



Planning a Garden

Part 2

(Modified from Edible Schoolyard lesson)

NGSS Addressed

K-ESS3-1 Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

Math CCSS Addressed

K.CC.4 When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

K.MD3 Classify objects into given categories.

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.4 Estimate lengths using units of inches, feet, centimeters, and meters.

3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.



Materials

Large paper (butcher paper would work best) for K-1 students to plan out their garden, crayon or markers, large construction paper for 2nd -3rd grade or copies of graph paper (see template) for 3rd-5th grade.

Teacher note: Save the garden maps created by students for Lesson 8!

Success Skills

- **Collaboration:** working in groups to select seeds and make a plan for a hypothetical garden.
- **Communication:** students communicate their opinions on why certain seeds/plants should or should not be planted in a garden.
- **Critical Thinking:** students defend their choices they make concerning the choice of seeds or plants for a garden.
- **Creativity:** students design their own garden space.



Challenging Question

How do I know if a seed will grow? How can planning help or hinder the success of a garden?

(All Grades) Access prior knowledge

- Review the seed to table cycle with the class. Call attention to the Planting a Seed stage.

Ask: If I put a seed in our school garden and water it... any seed ... will it grow? How do I know it will grow?

- Review companion plants.
- Review the choice the class (K-1) or student groups (2-5) made regarding companion plants.



Explore

Kindergarten and First Grade Explore

In this lesson, students will:

- Identify plant needs, including space.
- Recognize that different plants need different amounts of space.

Say: The class has made their four seed choices, so today we will make a garden map to show your choices.

Review: read through the seed cards from the plants the class chose. Talk about the information provided on the cards.

Assign students a seed and have them decorate the garden plot of that seed, four at a time.

Ideas for other centers at this time:

1. Book Center with different books about plants and seeds.
2. Seed sorting on a tray, mix up three or four different types of seeds. Have students sort the seeds and then draw them.
3. Picture center: Have students sort through pictures of different vegetables and fruits, sorting them by the initial consonant.

Kindergarten and First Grade Revision and Reflection

Journal: Students write about the type of plant they liked best. They can describe the plant, its companion plant or any other information they remember about the plant.



Second and Third Grade Explore

In this lesson, students will:

- Identify plant needs.
- Recognize that different plants need different amounts of space (figure out area and perimeter).

Say: Each group has made their six seed choices, so today we will make a garden map to show your choices.

Review: Have each table group read through the seed cards from the plants they chose. The group should confirm their choices before creating their garden map.

- Have students label each space with the seed that will be planted in each section. Teacher may have each student group present their garden choices in front of the class.

Third grade: Third grade students can map out their gardens on graph paper. Students map out on the squares and count the number of squares used for each plant. This is a good introduction to area and perimeter.

Second and Third Grade Revision and Reflection

- After the group presentations, students reflect individually on how they would change their choices, given the information they received from the other groups. Students draw their own garden, and explain the reasons for their seed selections.
- Students may also add other things to their garden, like trees to provide shade for plants that need shade or partial shade.

Fourth and Fifth Grade Explore

In this lesson, students will:

- Identify plant needs.
- Recognize that different vegetables need different amounts of space (figure out area and perimeter).
- Figure out harvest amounts using multiplication.

Say: Each group has made their six seed choices, so today we will make a garden map to show your choices.

Review: Have each table group read through the seed cards from the plants they chose. The group should confirm their choices before creating their garden map.

- Have students label each space with the seed that will be planted in each section. Teacher may have each student group present their garden choices in front of the class.

- Students can also map out their gardens on graph paper, with each square representing one square foot. Students map out the garden and count the number of squares used for each plant. This is a good practice of area.
- Finally, based on the garden map, have students figure out the number of plants that will be harvested in each section.

Fourth and Fifth Grade Revision and Reflection

- After the group presentations, students reflect individually on how they would change their choices, given the information they received from the other groups. Students draw their own garden, and explain the reasons for their seed selections.
- Students may also add other things to their garden, like trees to provide shade for plants that need shade or partial shade.





