Teacher's Guide

"Plants and Trees"

Grade Level:
K—5

GSE Reference:
SKL1,2; SKL2b;
S1L1: a, b, c;
S2E3: a, b, S2L1: c, d,
S3L1: a, c, S3L2: a, b
S4L1: a, b, c, S5L1:b,

Summary:
Students will focus on investigating parts of a plant and how plants grow. Students will meet a live animal and learn about its connections with plants.

Objective:
Students will learn about plants and how they grow to help understand these similarities and differences, and the relationship between plants and animals.

Essential Questions

When reviewing "*Plants and Trees*" with your students, begin by introducing the concept of basic needs for plants such as soil, water and sunlight. Show students a plant either inside or on the school campus.

- What part holds the plant up?
- What holds the plant in the ground?
- Where does the plant get water and nutrients?
- What is the relationship between animals and trees and / or other plants?

Vocabulary

- *Roots*—underground part of a plant serving to anchor and absorb water and nutrients
- *Stem*— trunk or above ground extension that supports another part
- *Flowers*—reproductive part of a plant
- *Habitat*— arrangement of plants, water, and space suitable to animals and plants needs

Pre-Visit Activities

- **Read** from suggested list
- **Tree Collage:** Have students look through magazines for pictures of trees. Cut them out and glue them to make their own colleague.
- **Leaf Animals:** Have students walk around and gather different leaves that they see to investigate how many different trees are in an area. Then, use the leaves they find to create animals, gluing the leaves to construction paper.
- **Build a Habitat:** Students look through magazines for pictures of trees and animals that may use trees for food or shelter. They then cut them out and glue them to build a picture of a habitat.

Post visit activities

- **Review** vocabulary and concepts

- **Trees Meet My Needs:** *What things are made from trees?* Have students look through magazines for items that are made from trees. Which items do they use at home? At school? How many items that you use each day come from trees?

- **Native Trees:** Have students go outside and pick up different leaves. Using a field guide, students research to find the type of trees they come from and if they are native trees or not. Students can do a leaf rub on a piece of paper and then label the leaf with information from their research.

- **Where Did All The Trees Go?** Find pictures of cleared land and pictures of land with trees. They can then compare and contrast the animals that would be living in both locations.

- **Seeing photosynthesis from space:** NASA scientists study plant health using satellites to measure what's occurring inside Earth's land plants at a cellular level. https://www.nasa.gov/content/goddard/seeing-photosynthesis-from-space-nasa-scientists-use-satellites-to-measure-plant-health/

Suggesting Reading

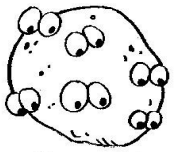
What Good is a Tree? By Larry Dane Brimmer
The Tiny Seed (Pixies) By Eric Carle
Planting a Rainbow By Lois Ehlert
From Seed to Plant By Gail Gibbons
From Seed to Sunflower By Gerald Legg
The Empty Lot By Dale H. Fife
The First Strawberries by Joseph Bruchac
The Lorax by Dr. Seuss

Suggested Websites

http://www.education.com/science-fair/article/best-water-for-plants/
http://www.sharingnature.com/nature-activities/
http://www.ehow.com/info_8249519_characteristics-living-things-kindergarten.html
http://www.neok12.com/Plants.htm
http://www.enature.com/fieldguides/intermediate.asp?curGroupID=10
http://www.arborday.org/

Further Investigations!

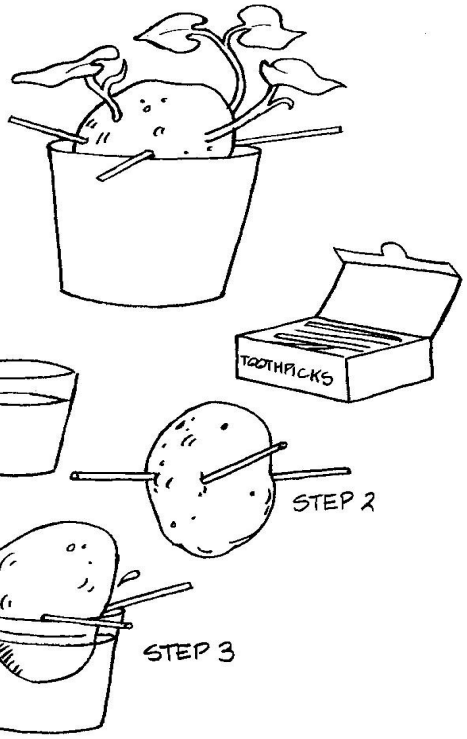
Use the activity below to grow and show parts of a plant! What do plants need to grow? Be sure your potato has everything it needs to grow. If your plant is successful, have students share recipes using potatoes.



Name _____

POTATO POTTING

Start with: a disposable plastic cup, or a glass
water
4 toothpicks
a white potato with lots of eyes, or a sweet potato
soil



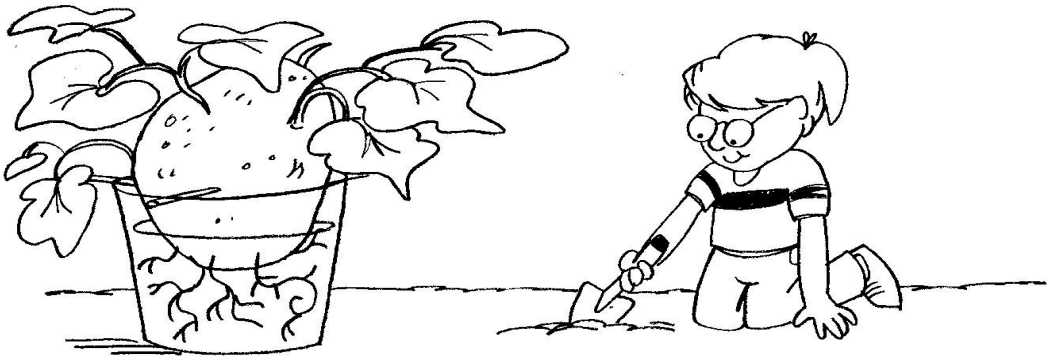
Step 1: Fill the cup or glass with water until it is nearly full (about one-half inch from the top).

Step 2: Push the toothpicks into the potato as shown so that you can rest the toothpicks on the rim of the container.

Step 3: Place the potato into the water so that the toothpicks balance on the rim of the container.

Step 4: If you are using a white potato, place the experiment in a cool, dark place. If you are using a sweet potato, place it in the sunshine.

Add water as needed to keep the container filled one-half inch from the top. After two months, you will have a potato plant that is strong enough to be transplanted into the soil.



Science Experiments and Nature Studies
Macmillan Instant Activities Program