Vegetable Soup Graphs I (Grades 1-3)

Focus Lesson: **Representing & Interpreting Data using vegetable soup recipe** **Materials:** *Growing Vegetable Soup* by Lois Ehlert Smart Board/Chart Paper Photo copy the list/amount of ingredients in back of book for each student (Back cover, only step 1: Wash & Cut) **Time: 1 hour** Pairs with lesson plan: Vegetable Soup Graphs II	***Common Core Standards:** **CCSS.Math.Content.2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems[1] using information presented in a bar graph. **CCSS.Math.Content.3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. **Thinking Skill:** Representing and Interpreting Data

Objective:
Students will participate in making a class bar graph using a vegetable soup recipe
Students will answer simple addition and subtraction (How many more, How many less) problems through interpreting data on class made graph.
Students will brainstorm ingredients to make a healthy vegetable soup.

Connection:
Students will connect literature and mathematics through analyzing recipe information provided in a book in graph form in order to interpret data.

Explicit Instruction:
Ask before reading: How many of you like soup? What are your favorite kinds of soup? Where do the ingredients for soup come from?

Read Aloud: *Growing Vegetable Soup* by Lois Ehlert.

What did the author in this story teach us how to do? What kind of illustrations did Lois Ehlert use to show how vegetables grow? What are your favorite vegetables?

Lois Ehlert also provided the recipe for her favorite vegetable soup in the back of the book.
We are going to use the author's recipe to make a simple bar graph and then we're going to make

some soup recipes!

Model or Review (depending on prior knowledge): how to set up a bar on the SMART BOARD or chart paper.

There are many ingredients listed for Lois Ehlert's vegetable soup. Put recipe up on Smart Board. One way to show the ingredients is to create a bar graph.

Guided Practice:
1. There is a way to draw a graph showing how many of each ingredient go into the soup.
2. Demonstrate and guide how to set up class graph:

What goes on this flat horizontal line? (referring to the X-axis which will list categories for ingredients). What goes on this vertical line called the Y-axis? (how many of each ingredient: for example, how many onions, how many carrots). The Y-axis has numbers.
What am I missing?: referring to labels or title

After setting up graph ask individual students to use the recipe handout in order to come to the board and draw a bar for each category of ingredients.

Model the first: the recipe tells me I need one onion. So I need to go to the X-axis, find onions and then find number one on the Y-axis and draw a bar up to my number 1. Who can come to the board and show me how to draw a bar to tell me how many carrots I am putting in my soup? Continue until bar graph is complete. Leave graph projected.

Independent Practice:
After the class graph is complete give students a worksheet to complete asking 3 or 4 word problems in which they must interpret the data on the class bar graph to answer (more, less, same).

How many more green beans are in the soup than onions?
How many less potatoes are in the soup than tomatoes?
What are two vegetables that need the same amount in the soup?

Go over the questions as a class after independent completion.

Reflection – Group Share:
Now we have one more thing to do before the end of our lesson today!

Tomorrow in groups you are going to be making your own bar graphs using your own soup recipes! You will work in groups and talk to each other about what kind of ingredients and how much of each ingredient you want to include in your own soup recipe.

You can add more foods than just vegetables to make it unique and special, but there is one rule: your soup recipe has to be healthy.
Each soup should have 7-8 ingredients and your numbers should only go up to 10.

For example, you may want 1 carrot, 7 onions and 4 chicken thighs. Start to think about what your soup is going to be called. Try and make it as delicious and as healthy as possible!

Assign students to groups and give them 10 minutes to begin to brainstorm and write down their soup ingredients and how much of each ingredient they want in their recipes.

Reading list:
Growing Vegetable Soup by: Lois Ehlert

Teacher Note: This lesson could also be done to teach picture graphs and would be especially useful in the first grade.