

Kindergarten Fall garden introduction

Fall Introduction to the Garden – Kindergarten Lesson Overview

Science Standards addressed:

EALR 1: Systems: *Part-Whole Relationships* K-1 Living and nonliving things are made of parts. People give names to the parts that are different from the name of the whole object, plant, or animal.

EALR 2: Inquiry: *Making Observations*

Students learn that scientific investigations involve trying to answer questions by making observations or trying things out, rather than just asking an adult.

EALR 3: Application: *Tools and Materials* Students learn to use simple tools (e.g., pencils, scissors) and materials (e.g., paper, tape, glue, and cardboard) to solve problems in creative ways.

EALR 4 LS1: Life Science. Structures and Functions of Living Organisms: *Plant and Animal Parts* Students learn that all living things have basic needs, and they meet those needs in various ways. Just as humans have external body parts that perform different functions to meet their needs, animals and plants also have body parts that perform different functions to meet their needs. A magnifier is a tool that reveals further details of plant and animal parts that are not easily seen with the unaided eye. Learning about the diverse needs of plants and animals and the various ways they meet their needs will help to prepare students to understand more detailed structures beginning at the 2-3 grade band.

Objective: To introduce students to the garden, help create garden rules, harvest pumpkins (if available)

Date: Mid-September

Time Required: 15 minute introduction; (3 groups of 8 for 15 minutes each=1 hour for class)

Materials: hand lenses, pictures of gardens (some are included separately as a pdf.file), clippers for pumpkins (if available)

Vocabulary Words:

garden: an area of land used for growing flowers or vegetables.

creature: a living person or animal

garden bed: an area of the ground used for planting flowers or vegetables.

Class Discussion and Action:

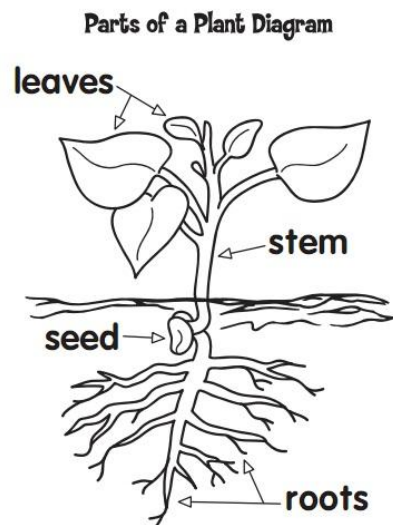
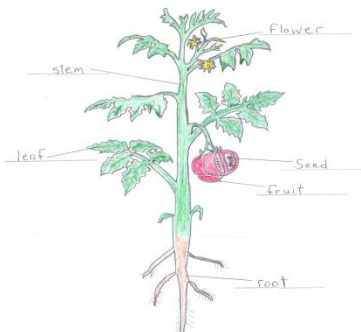
- 1) In the classroom talk to the full class about the garden. Prior knowledge will be varied among the students. *Who knows what a garden is? Show pictures of gardens. What can grow in one? What kinds of creatures can live in a garden? What is needed for a garden to grow?*
- 2) Tell them that
 - a) Each grade level takes care of a garden bed.

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- b) Every year they get to plant and harvest something new.
- c) There is an afterschool garden club everyone can sign up for later in the year. (if available)
- 3) Have students help create the Garden Rules. *What are important rules so everyone and everything is safe in our garden?* Ideas to include:
 - a) Wait outside the fence and wait for an adult to give the "OK" before going inside.
 - b) Feet stay on the paths.
 - c) Ask before eating/picking.
 - d) Respect all things. Be kind to plants, animals and each other.
 - e) Keep tools below your waist (bellybutton).
- 4) In small groups (3 groups of 8 for 15 minutes each=1 hour for class) take a tour of the garden with hand lenses.
 - a) Taste and smell plants from the herb garden.
 - b) Guess how tall the sunflowers are.
 - c) Feel the different types of leaves.
- 5) Each group that tours (3 groups from 3 classes=9 groups) should be able to harvest a pumpkin to take back to the classroom. They can then use the pumpkins in their fall classroom activities. Pumpkins should be orange and the stem should be drying out. If we wait too long to harvest pumpkins, they disappear.

Follow-up activities in the classroom: *templates are included separately as a pdf. file. These activities can also be done in the spring.

1. **Observation picture:** Have students draw a picture of what they saw in the garden in their science journal.
2. **Garden Rules:** Have students recall the garden rules and write them on a poster as a class.
3. **Vocabulary:** See Garden and Weather Vocabulary Cards* to use with your class.
4. **Parts of a plant:** Use one of the parts of a plant diagrams* to make a pictorial input chart (GLAD strategy).



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See Plant a Garden Science and Writing*, which includes templates for parts of a plant and plant needs.

Name _____

PARTS OF A PLANT

leaves	seeds	stem
roots	flower	sunlight

Name _____ Sort the words into the correct box.

Plant Parts

Plant Needs

seeds	sunlight	leaves	water
fruit	flower	air	soil
	stem	roots	

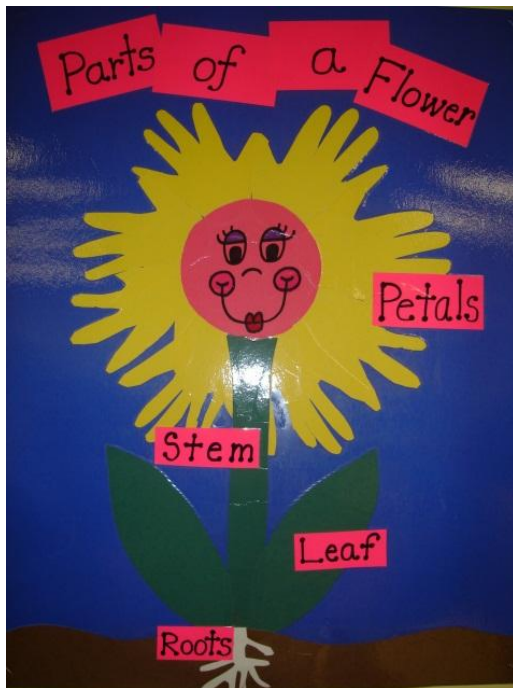
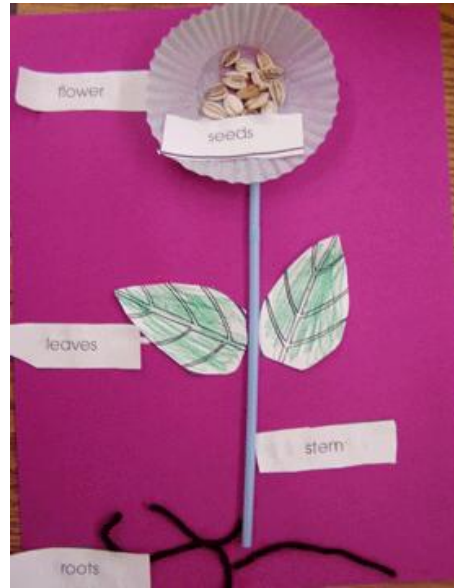
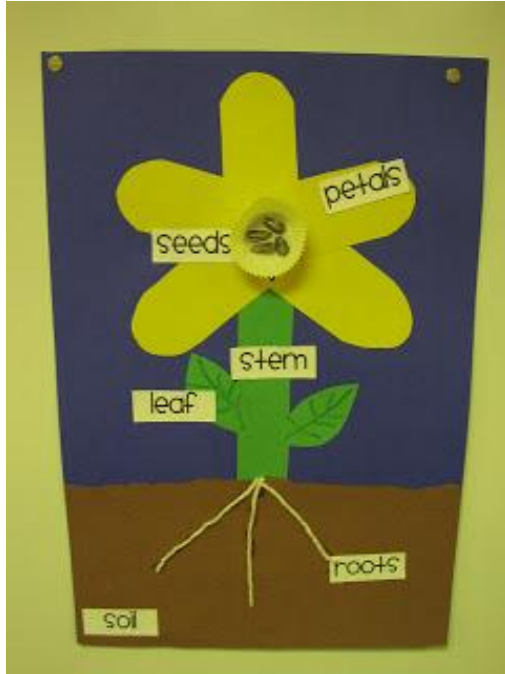
5. **Life Cycle of a Plant:** See Plant Life Cycle in Order* and Pumpkin Life Cycle Vocabulary Cards* to show the life cycle of a plant.

Seed

The **1st** stage in a pumpkin's life cycle.

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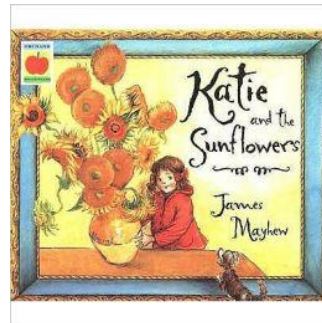
6. **Parts of a Flowering plant:** If your school garden has flowers at the beginning of the year, these photos may inspire ideas. Many other examples can be found with a simple internet search. Check interactive whiteboard sites such as Promethean Planet to label a flowering plant. See Montessori Part Sunflower Matching Cards.*



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7. **Van Gogh Sunflowers:** If your school garden has sunflowers growing at the beginning of the year, there are examples of art lessons online using Vincent Van Gogh's sunflower paintings as inspiration. Check Promethean Planet for sunflower or Van Gogh overviews. Art Masterpiece Moms have a lesson at <http://www.artmasterpiece.com/2011/06/van-goghs-sunflowers.html> which includes a link to background information on Van Gogh. Discussing and using circles can be integrated. Also see Cheryl Trowbridge / www.TeachKidsArt.net and the book, Katie and the Sunflowers by James Mayhew.



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Standards addressed:

CCSS.Math.Content.K.CC.B.4a 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.

CCSS.Math.Content.K.CC.B.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

CCSS.Math.Content.K.CC.C.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.¹

8. Garden Counting:

a. <http://www.makinglearningfun.com/themepages/SunflowerOnetoOneCorrespondence.htm>

“Print, cut and laminate cards. (downloads are on the site) Purchase a bouquet of fake sunflowers whose sunflower head is approximately 1” or less across.

Pull the sunflower heads from the bouquet. On the back of the head will be a plastic stem that is one inch long.

Clip that off so the head can sit somewhat flat.

Give the children the sunflower heads and the cards.

Have them put one sunflower head on each stem.

This is a great activity to reinforce one to one correspondence.”



b. Counting plants and parts of plants in the garden can be integrated during garden visits. *How many plants are in this bed? How many petals does this flower have? How many leaves/stems can you count? Are there more pumpkins or stalks of corn?*

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Standards addressed:

CCSS.Math.Content.K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.

CCSS.Math.Content.K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

CCSS.Math.Content.K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

- 9. Geometry and Measurement in the garden:** Shapes and positions can be discussed during garden visits, art, and parts of a flower. *What shape is this flower bed? What shape is the center of the sunflower? Comparisons can be made among plants. What plants are the shortest? Which plants are taller?*

a. Model Shapes: Have students create a garden using shapes on the interactive whiteboard, a computer drawing program, or with math manipulatives.



b. Gardening Measuring Freebie*: For measuring and comparing flower heights.

Garden Measuring

Instructions for use:

1. Cut in half and laminate (if desired) pages 3 - 6.

2. Place at a center with manipulatives for students to measure each flower's height. When at the center, students connect the manipulatives to determine how tall each flower is.

Variations:

*Students can measure just the stem part of the flower.

*You can also have students place the flowers in height order from tallest to shortest or shortest to tallest.

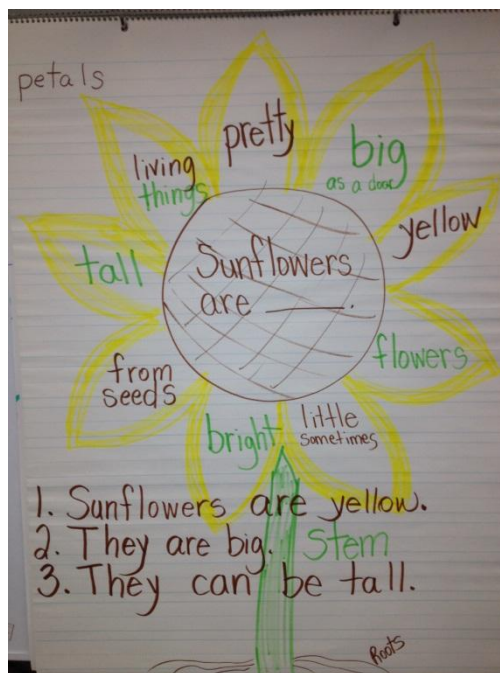


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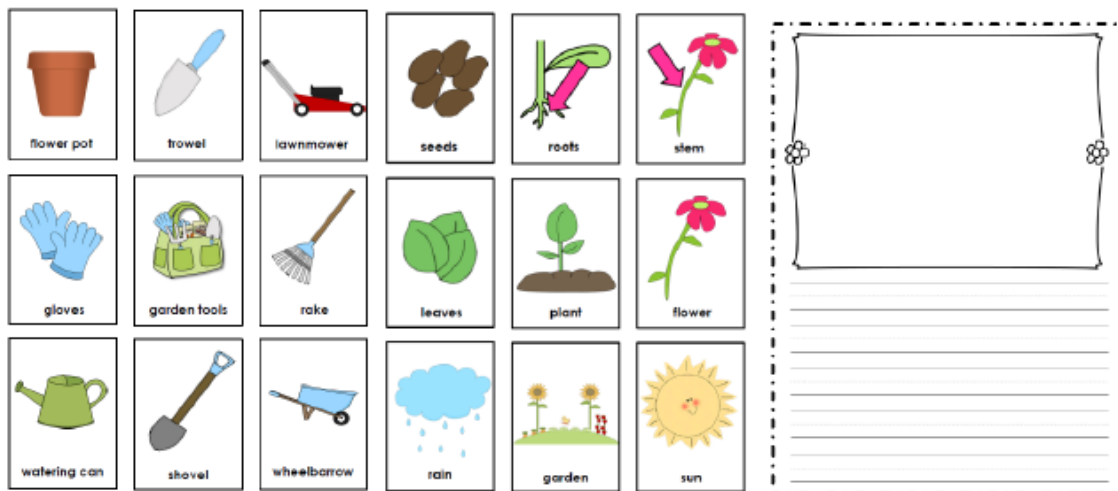
Standards addressed:

CCSS.ELA-Literacy.W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

- 6) **a. Sunflower writing:** from Green Bean Kindergarten (they have many other ideas on the theme) <http://greenbeankindergarten.wordpress.com/tag/sunflower-art/> This activity models informative writing for students at the beginning of the year.



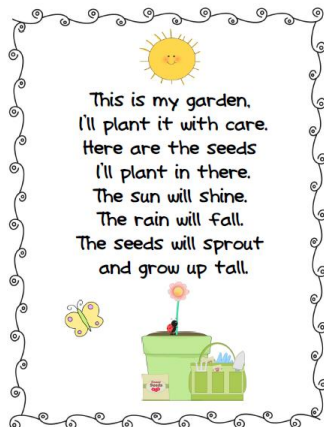
- b. Plant a Garden: Science and Writing*** has vocabulary cards and a writing template.



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Standards addressed:

CCSS.ELA-Literacy.RL.K.5 Recognize common types of texts (e.g., storybooks, poems).



Parts of a Plant (To the tune of “The Wheels on the Bus”)

The roots on a plant grow underground,
Underground, underground.

The roots on a plant grow underground,
Roots are part of a plant.

The stems on a plant hold up the leaves,
Up the leaves, up the leaves.

The stems on a plant hold up the leaves,
Stems are part of a plant.

The leaves on a plant are making food,
Making food, making food.

The leaves on a plant are making food,
Leaves are part of a plant.

The flowers on a plant are growing seeds,
Growing seeds, growing seeds.

The flowers on a plant are growing seeds,
Flowers are part of a plant.

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What Makes a Garden Grow, Grow, Grow Patricia Elizabeth Garner

What makes a garden grow, grow, grow?

(Measure from floor with hand at three levels)

Lots of work with a rake and hoe,

(Pretend to rake and hoe)

Seeds gently planted in a row --

(pretend to plant seeds with thumb and index finger together)

That makes a garden grow, grow, grow.

(Measure from floor with hand at three levels)

What brings the seedlings up from the ground?

(With palms up, close to floor, measure at three levels)

Rain from the sky coming down, down,

(Raise hands high and flutter fingers down, down, down)

Bright yellow sunbeams shining round.

(Make arms into big circle overhead)

Help bring the seedlings up from the ground.

(With palms up, close to floor measure at three levels.)

Everything Grows (Harcourt Trophies) Big Book of Rhymes and Songs p. 16, CD song number

Standards addressed:

CCSS.ELA-Literacy.RF.K.3c Read common high-frequency words by sight (e.g., *the, of, to, you, she, my, is, are, do, does*).

CCSS.ELA-Literacy.RF.K.4 Read emergent-reader texts with purpose and understanding.

I See the Vegetables

