

**Purpose**

Plant a bed of crops that are featured in the following children's books:

*Sylvia's Spinach* by Katherine Pryor  
*Tops and Bottoms* by Janet Stevens  
*The Turnip* by Jan Brett  
*Too Many Carrots* by Katy Hudson  
*Stone Soup*, folklore  
*Our School Garden* by Rick Swann  
*From Seed to Plant* by Gail Gibbons

Use the garden bed to teach the following standards:

- 1.E.2.2** Compare the properties of soil samples from different places relating their capacity to retain water, nourish and support the growth of certain plants.
- 1.L.1.1** Recognize that plants and animals need air, water, light (plants only), space, food, shelter; these may be found in their environment.
- 1.L.1.3** Summarize the ways that humans protect their environment and/or improve conditions for the growth of plants and animals that live there (e.g. reuse or recycle products to avoid littering).
- 1.L.2.1** Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.
- RL.1.2** Retell stories, including key details, and demonstrate understanding of their central message or lesson.
- RL.1.3** Describe characters, settings, and major events in a story, using key details.
- RL.1.5** Explain major differences between books that tell stories and books that give information.
- RL.1.6** Identify who is telling the story at various points in a text.
- RL.1.7** Use illustrations and details in a story to describe its characters, setting or events.
- RI.1.1** Ask and answer questions about key details in a text.

- RI.1.** Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- 1.H.1.2** Explain the importance of folklore and celebrations and their impact on local communities.
- 1.G.1.3** Understand the basic elements of geographic representations using maps (cardinal directions and map symbols).
- 1.E.1.1** Summarize the various ways in which people earn and use money for goods and services.
- NC.1.MD.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- NC.1.MD.2** Measure lengths with non-standard units.
- Express the length of an object as a whole number of non-standard length units.
  - Measure by laying multiple copies of a shorter object end-to-end with no gaps or overlaps.
- NC.1.MD.4** Organize, represent and interpret data with up to three categories.
- NC.1. G.3** Partition circles and rectangles into two and four equal shares.
- Describe the shares as halves and fourths, as half of and fourth of.
  - Describe the whole as two of or four of the shares.
  - Explain that decomposing into more equal shares created smaller shares.

### Prior to Planting

- Examine soil from several places around the school using a magnifying glass. Poke several small holes in a plastic or Styrofoam cup (1 per soil sample). Add  $\frac{1}{2}$  cup of each soil to a different cup and  $\frac{1}{2}$  cup of water to each cup. Observe and compare how well each retains water by measuring the amount of water that passes through each cup.

- Fertilize and prepare the soil. Allow students to use hand rakes to work the organic fertilizer into the soil. Emphasize the proper use of tools. (How do humans improve conditions for growth?)
- Use non-standard units to measure and grid the garden bed.
- Read *From Seed to Plant* by Gail Gibbons.
- Create seed mats for carrots and turnips by partitioning a paper towel into rectangles.
- During planting, partition rectangles in the grid to allow for appropriate spacing.
- Discuss why plants need space and why some crops need more space than others. Consider planting one or more squares too close together to see what happens when plants do not get the space they need. (This works well with root crops.)
- Choose one or more of the children's books to read and discuss how the book relates to the garden bed.

## Growing

- Observe what plants need to grow. Experiment by planting some of the same crops in containers and limiting light and water. Compare to those in the garden.
- Read one of the following: *Stone Soup*, *Tops and Bottoms*, *The Turnip*, *Sylvia's Spinach*. Have students retell the story to another student. Identify who is telling the story. Determine the central message or lesson. How does this story differ from the book *From Seed to Plant*?
- Create a garden map that includes symbols and cardinal directions.

## Harvest

- Measure and weigh each crop.
- Order the length of the harvested carrots. Compare the length of two carrots by comparing to a third carrot.

- Conduct a tasting with each crop. Collect data on the following statements.









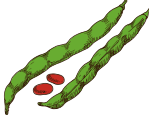











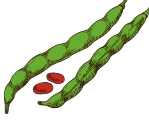
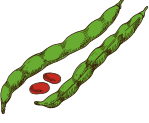











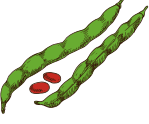











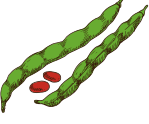


I loved it

I liked it

Not today

## Your Notes & Ideas

# Storybook Crops Garden Bed

4' x 12' garden bed



**Carrots**  
16 per ft<sup>2</sup>



**Cabbage**  
1 per ft<sup>2</sup>



**Kale**  
2 per ft<sup>2</sup>



**Peas**  
8 (with trellis) per ft<sup>2</sup>



**Turnips**  
9 per ft<sup>2</sup>



**Spinach**  
9 per ft<sup>2</sup>



**Bush Beans**  
9 per ft<sup>2</sup>