

# Planting a Tree from Seed

created by Tree Pittsburgh

This lesson is best done outside near a concrete surface where the seeds can be scraped. Tree Pittsburgh is glad to provide Kentucky coffee tree seeds to your class.

## Kentucky coffeetree

Tree Pittsburgh collects coffeetree seeds in late winter/early spring when the pods fall from the trees. These seeds are 95% viable and nearly always grow a seedling. Because of their hard seed coat, the seeds must be scraped in order for water to get into them—students love scraping coffeetree seeds against the ground before planting them.

## Purpose

This activity is designed to increase students' awareness and knowledge of how trees grow. The hands-on activity will help foster involvement in growing and caring for trees that will lead them to become caretakers of their environment.

## Objectives

- Discuss what a seed needs to grow
- Identify the various functions of the parts of a tree
- Reflect on the benefits trees provide to the environment
- Evaluate proper tree planting techniques, care and maintenance
- Learn details of selected tree species

## Materials

- Kentucky coffeetree Seeds
- Nail files, or a concrete surface
- Small disposable plastic cups or empty milk cartons with holes for drainage
- Markers for identification and decoration
- Soil
- Water pitcher
- Medium-sized bowl
- Paper towels
- Photos of Kentucky coffeetree pod, branch, and mature tree

## Procedures

1. Give each student his/her own plastic cup or milk carton to mark with their name, date and any other decorations.
2. Give each student a seed. Ask students to feel the seeds. How do they feel? Smooth and hard? That is because the seed is protecting itself with a strong seed coat. The seed cannot grow unless we scratch through it so water can get inside.

Instruct students to rub the seed vigorously on a nearby concrete surface on the opposite end

from the nub until a small amount of the inner seed is exposed. The inner part of the seed

is typically identified by a change in color from the outside of the seed casing—usually a yellowish spot. Sometimes this can take 5-10 minutes. Students can sing a song while they do it, and will ask over and over again if they are done. Chances are they aren't! (*See the accompanying video for guidance if you aren't sure about this activity.*)

3. Once seeds are properly scraped, instruct each student to fill his/her own cup 2/3 with soil. Once the cup is 2/3 full, students should place both seeds in the soil with the filed ends facing up. Place a final handful of soil over the seeds.
4. Holding the water pitcher over a medium-sized bowl, water each student's freshly planted seeds until water begins to leak from the holes in the bottom of the cup. Next place each student's cup on a small piece of paper towel until drainage is complete.
5. Plants should continue to be regularly watered and placed in an area where they can receive sufficient sunlight. New seed should not be placed outside!

## Result

Seeds should germinate within approximately two weeks. Typically trees should be grown indoors for the first year and can then be transplanted outdoors following standard tree planting methods.

## Kentucky coffeetree

Formerly the state tree of Kentucky, the Kentucky coffeetree is native to the Midwest of North America. It ranges from Kentucky (where it was first encountered by Europeans) and western Pennsylvania in the east, to Kansas, eastern Nebraska, and southeastern South Dakota in the west, and to northern Louisiana in the south. It varies from seventy-five to one hundred feet high with a trunk two or three feet in diameter. The leaves emerge later in the spring than those of most other deciduous trees and fall earlier in the autumn. The fruit is a hard-shelled bean in heavy, woody, thick-walled pods filled with sweet, thick, gooey pulp. The peculiarly late-emerging and early-dropping leaves, coupled with the fact that the large leaves mean few twigs in the winter, make it a tree that is ideal for urban shading where winter sunlight is to be maximized. The common name "coffee tree" derives from the use of the roasted seeds as a substitute for coffee in times of poverty. They are a very inferior substitute for real coffee, and caution should be used in trying them as they are poisonous in large quantities.