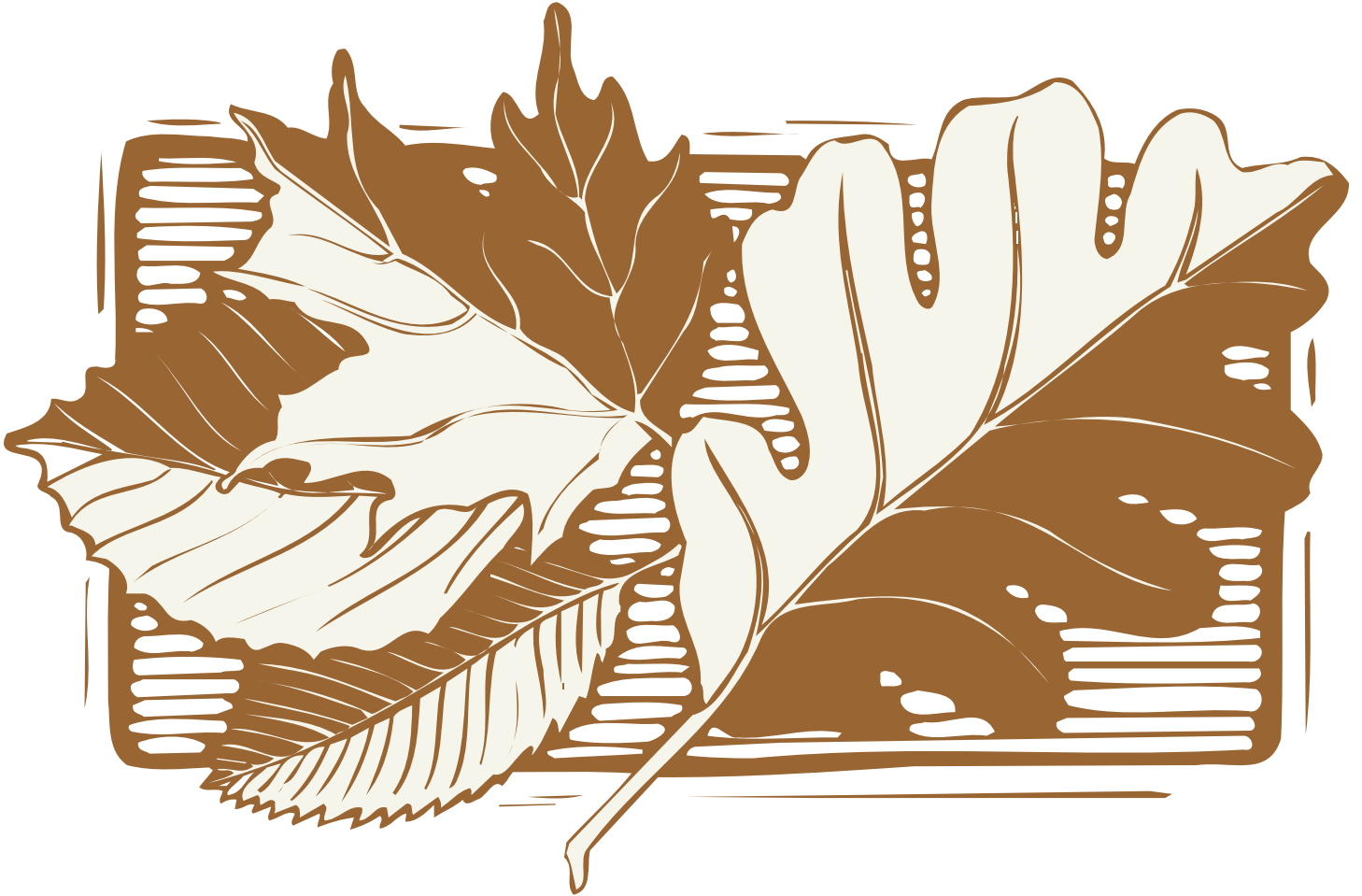


# TREES ARE TERRIFIC



K - 2

# TREES ARE TERRIFIC

## SNC – Plant Farley LESSON PLAN



Lesson Title: “Trees Are Terrific”



Lesson Description:

Students will learn about two vegetative organs of trees, bark and leaves. Activities include observation and description of leaves and bark, construction of leaf and bark prints and identification of trees using bark and leaves.



Grade Level:

K-2 (modify as needed for each grade level)



Subject Area(s):

biology, life science, ecology



Objectives:

Students will:

- collect, observe, measure and describe leaves
- construct a leaf print
- observe the pattern, color and texture of tree bark
- use leaves and bark to identify selected species of trees
- share observations and prints with other students



Materials:

- leaves of common trees
- hand lenses
- metric rules
- onion skin or similar paper for leaf prints
- crayons for prints
- pencils
- butcher or similar paper for bark prints (sheets must be long enough to wrap around tree)
- activity sheets



Correlations for National Science Education Standards:

- Content Standard A – Science as Inquiry
  - conduct a simple investigation
  - employ simple equipment and tools to gather data and extend the senses
  - communicate investigations and explanations
- Content Standard C – Life Science
  - develop understanding of organisms
  - develop understanding of organisms and their environments



### Correlations for National Science Education Standards (continued):

- Content Standard E – Science and Technology  
develop abilities to distinguish between natural objects and objects made by humans
- Content Standard F – Science in Personal and Social Perspectives  
develop understanding of types of resources



### Curriculum Integration:

- Mathematics (measurements)
- Fine Arts (construction of prints)
- Appropriate for Visually Impaired Learners (tactile activities involving bark and leaves)



### Process Skills:

- Observation
- Comparison
- Collection of data
- Measurement
- Counting
- Research
- Inference
- Investigation
- Interpretation of data
- Analysis of data
- Description of findings
- Communication of ideas
- Construction of model



### Background Information:

- Main ideas

Trees are an important and essential part of our environment/ecosystem. They are important resources for many reasons as they provide the oxygen in the atmosphere; are a food source for ourselves and countless other organisms; reduce air pollution; are sources of medicines; provide building materials and beautify our surroundings.

Two major parts of trees are their leaves and their bark. There is a great amount of variety among tree leaves and tree bark.

By observing the leaves and bark, one can identify different kinds of trees.

- Secondary ideas

Leaves have veins that occur in patterns. All leaves do not have the same venation patterns.

The surfaces and margins of leaves vary from species to species.

Tree bark is a home for many other kinds of organisms.



### Teacher Activities:

- If at all possible arrange a field trip to a park, nature trail, arboretum, etc. The area should have several different species of trees. Plan your trip when the weather is suitable and green leaves are present on trees.
- Assemble/organize all materials needed for the lesson.
- Present background material to students.
- Depending on the size of the class and number of aides or chaperones, the teacher may wish to divide the class into groups. Some of the groups could work on leaf activities while others work on bark activities. Distribute Activity Sheets and give instructions on completion.



### Teacher Activities (continued):

- Issue instructions to students regarding observation of leaves and bark. Include specific examples of what students are to observe (e.g., leaf venation patterns, leaf margins, bark texture, other life forms present).
- Explain what leaf and bark prints are and how to make one of each. Show examples of prints. Distribute paper for each activity.
- Accompany students on field trip and offer assistance as needed. Before allowing students to begin exercises, issue a time limit for completion of the activity.
- After students complete exercises and assemble back into a group, allow students to show their work and describe their observations.
- After students share their work, explain how the leaves and bark may be used to identify various species. Take the children to selected trees and match the prints to the species. Engage students in post-activity discussion. Stress main points of lesson during discussion.



### Student Activities:

- Listen to background information given by teacher.
- Observe leaves and bark during field activity.
- Construct leaf and bark prints.
- Record data on activity sheets.
- Interpret/analyze data and share it with other students.
- Participate in post-activity discussion.



### Evaluation:

- Activity sheets
- Leaf/bark prints
- Observation of student engagement in discussion



### Extension/Enrichment:

- Have students make a leaf collection.
- Extract chlorophyll from leaves (spinach leaves work well) and discuss photosynthesis.
- Allow students to make plaster of Paris leaf prints and then paint them.
- Paint leaves with melted chocolate to make “edible” leaves. (Leaves from rose bushes that have not been treated/sprayed with insecticide work well for this. Wash and dry leaves before “painting” them with melted chocolate chips. Refrigerate 20 minutes and peel leaves away from chocolate.)
- See how many insects may be found on bark and/or leaves.
- Discuss how, when and why leaves change colors.
- Discuss the differences between evergreen and deciduous trees.



### Safety Considerations:

- Caution young children against placing leaves or bark in their mouths as some plants may be poisonous.
- Use caution when working with plants as some (e.g. poison ivy, sumac, etc.) may cause allergic reactions in sensitive individuals.
- Stinging and/or biting insects may be present on the leaves or bark of some trees.

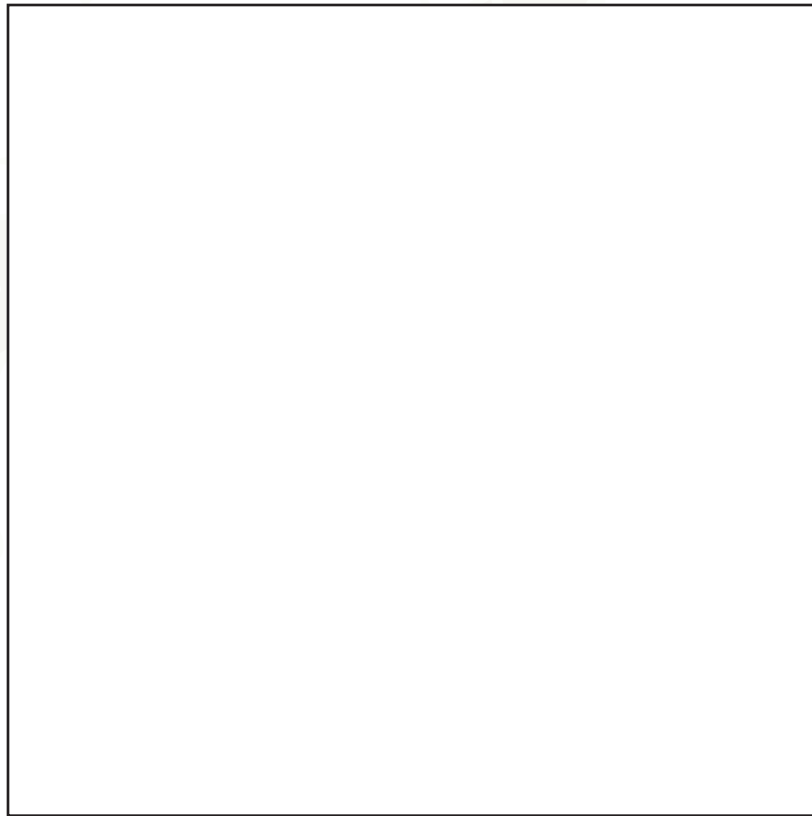
# TREES ARE TERRIFIC

## ACTIVITY SHEET ONE

### “Leaf Observation”

1

Collect a leaf from a tree. Look carefully at your leaf. Draw it in the box below. Color your leaf.



2

Use a magnifying glass to look at the veins in the leaf. Use the ruler to measure the length and width of your leaf. Write down the measurements on the spaces below.

Leaf length \_\_\_\_\_ Leaf width \_\_\_\_\_

3

Answer the following questions about leaves on the spaces.

Do all leaves look the same? \_\_\_\_\_

What color is your leaf? \_\_\_\_\_

Are all leaves the same color? \_\_\_\_\_

Describe the edges of your leaf.  
Are they smooth, wavy or jagged? \_\_\_\_\_

Do you think leaves ever change colors? \_\_\_\_\_

Is your leaf smooth or fuzzy? \_\_\_\_\_

Is your leaf shiny or dull on the top side? \_\_\_\_\_

Is your leaf shiny or dull on the bottom side? \_\_\_\_\_

Are there any bugs on your leaf? \_\_\_\_\_

Some leaves have spots on them.  
Does your leaf have spots? \_\_\_\_\_

Some leaves are very hard and do not bend easily.  
Other leaves are soft and easy to bend.  
Does your leaf bend easily? \_\_\_\_\_

4

Use the special paper your teacher gave you and your crayons to make a leaf print. If you need help, ask your teacher.

# TREES ARE TERRIFIC

## ACTIVITY SHEET TWO

### “Bark Observation”

1

Look closely at the bark of several different trees. Does the bark of all trees look the same? \_\_\_\_\_

2

Choose one tree and look carefully at its bark. Use the magnifying glass and look at the cracks in the bark. You may see insects or moss in some of the cracks. Close your eyes and feel the bark with your fingers. After you look at and feel the bark, answer the questions below.

What are the colors of the bark? \_\_\_\_\_

Are the cracks in the bark  
the same color as the rest of the bark? \_\_\_\_\_

What are the colors of the cracks? \_\_\_\_\_

How does the bark feel? \_\_\_\_\_

Does the bark look rough or smooth? \_\_\_\_\_

Did you see any insects on the bark? \_\_\_\_\_

Did you find any moss or other plants  
growing on the bark or in the  
cracks of the bark? \_\_\_\_\_

3

Use the paper given to you by your teacher to make a print of the bark on the tree you selected. If you need help, ask your teacher.