UNIT PLAN School Garden: Planning with a Purpose Kindergarten

Purpose

Plant a bed of roots and shoots. Observe living and non-living organisms in the garden. Use the garden bed to teach the following standards:

K.P.1.1 Compare the relative positions of various objects observed in the classroom and outside using position words such as: in front of, behind, on top of, under, above, below and beside.

K.P.1.2 Give examples of different ways objects and organisms move (including falling to the ground when dropped).

K.P.2.1 Classify objects by observable physical properties (including size, color, shape, texture, weight, and flexibility).

K.P.2.2 Compare the observable physical properties of different kinds of materials.

K.L.1.2 Compare characteristics of living and non-living things in terms of their:

- Structure
- Growth
- Changes
- Movement
- Basic needs

NC.K.CC.3 Write numbers from 0-20. Represent a number of objects with a written numeral 0-20, with 0 representing a count of no objects.

NC.K.CC.4 Understand the relationship between numbers and quantities.

NC.K.CC.5 Count to answer "How many?"

NC.K.CC.6 Identify whether the number of objects, within 10, in one group is greater than, less than, or equal to the number of objects in another group, by using matching or counting strategies.

NC.K.MD.1 Describe measurable attributes of objects; and describe several different measurable attributes of a single object.

NC.K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of/less of" the attribute.

NC.K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

K.H.1.2 Explain how seasons change over time.

Prior to Planting

- 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.
- Grid the garden bed.
- Sort seed packets into roots and shoots.
- Use counting and predicting to create seed mats for each crop. Determine which crops are less than, more than, and equal to spinach, relative to the number of plants per square foot.

Growing

- Observe plants weekly on the same day. Have students choose one plant and create a "baby book" for their plant, drawing a weekly picture of their "little one". Observe the change over time.
- Use positional words to describe the relative positions of the crops as well as the soil, roots, leaves, sky, other beds, etc.
- Count the number of plants in each square foot and compare using more than, less than, and equal to.
- Use magnifying glasses to make observations in the garden, what living organisms do you observe? What non-living organisms do you observe?
- Continue to observe any living organisms. How do they move? How do plants move?
- Go on a scavenger hunt through the garden looking for specific physical properties (including size, color, shape, texture, weight, and flexibility), use egg crates to collect items that exhibit a specific physical property.

- Read one or more of the following books:
  Sylvia's Spinach by Katherine Pryor
  The Turnip by Jan Brett
  Too Many Carrots by Katy Hudson
  A Carrot Seed by Ruth Krauss

- Observe how the garden changes throughout the season. Take pictures of the garden each month and observe the seasonal changes.

Harvest

- Measure and weigh each crop.

- Sort the harvest into roots and shoots.

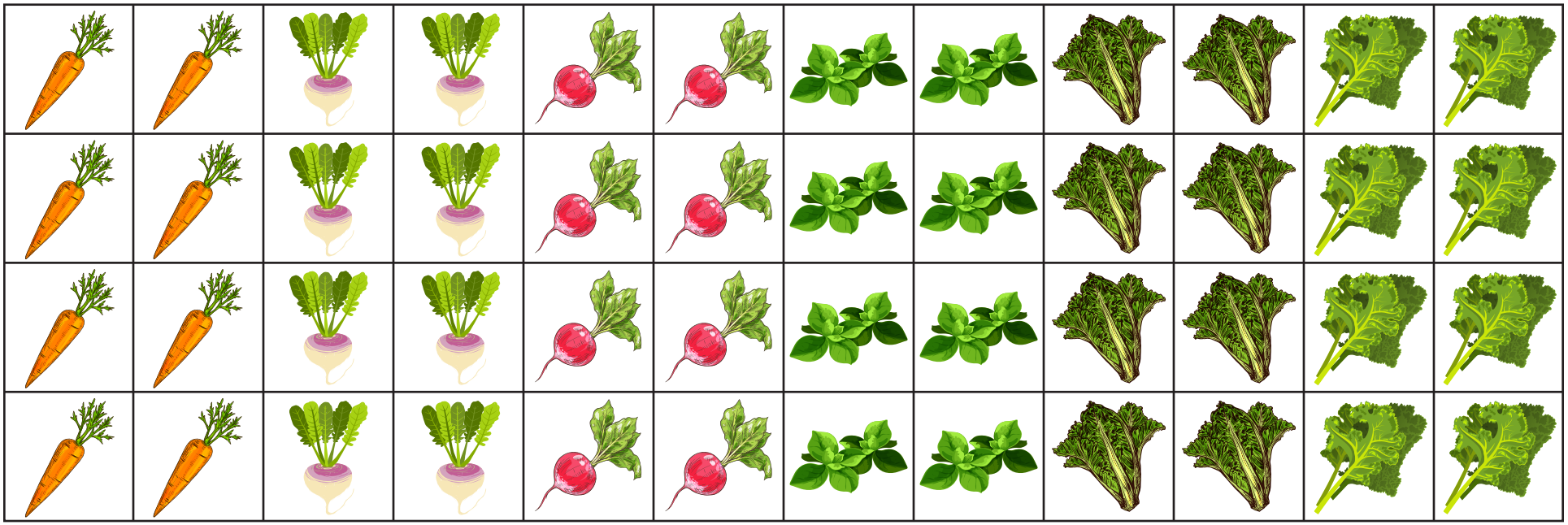
- Sort the roots into carrots, turnips, and radishes, sort the shoots into spinach, lettuce, kale.

- Count the number of each root crop. If rainbow carrots were planted, sort and count the number of each color.

- Celebrate the harvest with a tasting of each crop, consider making turnip pancakes.

Your Notes & Ideas

Roots & Shoots Garden Bed



4′ x 12′ garden bed

Carrots
16 per ft^2

Radishes
16 per ft^2

Lettuce
4 per ft^2

Turnips
9 per ft^2

Spinach
9 per ft^2

Kale
2 per ft^2

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