Measurement – Inch by Inch, Row by Row

Goal
Students will determine the space needed to grow the vegetables for a soup recipe. They will then make the soup using seasonal ingredients from a local farm as an optional extension activity.

NC Common Core
Third: Mathematics – 3.MD.6, 3.MD.7; English Language Arts – RI.3.5, RI.3.4, RI.3.7
Fourth: Mathematics– 4.NF.5; English Language Arts– RI.4.1, RI.4.7
Fifth: Mathematics – 5.NF.4, 5.OA.1, 5.OA.2; English Language Arts – RI.5.6, RI.5.7, W.5.2

Materials
Books to Read
Local Farms and Sustainable Foods by Julia Vogel
Who Grew My Soup? by Tom Darbyshire
Saving Strawberry Farm by Deborah Hopkinson

Supplies for each group
Seed catalogue with planting instructions and yield information
Access to the Internet
Scale
One of each vegetable:
   Potato
   Carrot
   Onion
   Tomato
   Green Bean

Activities
Read a book
Make the books Local Farms and Sustainable Food, Who Grew My Soup, and Saving Strawberry Farm available to students.
**Procedure**

The class will be “growing” vegetable soup. The students will have to figure out how much of each vegetable to grow and how much space will be needed in order to make the soup recipe. You may want to demonstrate how to use the scale for weighing produce. Instruct students to use the seed catalogs and the Internet to calculate the average yield of each vegetable per square foot. Explain to students how to fill in the chart on the student worksheet and double check that they understand how to calculate how many of each vegetable they will need to prepare their soup.

**Extension (optional): Make the Soup!**

**Ingredients and Materials**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Materials</th>
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<tbody>
<tr>
<td>3 lbs. potatoes</td>
<td>Large pot</td>
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<tr>
<td>2 lbs. of carrots</td>
<td>Large spoon</td>
</tr>
<tr>
<td>1 lb. onion</td>
<td>Measuring cups</td>
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<tr>
<td>½ lb. green beans</td>
<td>Measuring spoons</td>
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<tr>
<td>2 lbs. tomato</td>
<td>Large bowl</td>
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<tr>
<td>8 bouillon cubes</td>
<td>Hot plate</td>
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<tr>
<td>10 cups water</td>
<td>Sharp knife</td>
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<tr>
<td>3 bay leaves</td>
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<tr>
<td>½ cup parsley, chopped</td>
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<tr>
<td>2 tsp. dried marjoram</td>
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<tr>
<td>2 tsp. dried thyme</td>
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<td>Salt and pepper</td>
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**Instructions**

It is very important to review knife safety with students before proceeding. Students will slice onion and carrots into rounds. Cut potato into cubes. Cut beans into 1 inch pieces. Put in a large cooking pot. Set aside. Students will chop tomatoes into eighths. Put in a bowl. Set aside. Students will add bouillon cubes and water to cooking pot with vegetables. Teacher will be responsible for using the hot plate. Bring to boil. Reduce heat to medium low and simmer, uncovered, about 10 minutes. Make sure students do not linger around the hot plate. Students will add tomatoes. Add herbs. Stir. Bring back to a simmer. Simmer, uncovered, about 30 minutes, until vegetables are crisp-tender.