- Clipboards
- Pencils and coloring supplies



# Math Planning a Taste Test in the Cafeteria

## Reproducibles:

- Blank Dot Plot with a scale from 1-10

## Outline:

- Engage: Host a kale taste test
- Explore: Explore methods for data collection
- Explain: Explain the method of dot plots for a random sample
- Extend: Collect and analyze data

## Lesson Plan:

- Engage (throughout the school)
  - Task students with developing a way to communicate the entire school's opinion of kale to their principal and cafeteria staff.
  - Allow students to brainstorm ideas together for how to collect and share this data.
- Explore (whole group) - 10 minutes
  - Remind students that they can prepare a taste test of kale and offer it to a random sampling from the grade level or school - either during lunch time in the cafeteria or by choosing just a few students at random from multiple classes. Random sampling tends to produce representative samples and support valid inferences.
  - Students should create a dot plot to gather data from the students (at least 60 responses is ideal), specifically how much they like kale on a scale from 1-10.
  - Resources:
    - [Planning a Taste Test \(in the Cafeteria\)](#)
    - Kale Taste Test Recipes:
      - [Super Power Kale Pesto Recipe](#)
      - [Basil Kale Pesto Recipe](#)
      - [Sukuma Wiki Recipe](#)
      - [Massaged Kale Salad Recipe](#)
      - [Kale Chips Recipe](#)
- Explain (whole group / on carpet) - 15 minutes
  - Explain that random sampling tends to produce representative samples and support valid inferences. Allow students to discuss the data that they collected to determine patterns and make inferences.



# Math Planning a Taste Test in the Cafeteria

- Extend (small groups / in seats) - 20 minutes
  - Allow students to display this data in a way that would be persuasive to their principal or cafeteria staff by sharing the data on students' opinions of kale. Consider having students provide an accompanying opinion writing piece having a specific ask for the recipient - for example, offering kale in the salad bar more often.
- Evaluate

*Example Evaluation*

Engage	Student participated in brainstorming methods for collecting data from the entire school population.	<u>    </u> / 25
Explore CCSS.MATH.CONTENT.6.SP.B.4.	Student participated in collecting numerical data on a dot plot.	<u>    </u> / 25
Explain CCSS.MATH.CONTENT.7.SP.A.1.	Student participated in building a valid inference from a representative sample of data.	<u>    </u> / 25
Extend	Student participated in communicating the data collected effectively with the audience.	<u>    </u> / 25
TOTAL		<u>    </u> / 100

# Math Planning a Taste Test in the Cafeteria

## Before the Taste Test Day

**Recruit a Team.** Recruit a team of supporters in your school to help plan and lead the taste test. The team could include School Nutrition Director, Cafeteria Manager, School Administration, teachers, students, and parents.

**Plan the Taste Test.** Gather the team of supporters to plan the taste test - discuss sourcing, scheduling, budget, and preparation, along with planning the day-of details.

### Sourcing, Scheduling, and Budget

- What day will taste test be?
- Where will the produce be sourced? How much produce should be purchased?
- Who will cover the cost of the produce and other needed materials?

### Preparation

- How will the produce be prepared for tasting? What equipment will be needed?
- Who will prepare the produce or recipe and divide into sample-sized portions?
- When should the produce be prepared and where will it be kept?

### Day-of Details

- Where will the taste test be served? Who will serve it?
- Who will be responsible for setup? Who will be responsible for clean up?
- What else will be needed beyond samples? (see “Items to Bring” below)
- How will data be collected?

## On Taste Test Day

**Setup the Taste Test Area.** It is generally best to separate the taste test sampling area from the cafeteria line. Place your taste test in a central, high traffic location where students will easily pass by.

Items to bring may include:

- Tablecloth and signage: “Taste Test Today!”
- Have produce in a bowl/plate on display
- Serving vessels, utensils, and gloves
- Surveying materials

**Collect Data.** Gather tallies from students as they taste. Questions may include:

- Did you try it? (Yes / No)
- Did you like it? (Yes / No)
- Would you try it again? (Yes / No)

## After the Taste Test

**Share Results.** Post the survey results in a creative way - on a bulletin board, in an email newsletter, and send them to Georgia Organics!

***Dig Deeper.** Allow opportunities for students to help plant, grow, harvest, or prepare the produce for a taste test and they will be more likely to try it!*