LEARN ABOUT
FORESTS

We all depend on trees and forests! Use this fun, hands-on activity to engage youth in learning about sustainable forest management. It's perfect for educational events, career days, or field visits.

PROJECT LEARNING TREE
An initiative of SFI

TREES IN TROUBLE

PLAN

KEY CONCEPT: Forest management includes actions employed over a long-term to purposefully guide the species composition, size and age of trees in a forest. Forest management plays an important role in maintaining forest health and resilience. [PLT's Forest Literacy Framework, Concept 3.C.2]

OBJECTIVES: Provide opportunities and materials for learners to
• Recognize symptoms of unhealthy trees
• Assess possible causes of a tree's poor health.
SESSION TIME: 50 minutes
SETTING: Outdoors

BACKGROUND

Trees require some of the same things that people and animals need to grow and thrive. For example, they need plenty of water, nutrients, and room to grow. If these requirements are not met, a tree may grow slowly or even die.

When a person is ill, we look for symptoms to help us identify what is wrong. Trees also exhibit symptoms that can help us identify the cause of a problem. Loss of vigor, discolored or misshapen leaves, insect bore holes, and wounds are all signs that something is wrong. The worksheet provides specific information about potential signs and what they might suggest about tree health.

BENEFITS OF FORESTS

By monitoring forest health, forest managers can determine the stability of the forest ecosystem and the magnitude of any changes. They look for indicators such as tree and crown condition, forest diversity, and presence of wildlife to assess forest health.

PREPARE

MATERIALS: Optional: Camera.

GET READY: Make copies of the worksheet. Locate an area with several trees, preferably during a time of year when the trees have their leaves. Identify examples of unhealthy tree conditions like those described on the worksheet, or take pictures of such trees to show to learners.

PROJECT LEARNING TREE
An initiative of SFI

EXPERIENCE:

1. Invite the group to brainstorm a list of signs of a healthy tree. Possibilities include new growth, full branches, strong bark, and lots of healthy leaves. Ask: What kinds of things can compromise tree health? What do trees need to stay healthy? How are those things like or unlike the things that keep humans healthy?

2. Invite learners to observe a variety of trees to assess for health indicators. Provide them with copies of the worksheet to identify indicators of unhealthy trees. You may choose to show them some examples at the site or with photos.

3. Give learners time to examine the trees. Encourage them to make sketches or take pictures of their findings, such as broken branches; unusual leaf colors or shapes; holes; hollows in the trunk; trunks damaged from scratches, carvings, or graffiti; or uprooted, fallen trees that still appear to be alive.

4. Ask learners to explain what they think caused the damage they found, supporting their claims with evidence they observed.

LEAD

INTRODUCE:

As a group, discuss what kinds of things cause a person to get sick. (Responses might include poor nutrition, contaminated water, a lack of food or water, viruses, toxic substances like smoke or drugs, disease, and physical injury.) Ask learners what people can do to stay healthy. (Responses might include eat a balanced diet, exercise regularly, and act safely.)

PROJECT LEARNING TREE
An initiative of SFI

CONNECT:

Invite learners to brainstorm things that could be done to improve the health of the trees.

CLOSE

Ask: How healthy or unhealthy are the trees in our study site? Why do you think people should care about the health of trees?
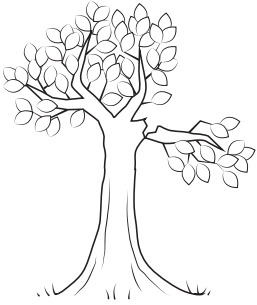

TAKE ACTION

Point out that urban foresters plant and manage the trees in a city, monitoring them to make sure they are healthy. Invite learners to list ways they could help to protect the trees in their neighborhood.

PROJECT LEARNING TREE
An initiative of SFI

NAME _____ DATE _____

Check trees for the trouble signs below, circling any that you find. Be sure to note the location of any troubled tree and document any evidence that indicates the possible cause.
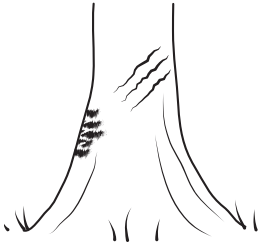
BROKEN BRANCHES
(possible cause: weak structure, damaged by truck driving under tree, storms)
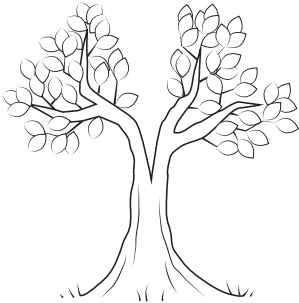
Location: _____

Evidence for the cause: _____

TRUNK DAMAGE
(possible cause: hit by car or lawnmower)

Location: _____

Evidence for the cause: _____

TRUNK CRACKED OR SPLIT
(possible cause: weakened by lightning or frost)
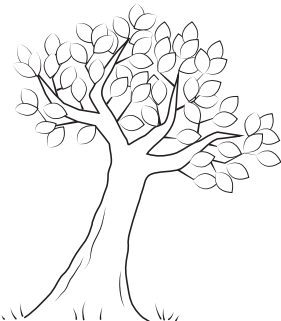
Location: _____

Evidence for the cause: _____

ROTTEN SPOTS
(possible cause: dying section of tree)

Location: _____

Evidence for the cause: _____

TREE LEANING
(possible cause: root damage)

Location: _____

Evidence for the cause: _____
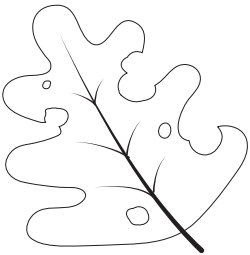
NAME _____ DATE_____

DEAD TREE
(possible cause: disease)

Location: _____
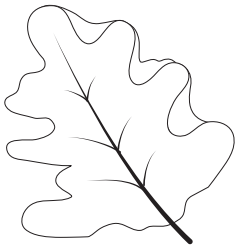
Evidence for the cause: _____

LEAVES FULL OF HOLES
(possible cause: insects feeding on leaves)

Location: _____

Evidence for the cause: _____

CURLED OR FUNNY-SHAPED LEAVES
(possible cause: fungus or other infection)
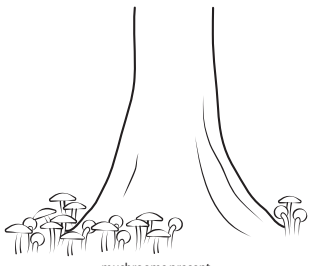
Location: _____

Evidence for the cause: _____

BALD SPOTS ON BARK
(possible cause: dead section of tree)

Location: _____

Evidence for the cause: _____

MUSHROOMS GROWING ON TRUNK NEAR GROUND
(possible cause: rot or decay)

Location: _____

Evidence for the cause: _____