

Bulbs! Garden Lesson Plan

SUMMARY

Garlic and tulips are two examples of bulbs. Garlic is an edible bulb and tulips are a decorative flower. A bulb is a storage unit for a plant. Kind of like a refrigerator, it stores all the food the plant needs to overwinter, then grow and bloom into a flower in the spring.

Botanically speaking, a bulb is a modified stem containing a complete miniature plant, including embryonic leaf, stem, and flower parts, and surrounded by fleshy scales (which provide food for the young plant) and a basal plate (which produces roots). Bulbs are surrounded by a thin protective layer called a tunic. These layers are papery thin.

Garlic, tulips, daffodils, and onions are **true bulbs**. If you slice a bulb in half horizontally, you'll see rings formed by the scales, and if you are looking at one close to planting time, you'll see a small plant in the center. An onion that has started to sprout is a good example to show.

OBJECTIVES

Students will learn how to identify a bulb and the parts of a bulb. Students will understand that the purpose of a bulb is to store food for the plant. Students will be able to give examples of true bulbs: Onions, tulips and daffodils

Students will learn the proper way to plant a bulb – pointy side up.

MATERIALS

- Book: Onions and Garlic
- An onion
- 12-15 garlic heads
- A dried garlic flower head
- 24 tulip bulbs
- Garden trowels

PROCEDURE:

ENGAGE (10 minutes)

Gather all the students in the garden. Show examples of bulbs: onion, garlic and tulip. Explain that a bulb is a storage unit, kind of like a refrigerator. Cut an onion or tulip bulb in half and show the students the layers and the baby plant inside. Show the students that there is a top and a bottom. The top is pointy and the bottom is usually flat and has some dried roots coming out. We always plant the bulbs pointy side up, root side down.

Growing garlic from cloves is pretty cool. We are actually cloning the plant. When we separate the cloves and plant them, next year they will form into full heads! Show the class the dried bulbils (mini bulbs), and true seeds from a garlic flower cluster.

Divide students into three groups.

Group 1 will listen to the educator read the book: Onions and Garlic

Group 2 will plant garlic

Group 3 will plant tulips

Each group will rotate after 15 minutes.

Activities (15 minutes each)

Reading Book: Onions and Garlic

Planting garlic:

Carefully separate the heads into individual cloves. Try not to remove the protective outer layer on each clove. Plant each clove 2" in the ground, pointy side up, spaced 6" apart. Cover with straw.

Planting Tulips:

Get into groups of 3 or 4 or all work together. Dig a large hole about 8" deep and 2 ft. around. Place bulbs in desired pattern, then cover with soil and pat lightly.

Fun Facts:

Garlic:

Originated in Central Asia. It's been used for thousands of years for medicinal purposes as well as flavoring for foods. It is related to the onion. In Europe, many cultures have used garlic for protection or white **magic**, perhaps owing to its reputation as a potent preventative medicine. Central European folk beliefs considered garlic a powerful ward against **demons**, **werewolves**, and **vampires**. To ward off vampires, garlic could be worn, hung in windows, or rubbed on chimneys and keyholes.

Tulips:

Tulips originate in Asia. They were first cultivated in Turkey. Tulips are botanically related to lilies, but got their name from their resemblance to turbans (from Turk. tülbent "turban," also "gauze, muslin," from Persian dulband "turban").