

# PLANTING GARLIC

Lesson time: One hour for lesson. Full school year for full garlic cycle. Vocabulary: garlic, clove, seed, season, planting, fall, winter, spring

## Description

Students plant garlic seeds in the fall, watch them grow through the winter and harvest them in the spring. Students learn that like produces like and experience the full cycle of a plant.

## Guiding Question

What will happen when a clove of garlic is planted in the Fall?

## Big Idea

A plant's unique characteristics are contained within it's seed.



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## Learning Objectives

At the end of this lesson, students will be able to make predictions about plants, based on the principle that like produces like. Students will be able to describe the growth cycle of garlic plants and work with adults to plant seeds in the garden.

## Materials

About 8 intact whole heads of garlic, enough to yield 30 individual cloves.  
Six, 6" long pieces of string.  
Six Popsicle sticks marked at 2 inch depth, for making holes in the soil.  
Illustration KF6, one per student, and one copy enlarged to show in class.  
Garden bed space, roughly 6 feet by 4 feet.

## Preparation

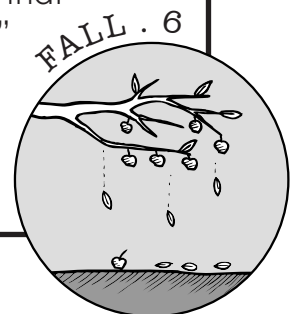
Recruit and train volunteers to assist small groups with planting activity.  
Prepare a garden bed in the school garden for planting, on your own or with the class or assign volunteer(s) to clear the garden beds of previous plantings and weeds, and loosen and amend the soil.

## Introducing the Lesson

Activate prior knowledge and interest in the lesson with a classroom discussion.

*Review plant parts.* Review with students the key concepts from Kindergarten Fall Lesson 3, *Fruits and Seeds, Roots and Stems, Flowers and Leaves*: Plants have different parts, and we can eat some parts of plants.

*Discover the edible parts of garlic plants.* Show students the enlarged copy of Illustration KF6 and one head of garlic. Ask students which part of the plant the garlic head is. Help them to understand that it is a bulb, Tell students that people like to eat the bulb part of the garlic plant and that the "scape" that grows in the spring is also edible. Invite a few volunteers to name some garlicky foods they like, such as garlic bread.



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Review *harvest cycles*. After a brief discussion of the eating part of the garlic plant, remind students that foods from plants are harvested at different times of the year. If you did Kindergarten Fall Lesson 4 and Lesson 5, about apples, remind students that apples are harvested in the Fall. Ask students to guess when they think garlic is harvested. Confirm or explain that garlic is actually ready to harvest in the late spring/early summer. Gardeners plant garlic seeds in the fall, and garlic grows underground during the winter.

Preview *the activity*. Point out that it is fall now, and that school will last until spring, so the students can plant some garlic and watch it grow until it is time to harvest.

## Procedure

1. In the classroom:

Show the enlarged Illustration KF6 again. Ask students to predict which part of the plant is the seed. After students have had a chance to guess, confirm that the garlic head provides the seeds. Break one clove from a head of garlic, and show students the clove. Explain that each clove is a garlic seed. Ask, "If we plant this seed, what kind of plant will we get?" After students answer, ask, "What would grow if we planted a sunflower seed?" "What if we planted a pumpkin seed?" Help students understand that like produces like. A seed can only make the same kind of plant that it came from.

2. Prepare students for a trip to the garden:

Hold up the garlic head from which you broke one clove. Point out to students the roots at the bottom of the clove and the pointed part at the top. Break off another clove and show students how each clove also has a root end and a pointy end. Ask which end they think should point up when they plant the clove into the ground. Confirm that the pointy end should point upward.

3. Divide the class into groups and have the groups, with the help of volunteers, break the remaining garlic heads into cloves, leaving the papery skin on cloves. Give each student at least one clove of garlic to carry out to the garden.

4. In the school garden:

Demonstrate how to plant the garlic:

Gently loosen the soil for the planting.

Make a hole with the Popsicle stick 2 inches deep.

Plant garlic cloves one at a time, pointy end up and root end down in the hole.

Cover the clove with soil.

Gently, pat down the soil.

Use the string to measure six inches to a place to plant the next clove.

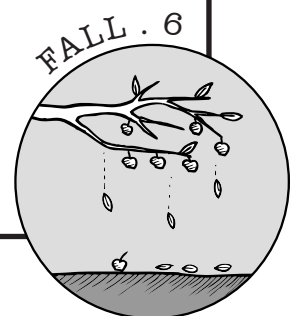
5. Have volunteers help students plant all the garlic cloves.

6. Return to classroom for assessment.

7. Visit the garden at least once a month to observe and tend the garlic bed.



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## Assessing Student Knowledge

Conduct informal assessments of your students' knowledge by asking them some or all of the following:

What did we plant today?

What will grow from what we planted today?

If we planted a pumpkin seed, what would grow?

How long does it take for a garlic seed to grow into something we can eat?

Hand out Illustration KF6 and have students color in the drawing. Students may also use the back of the sheet to draw pictures that show how to plant garlic. Circulate as students draw to evaluate their understanding of the lesson and correct any misunderstandings.

## Extensions

Create a classroom garlic calendar. Have students work in groups to draw pictures, or glue pictures printed from the Garlic Calendar web site, showing what the class's garlic might look like in each month from now until June.

## Books & Resources

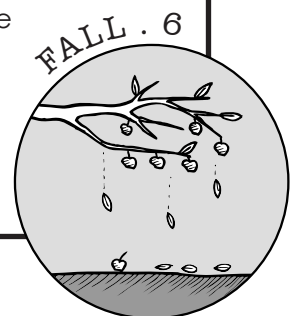
Link to a Garlic Calendar <http://www.hoodrivergarlic.com/garlic-calendar.htm> for pictures and information about how garlic grows month by month.

## **OR. Dept. of Ed. Key Standards**

Oregon Science Academic Content Standards:  
K.3S.1 Explore questions about living and non-living things and events in the natural world.

Oregon Social Sciences Academic Content Standards:  
K.10 Explain how people can care for the environment.

Common Core State Standards for English Language Arts:  
K.W.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.



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