



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

Learn about living things and plant some garlic!



Supplies Required:

- Can (used, empty, and clean)
- Can opener
- Coffee filter or paper towel
- Scissors
- Soil
- Clove of garlic
- Pen or marker

Video

Watch this video to learn all about plants: <https://tinyurl.com/yagnfnqf>

Overview

What is a living thing? What do living things need? Living things can grow, and they need energy to grow. Our plants get energy in from the sun and from watering. Living things reproduce, or multiply. Plants do this by spreading seeds, which you have probably seen on the inside of fruits and vegetables you eat. Most plants make their own food through a process called photosynthesis. Plants have a cuticle, meaning they have a waxy layer on their surface that protects them and keeps them from drying out. They have eukaryotic cells with rigid cell walls. They reproduce with spores or with sex cells. There are many different types of plants. They are typically divided into two major groups: vascular and nonvascular. Vascular - These plants have specific tissues that help to move materials such as water through the plant. They are further divided into non-flowering plants and flowering plants. Most of the organisms you probably think of as plants, such as trees, bushes, and flowers, fit into this group. Nonvascular - These are smaller plants, such as mosses, that use diffusion and osmosis to move material through the plant.



Instructions

1. Trace bottom of can onto coffee filter or paper towel using marker or pen. Use scissors to cut this circle.
2. Use can opener to open top of can.
3. Use can opener to open 2-3 holes in bottom of can.
4. Place cut coffee filter onto bottom of inside of can.
5. Fill can with soil, leaving two inches of room at the top.
6. Place one clove of garlic into soil, pointy side up!
7. Cover the clove with more soil, leaving one inch of room at the top of the can.
8. Water your plant until you see water come out from the holes you poked.
9. Water your plant every other day, or less often if you feel that the soil is still moist. Remember to place your plant in an area that gets some sun!

Additional Resources

Think About It! What did the plant look like at its different stages? Plant more cloves of garlic and change the amounts of water or sun for each. How do different amounts of water and sun affect plant growth? Why do you think it's important to learn how to grow your own food?

1. More instructions on how to grow garlic: <https://tinyurl.com/yc7lv6zy>
2. Learn more about plants with Ducksters: <https://tinyurl.com/y8begb3s>

Share It Out

Share on social media: Take pictures of your plant everyday once it starts to grow. Create a video of each picture day by day to see a faster version of your plant growing! Tag the Chicago Botanic Garden or Lurie Garden and show them your green thumb. Share on social media using the hashtags:

#GarlicPlant
#ProjectExploration
#StemAtHome

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 229. Learn more at www.projectexploration.org/explore-store

Join PE's character contest!

Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists.

Learn more at:
www.projectexploration.org/character-contest.



Call or text us for help: 312-772-6634



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