



DALLAS ARBORETUM  
Education

*Garden STEM at Home*  
*Trees in Trouble: Crowding*



WE GROW MINDS, TOO.

# TREES IN TROUBLE: CROWDING



## OBJECTIVE:

STUDENTS WILL EXPLORE THE IMPACT OF CROWDING ON TREES BY EXPERIMENTING WITH THEIR OWN LIVING MODEL.

## SOURCE

Project Learning Tree PreK-8 Activity Guide

## BACKGROUND

Trees, like all plants, need space to grow so they can spread their roots and branches. In this demo, students will model crowding by growing their own seeds.

## INSTRUCTIONS

1. Ask students to form a hypothesis about what will happen to plants grown under crowded conditions. Ask them to use an if/then statement (If plants are grown too closely together, then ...)
2. Use two half milk cartons, an egg container or other recycled containers to create two identical planters.
3. Make several drainage holes in the bottom of the container if it doesn't already have some.
4. Fill with potting soil and moisten.
5. In one container, space out two holes and place 1 or 2 radish seeds.
6. In the other container, space out two holes and plant approximately one dozen in each hole.
7. Give both planters the same light and water conditions.
8. Collect data on the following: how long they take to sprout, height of the plants every few days, and after a specified time (30 days), dig up and measure/observe the roots.
9. Discuss your findings and your if/then statements about tree crowding.
10. Additional questions for discussion and research: (1) What may cause crowded trees to grow? (2) How do forest managers keep trees from crowding? (3) Can you find crowded trees or plants around your neighborhood? What could you do help them?

## ADDITIONAL RESOURCES

Explore the Trees in Trouble Resources page from PLT:  
<https://www.plt.org/activity-resources/prek-8-activity-77-trees-in-trouble/>

Protecting Trees and Forests by Felicity Brooks; ISBN: 074600656X.