

Plotting Your Garden Meal

Grade Level: Grade 2

Follow up from: “Garden Meal” activity, in which students dismantled their favorite recipes into crops to be grown in the garden

Description

In this lesson, students will learn about why plants need to be spaced, how farmers figure out how to space their crops, and do a theater activity to visualize this. Then they will practice spacing vegetables on a graph paper map of a garden bed.

Background

Guiding Questions

Why would plants need space from each other? What do plants need? Why might planting them too close together stop them from getting what they need?

Big Idea

You can use math in the garden to figure out how to best space your vegetables and get the best plants.

Learning Objectives

To understand why plants need to be spaced out, and to use addition and a simple mapping technique to plot out vegetable spacing.

Materials

- Graph paper
- Colored pencils
- Rulers
- Seed packets

Preparation

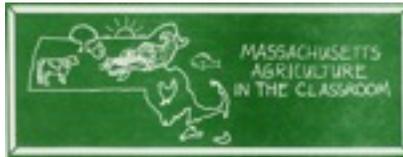
Gather seed packets. Use seed packets from the vegetables in their garden plans from the “Garden Meal” activity.

Introducing the Lesson

Explain that farmers use math to determine how to plant their crops. Talk about why plants need space.



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Engage Student Interest: Bring out their garden meal pictures. Review what they did. Explain that they are now going to learn how to space out the vegetables in their meal beds so that they can grow well and make their delicious dishes.

Procedure Total time approximately mins.

1. In an open space outside or in another open space inside, explain to students that they are going to all be plants in a garden. First, they are planted seeds. Have them crouch and curl up in a group in the middle of the room. Tell them they are seeds, and a second grader has planted them all in the middle of the bed.
2. Next, explain that they are to grow, when they are growing, they should gently, without touching anyone, stretch out their leaves. Remind them that they are plants, and cannot move their feet. Is anyone having a hard time reaching out their leaves to gather sunlight? Yes? Ok, freeze!
3. Now, they should step away from other students until they have enough space to stretch out their arms. Ask them to curl up once more. Explain that they have now been planted by a careful second grader who understands what space they need.
4. Have students come back to a circle/ their desks. What did they notice about the space they needed as full grown plants vs as seeds?
5. Next, hand out a piece of graph paper (or use the included one at the end of this lesson) to each student, and ask them to write the name of their garden on the top, and the names of 2 vegetables from their garden, and choose a color for each vegetable. Next to the name of the vegetable, color in a few squares in that color as a simple key.
6. Tell or have them look up the plant spacing for each of their vegetables.
7. Now ask them to mark out and color in squares in each direction to indicate how much space a plant needs. E.g. Beans with a 3" spacing would have a three inch square (three squares in each direction.) Tell them they can fit as many in their bed as they can.

Wrap Up and Assessing Student knowledge

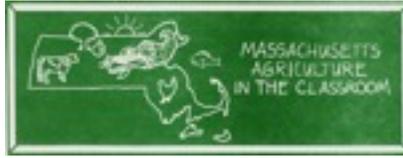
Have students show their beds to the class and talk about what they did. Ask them if they gave their vegetables enough space to stretch out. How many vegetables could they fit in their bed? Why might some plants need more space than others?

*** MA Department of Ed. Standards in this lesson***

Life Science 1: Recognize that animals and plants are living things that grow, reproduce, and need food, air, water.



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Life Science 7. Recognize the changes in appearance the animals and plants go through as the seasons change.

Measurement and Data 1.

Represent and Interpret Data 10.

Extensions: Do this as a class with whole garden beds. Make cards to represent different plant spacing needs and arrange in different ways on a grid. Research square foot gardening, and look into making a planting grid for your plants.

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Thanks!



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