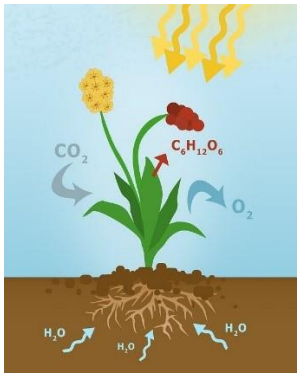
BULBS – HOW DO THEY GROW?

Maybe you think that spring is the only time to plant flowers and vegetables in your garden. Keep reading and discover some beautiful flowers you can plant right now!

Plants are living things which grow and reproduce like all other living things. Most plants live anchored into the ground and need carbon dioxide (CO_2), water (H_20), sunlight, and nutrients to grow. They produce their own food through a process known as **photosynthesis**. Most plants have roots in the soil, and stems, leaves, and flowers above ground. Once food is produced by the leaves of a plant, it is transported through the plant to other parts of the plant such as the stems and roots.

Daffodil bulbs



Parts of a plant

Red onion bulb

A **bulb** is a special kind of plant. Bulbs grow from a thick mass of storage tissue. There is a miniature plant inside the bulb surrounded by **scales**. The scales provide food for the plant. Bulbs can be classified as **tunicate** or **non-tunicate**. Tunicate bulbs have a papery covering, like onions and tulips. Non-tunicate bulbs do not have paper coverings; an example is a lily. If a bulb is sliced in half horizontally, you will see rings formed by the scale leaves. If you slice one in half vertically, you may be able to see leaves, stems and sometimes flower buds.

Bulbs are able to store energy from one growing season to another. When a bulb grows, it uses its stored food to form roots, shoots, leaves and flowers. Unlike other plants that depend on perfect weather and soil conditions, bulbs are very self-sufficient.

ACTIVITY: Watch a plant grow!

Materials

- One clear glass container, a jar or vase will work well
- Plant bulb (tulip, daffodil, crocus, and hyacinth all grow well in our climate; available at garden centers, online, and even some grocery stores)
- Marbles or small stones
- Water
- Optional: notepad and pen, pencil, markers or crayons for recording observations

Materials for this activity

1. Fill your container ½ - ¾ full with marbles or small stones.
2. Place your bulb on top, roots facing down.
3. Add water until it just covers the bottom of the bulb.
4. Place the bulb in a sunny spot in your house.
5. Observe the bulb each day.
6. Continue adding water as the water level goes down.
7. Record your observations.

A daffodil bulb set up and ready for observation

What's happening here?

With this project you will be able to observe the plant growing roots and stems. If you have chosen a flowering bulb (like a tulip, daffodil or crocus), and you continue to provide water and sunlight, it will eventually produce a beautiful flower for you! Consider planting it in your garden or in a pot when you have finished this activity.

Tulips

Crocus

Daffodil

Take it a step further

- Try a few different kinds of bulbs and record your observations.
- With the help of an adult, cut a bulb in half lengthwise to see what is inside.
- Cut another bulb horizontally and compare.

Clump of daffodil bulbs that were recently dug up – these have multiplied and produced three bulbs from one! Ready to plant again for spring bloom.

Facts about bulbs

- Fall is the perfect time to plant bulbs outside for a spring show of flowers.
- Bulbs can also be planted in pots and containers.
- Different kinds of flower bulbs bloom at different times of the year.
- Some spring flowering bulbs are tulips, daffodils, crocus, and hyacinths.
- Crocuses are the earliest bulbs to appear in springtime and flower. They will even push up through a layer of snow to bloom!
- Summer bulbs include gladiolas and calla lilies. Summer bulbs are planted in the spring for flowers in the summer and fall.
- Amaryllis and paperwhite are types of bulbs planted indoors early in the winter for a show of indoor flowers during the dreary winter months.

- Bulbs will multiply if they are left in the ground. To help them multiply, remove the dead flowers, but do not remove the leaves. These leaves will continue making food to store in the bulb for the plant to use during the winter. After the leaves wither, you can cut them down to ground level.
- Every few years, you can dig them up, divide them, and plant even more of them!

ADDITIONAL RESOURCES

Books available from the Washoe County Library System:

Bloom by Deborah Diesen

Bulbs for All Seasons by Pierre Gingras, translated by Michael Ballantyne

Flowers by Kathryn Clay

The Magic Hill by A. A. Milne

The Netherlands by Ann Heinrichs

The Nitty-Gritty Gardening Book: Fun Projects for All Seasons by Kari A. Cornell

Plants Can't Sit Still by Rebecca E. Hirsch

Plants in Spring by Martha E. H. Rustad

Seeds, Bulbs, Plants and Flowers: The Best Start in Science by Helen Orme

Tulips by Mitchell, Melanie S. Tanya Visser – The Gardener

Videos:

ehowhome, At Home with P. Allen Smith, "Teaching Kids How to Plant Daffodils' https://youtu.be/fa4Y0oRW8As

Sci Show Kids, "How Does a Seed Become a Plant?" https://youtu.be/tkFPyue5X3Q

Tanya Visser – The Gardener, "Planting Daffodils in Pots" https://www.youtube.com/watch?v=gAuKPi7aGwo

Websites:

Kids Gardening, Bulb Botany https://kidsgardening.org/lesson-plans-bulb-botany/

National Association of Landscape Professionals, Gardening with Kids https://www.loveyourlandscape.org/expert-advice/little-landscapers/family-fun/gardening-with-kids/