Overview:
Students will conduct a taste test of legumes with a random sample of students from throughout the grade level or school, asking students how they would rate the taste of legumes from 1 to 10. Students will collect that data on a number line dot plot and draw conclusions about the general population's opinion of legumes from their collection.
(Time Needed: Approximately 40 minutes - with 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 will be able to display numerical data of students’ opinion of legumes on a scale from 1-10 in plots on a number line dot plot.
- Students will be able to collect data from a random sample of students, representative of the entire grade / school population, and make generalizations about the entire population from that data.

For more information, visit www.georgiaorganics.org/for-schools/octoberfarmtoschoolmonth
Materials:
From the Grocery Store:
● Legumes, washed
From the Classroom:
● Clipboards
● Pencils and coloring supplies
Reproducibles:
● Blank Dot Plot with a scale from 1-10

Outline:
● Engage: Host a legumes 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)
  ○ Express to students that they are tasked with developing a way to communicate the entire school’s opinion of legumes 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 legumes and offer the legumes to a random sampling from the grade level or school - either during lunch time in the cafeteria or from classroom to classroom, choosing just a few students at random from each. 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 legumes on a scale from 1-10.
  ○ Resources:
    ■ Planning a Taste Test (in the Cafeteria)
    ■ Dressing Recipes for Classrooms
    ■ Legumes Recipes for Classrooms
● 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.
● Extend (small groups / in seats) - 20 minutes
  ○ Allow students to display this data in a way that would speak to their principal or cafeteria staff, sharing the data on students’ opinions of legumes and potentially accompanied by an opinion writing piece having a specific ask for the recipient - for example, offering legumes in the salad bar more often.

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**Evaluate**

*Example Evaluation*

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