

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

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LESSON 1.4

Planting a Pizza and Spaghetti Herb Garden

Unit:
PLANTS AND GARDENING

PRECEPTS

- D. Character
 - D.5 Practice self discipline



Lesson Type:
Large Group

NATIONAL STANDARDS

- FPP.04.02.02.a. Identify and describe products derived from fruits and vegetables.
- PS.03.02.02.a. Explain the reasons for preparing growing media before planting.
- PS.03.02.03.a. Demonstrate proper planting procedures and post-planting care.
- NL-ENG.K-12.12 – Applying Language Skills

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

- Define the term herb.
- Identify common cooking herbs used in pizza and spaghetti.
- Properly plant and care for a container-grown herb garden.





TIME

Instruction time for this lesson: **50 minutes.**



RESOURCES

www.indoorherbgarden.org



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ **Cooked cheese pizza** (*size depends on number of students*)
- ✓ **Pizza cutter**
- ✓ **Napkins**
- ✓ **Small paper plates** (*enough for one piece of pizza per student and for samples of dried herbs*)
- ✓ **PALS.1.4.LG.AS.A and PALS.1.4.LG.AS.B** – needed for instructor only
- ✓ **Dried herbs:** *oregano, garlic, basil, thyme, parsley, rosemary*
- ✓ **Live herb plugs** (*if available*): *oregano, garlic, basil, thyme, parsley, rosemary*
- ✓ **Selected herb seeds/bulbs** (NOTE: Use seed only if plugs not available)
- ✓ **8-inch Azalea pots or 4-quart plastic ice cream buckets for growing herbs** (*one per student*)
- ✓ **Potting soil** (*enough to fill every planting pot 3/4 full. Have soil split into two containers*)
- ✓ **2 coffee cans** (*or similar size cans for scooping soil into planters*)
- ✓ **3 popsicle sticks for each student** (*used as planting markers*).
Pre-label sticks with herb names
- ✓ **Address or adhesive labels with each students name** (*for labeling planters*)
- ✓ **Calendar** (*used to mark dates when plants will be ready for harvest*)
- ✓ **Writing surface with markers**



KEY TERMS

The following terms are presented in this lesson and appear in ***bold italics***:

Herb

Oregano

Garlic

Basil

Thyme

Parsley

Rosemary



CONTENT OUTLINE

- I. Defining the term **herb**
- II. Common cooking **herbs**
- III. Planting a **herb** garden

INTEREST APPROACH

Students will begin today's lesson by eating a 2" x 2" piece of cheese pizza then brainstorming what gives the pizza its flavor.



Raise your hand if you like pizza. Wow, many of you like pizza. That is great because you get to be pizza taste-testers today. So here are the rules a pizza taste-tester must follow:

- 1) Stay in your seats.
- 2) Remain quiet.
- 3) Do not taste the pizza until I say go.
- 4) When I say go, take small bites of pizza and think about all the flavors you taste.



So let's review the rules for a pizza taste-tester.

Review four rules again using a Choral Response e-Moment®



We need to ...

1. *Stay in our seats.*
2. *Remain quiet.*
3. *Do not taste the pizza until I say GO.*

When do you get to take a bite? (If they don't answer correctly remind them "When I say Go,") What questions do you have?

*Hand pizza out to each student. Once all pieces are distributed, say **GO**.*

*After students have finished pizza, you will ask them to brainstorm all the things that give the pizza its flavor. Examples will be cheese, crust, sauce. Students may not come up with more than this so you may have to help them to identify other ingredients that give flavor, such as **herbs**.*



Let's see if we can identify the ingredients you tasted in the pizza. Raise your hand if you can tell me one thing you tasted when eating the pizza.

*As students raise their hand, list the items they come up with on a writing surface such as a white board or poster board. If no one has said **herbs** by the time you have called on everyone, you will need to explain there are other items that also provide flavor, such as **herbs**.*



You came up with many of the things that give pizza its flavor, such as cheese, sauce and crust. But there is one more thing that gives pizza its flavor. They are called **herbs**. Raise your hand if you have ever heard of the word **herbs**? It looks like some of you have. Let's discover what **herbs** are.

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Define the term **herb**.



- I. Define the term **herb**
 - A. Write out the correct spelling – **herb**
 - B. Sound out the correct pronunciation – “**erb**”
 - C. Examine two common **herbs** used in pizza

*Many students will not have a connection to the word **herb** so you will need to provide some experience with **herbs** for them. First write the word “**herb**” on a writing surface. You will need to explain the pronunciation: **erb**. The H is silent. However, the British pronunciation uses the “h” so it is pronounced as spelled: “**Herb**.” Either form is correct. For purposes of this lesson, it is suggested to use the more common American form of “**erb**.”*

*To further make a connection for students, allow them to examine samples of **herbs**. The most convenient form is dried **herbs**, which can be found at your local supermarket. If you have a garden center, you may be able to obtain live **herbs**, which can also be used. Inform students that two things commonly used in pizza are **garlic** and **oregano**. **Garlic** and **oregano** are both **herbs**. Pass samples of **oregano** and **garlic** to students and have them examine and smell.*



Herb is spelled (write out on the writing surface **H-e-r-b**) and is pronounced “erb.” The H is silent. Use Choral Response e-Moment When I say Mmmm, they're yummy, everyone say **erb**. Ready, Mmmm they're yummy.

Wait for student response.



That's great!



An **herb** is a plant that can be grown in the garden. It adds flavor to other foods. When **herbs** reach harvest size, they are picked, dried and chopped up so they can be added to foods like the pizza you just ate. I have two **herbs** like those used in the pizza today. One is called **oregano** and the other **garlic**. In a moment, we will see and smell these two **herbs**.

*Note: If you have both a live sample of **oregano** and **garlic** and the dried version found in stores, hold up the live plants for all students to see. Next place a tablespoon of **oregano** on a small plate and a tablespoon of **garlic** on another plate. Walk the samples around to each student so they can see and smell both **herbs**.*



As we learned, **herbs** are plants.

If you have live plant samples, say the following; if not, skip to next instruction.



This is what **oregano** looks like when it is growing in a garden. This is a **garlic** plant.



On this plate, I have placed **oregano**. On the other plate I have placed **garlic**. As I come around to where you are seated, you will look at each **herb** and smell them. Everyone will need to stay in their seats while I bring the **herbs** around for you to see.

OBJECTIVE 2: | Identify common **herbs** and their uses.



II. Common cooking **herbs**

A. **Herbs** found in most kitchens

*Introduce students to the idea that **herbs** are used in other foods besides pizza and spaghetti for example. Show students other common **herbs**.*



We just looked at and smelled two common **herbs** found in pizza. There are **herbs** used in many other foods as well, like spaghetti sauce. Four other common **herbs** you could find in most kitchens are **parsley**, **basil**, **thyme** and **rosemary**.

*Write the name of each **herb** on your writing surface as you say it. After writing the name of the **herb**, show students sample of the **herbs**. If time permits, let students smell each one.*

OBJECTIVE 3: | Properly plant and care for a container-grown *herb* garden.



III. Planting a *herb* garden

- A. Select containers
- B. Fill with soil
- C. Plant seed or plug
- D. Water
- E. Place in area that receives sunlight

*To plant the **herb** garden, divide the students into two groups. Group 1 will plant **oregano**, **garlic** and **basil**. Group 2 will plant **thyme**, **parsley** and **rosemary**. Each student will plant three **herbs** in their pots, one of each type assigned to their group. Example: Each student in Group 1 will plant one **oregano**, one **garlic** and one **basil** plant in their planter. Students will need the following: one 8 to 10-inch pot, seeds or plugs of assigned **herb** and enough soil to fill the pot.*

Note: Since placing potting soil in the pots can be messy, you will want to do this activity in an area that can easily be cleaned or, if weather permits, outdoors. Have two containers of soil at the front of the classroom or planting area with one coffee can in each container. Make sure the containers have enough room between them that two students at a time can be around each container. Have the planting pots divided into two stacks and locate one near each container of soil.



Now that you have seen some common *herbs*, let's plant an *herb* garden. It will be called our Pizza and Spaghetti Garden since the *herbs* we are planting are used to make pizza and spaghetti sauce. Once they grow to harvest size, we can use them to make a pizza or spaghetti. Does that sound like fun?

The right side of the room will be Group 1 and the left side of the room will be Group 2.

You can also number them 1,2,1,2, etc., which ever works best for your situation.



In order to properly plant the Pizza and Spaghetti Garden, we need the following items: a planting pot.

Show students the 8-10-inch planters you have, the plants or bulbs, depending on what you are using, and soil.



When I say SOIL, Group 1 will quietly walk to the front and line up by the soil container on the right. Group 2 will quietly walk to the front and line by the soil container on the left. Everyone in Group 1, point to where you will line up. Group 2, point to where you will line up. Excellent!

SOIL

Wait for students to line up in front of soil containers.



Thanks for lining up so quickly and quietly! Next we will help each other fill the planting pots with soil.

Select the first two students in line and demonstrate the following.



The first person will hold the planting pot and the second person will take the can, fill it with soil and carefully dump it in the planting pot. When you have the pot three-fourths full, place the filled planter pot on the floor.

You will need to show them what three-fourths full looks like.



The second person will now hold their planting pot, and the first person will fill it with soil. When you and your partner have finished filling your planter pots, take your planter, return to your seat and wait quietly for everyone else to fill their pots. What questions do you have? You may begin.

*Carefully watch as each pair of students fills their planting pots to make sure they get the correct amount of soil in the pot. Once every student has their planters filled and have returned to their seats, you will be ready to plant the **herbs**. Refer to PALS.1.4.LG.AS.A and follow instructions for planting.*



Now that everyone has their planters ready, get ready for the **herbs** to be planted and a plant label to be placed in the soil beside it. Please do not touch the plants or label sticks until I tell you to.

Once each student has their plants, demonstrate how to plant the cutting or seeds, whichever you are using. Refer to PALS.1.4.LG.AS.A.



Instructions for cuttings: Please watch carefully as I make three small holes in the soil with my finger. These holes will be where we plant the plants.

Make three holes evenly spaced apart as shown in the diagram on PALS.1.4.LG.AS.A. Make sure each student can see how deep the three holes are and how they are spaced.



Now it's your turn. Use your finger to make three holes in your planter's soil.

Walk around and check to see if students are making holes at approximately the right depth and spaced evenly.



Great job everyone! Next you will see how to plant the **herbs**. After you see the proper way to plant the **herbs**, listen for the word GO and then plant your **herbs**.

First we pick up the plant by the root ball and gently place it in the hole.

Hold the plant up by root ball so all can see.



We make sure the stem and leaves are above the soil. Next we gently pack the soil around the roots. After we have our **garlic** planted, we now place a **garlic** label stick by the plant. We do this with each of the **herbs**. What questions are there about how we plant our **herbs**?

GO!

As students are planting, watch carefully to make sure they are placing plants at correct soil depth and getting label sticks by the correct plants.



Or instructions for seeds and bulbs: Please watch carefully as I make three shallow holes where we will plant the **herb** seeds or bulbs if you are planting **garlic**.

*Make three holes about a half inch deep and evenly spaced apart as shown in the diagram on PALS.1.4.LG.AS.A. Make sure each student can see how deep the three holes are and how they are spaced. For **garlic**, make the holes deep enough for the bulb to fit in and then cover with about a half inch of soil.*



Now it's your turn. Use your finger to make three shallow holes in your planter's soil.

Walk around and check to see if students are making holes at approximately the right depth and spaced evenly.



Great job everyone! Next let's learn how to plant the **herb** seeds and bulbs. After we see the proper way to plant them, you will hear the word GO. Then plant your seeds and bulbs.



We will first plant our **garlic**. We take two **garlic** bulbs and place it in one of the shallow holes. Gently cover the bulb up with about a half inch of soil. We will now place a **garlic** label stick by the plant. We do this with each of our **herbs**. What questions are there about how to plant bulbs?

GO!

As students are planting, watch carefully to make sure they are covering seeds with the correct amount of soil. At this time, take adhesive labels with student names and place on each student's planter.



Wow! You all did such a great job of planting your **herbs**. We want to make sure they will get sun so they can grow. When you hear the word SUNSHINE carry your planters over to the table by the window where the sun will shine on them. Then return to your seats.

SUNSHINE

At this time you may need to instruct them on how to clean up their work area. This will vary based on where the planting activity took place.



For this activity, it is suggested that the instructor water the planters the first time around, especially if seeds were used. If too much water is used it can wash out the seeds. After the first watering, students can water their own planters as needed.



REVIEW / SUMMARY

Review with students the following:

1. We all learned to pronounce this word (*show the word **HERB***). I will count to three and we will all say this word together. 1, 2, 3 – (*point to students and say “**erb**.”*)
2. Let’s review the new **herbs** we learned. Once you hear the question, shout out the answer:
 - a. What **herb** name begins and ends with an O? *You may want to write the O on your writing surface. **Oregano***
 - b. What **herb** has a ladies name? **Rosemary**
 - c. What **herb** sounds like what a clock keeps? **Thyme**
 - d. Which **herb**’s name begins with a B? **Basil**
 - e. This was one of the first two **herbs** you saw but hasn’t been named yet. **Garlic**
 - f. They use this **herb** to decorate plates in a restaurant. **Parsley**
3. We placed the plants in the sun so they can grow; what else is important for plants to grow. *The main answer you are looking for is water.*
4. Each day when you come into the room, check your planters to see if they need water. Raise your hand if you think you know how to tell if they need water. *If the soil feels moist, they don’t need water. If the soil is dry then you will water them.*
5. Here’s a question to ponder: When you know the answer, stand up. How long do you think it will take before your **herbs** are ready to harvest? *Answer: For plugs, average is six weeks. For seeds, average is 10-12 weeks. If no student stands up, inform them it is OK to guess, even if they are wrong, but they must first stand up and be called on to make a guess.*
6. Mark on a calendar so the students can see when the plants will be ready for harvest. *If it is October 1: Plugs- **Herbs** will be ready by about Nov. 15. Seeds: **Herbs** will be ready by about Jan. 1.*

APPLICATION



Small Group Idea

*Harvest and dry **herbs** (see PALS1.4.LG.AS.B); when **herbs** are ready for harvest, students can take cuttings, dry and prepare **herbs** for use.*

*Restaurant Italiano – Once **herbs** have been dried, make pizza or spaghetti using the **herbs** students have grown and have a pizza party.*



One-on-One Idea

Do a fertilizer experiment using different levels of Miracle Gro or similar fertilizer that can easily be applied to plants. Compare differences.

*Discuss other foods that have **herbs** used in them – Thanksgiving dressing, meatloaf, many ethnic dishes.*



PALS1.4.LG.ASSESS.A

1. True or False Herbs are plants that add flavor to foods.
2. True or False Oregano and garlic are common herbs.
3. True or False Herbs must be grown outside.
4. Properly plant a potted herb garden

ANSWERS TO EVALUATION:

1. True
2. True
3. False
4. Evaluated by instructor

PALS1.4.LG.ASSESS.A

Name _____

1. True or False Herbs are plants that add flavor to foods.
2. True or False Oregano and garlic are common herbs.
3. True or False Herbs must be grown outside.
4. Properly plant a potted herb garden

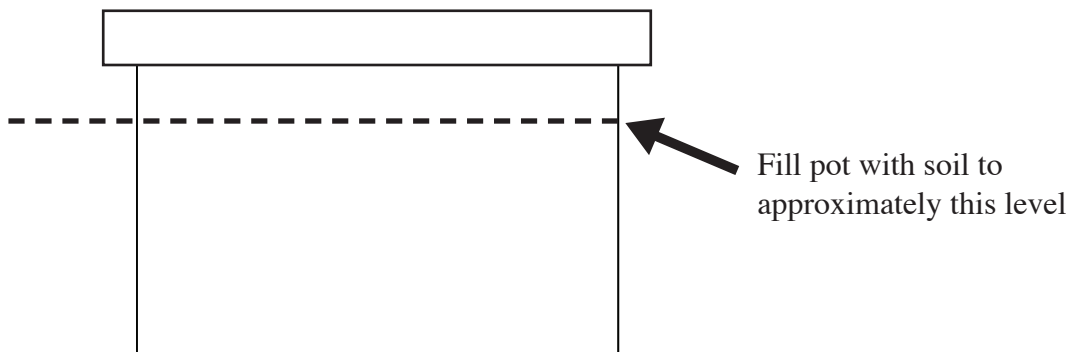
PALS.1.4.LG.AS.A

Planting a Herb Garden

Materials Needed:

- Planting Pot - 8-inch Azalea pot (4-quart plastic ice cream bucket will also work)
- Saucer for pot to catch water runoff. (Note: The pot you use will need to have drain holes in the bottom for good soil drainage. If using an Azalea pot, look for ones with saucers. If using an ice cream bucket, use the lid as a saucer.)
- Soil (enough to fill pot three-fourths full)
- **Herbs** (plugs, seeds or bulbs)
- Popsicle sticks for plant markers
- Water

A. Fill planting pot three-fourths full with potting soil as shown in the figure below:

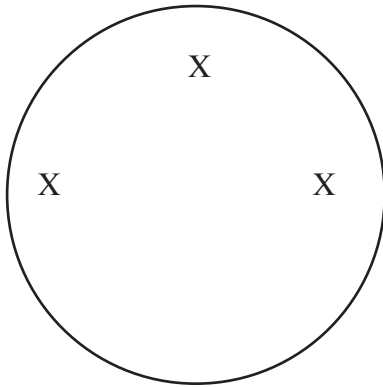


A. Planting the *herbs*:

1. Label three popsicle sticks with the names of the three *herbs* you will be planting.
2. "X" marks the spot (see diagram below) where you will plant each *herb*. Place no more than three *herbs* in one pot.
3. **If planting herb plugs:** Make a hole in the soil with your finger. Place the plug just deep enough to cover the root-ball. Gently pack the soil around each plant.
4. **If planting seeds:** Use a pencil or popsicle stick to make a small hole about a half inch deep, where the Xs in the diagram are. Place one *herb* seed in each hole. Cover the hole with soil. Do not pack soil tightly over the hole.

PALS.1.4.LG.AS.A *(continued)*

5. **If planting bulbs:** Use your finger to make a hole large enough for the bulb to fit into. Cover the bulb with about a half inch of soil so bulb is fully covered.
6. Place the correctly labeled popsicle stick by each plant.
7. Water soil gently. You will need approximately two cups of water to moisten soil.
8. Place planted pots where they will receive sunlight. After initial watering at planting, water when soil becomes dry to touch.



PALS 1.4.LG.AS.B

Harvesting and Drying Herbs

*Cooperative Extension Service – University of Illinois at Urbana-Champaign
College of Agricultural, Consumer and Environmental Sciences*

Harvesting

Harvest time is determined by the growing condition of the herb, rather than by a specific date or month. Most herbs are ready to be harvested just as the flower buds first appear but before they are fully open. The leaves contain the maximum amount of volatile oils at this stage of growth, giving the greatest flavor and fragrance to the finished product. It is important to harvest herbs at the proper time of day. Gather them early in the morning, just after the dew has evaporated and before the sun is hot. This is also a very pleasant and fragrant time to be in the garden, so the task at hand can be an enjoyable one.

Herb	Harvesting and Preserving	Uses
<i>Basil, Sweet</i>	For fresh use, harvest the leaves as they mature – about six weeks after planting. For dry use, harvest leaves just before the plant blooms.	One of the most popular herbs, used mainly with tomato and egg dishes, soups and salads, but also with many vegetable, poultry and meat dishes.
<i>Oregano</i>	Harvest and dry before first flowering occurs.	It is used to season spaghetti sauces and tomato dishes. Its flowers are attractive in summer arrangements.
<i>Parsley</i>	Snip young leaves just above ground, as needed.	Use as a garnish in soup salads, meats and poultry.
<i>Rosemary</i>	Harvest young, tender stems and leaves but avoid taking off more than 1/3 rd of the plant at one time. For drying, harvest just before plant flowers.	Used for seasoning meat, poultry dishes and potatoes. Use either fresh or dried.
<i>Sage</i>	Harvest when just starting to flower. Use either dried or fresh.	Commonly used seasoning for meats, stuffings, soups and salads.
<i>Thyme</i>	Cut leafy stem ends and flowers when plants are at the full-flowering stage. Use fresh, hang dry or freeze.	Used in combination with other herbs. Leaves can be used with meats, soups, sauces and egg dishes.