

Mini-unit “Becoming Familiar with PA Forests”

NOTE: This mini-unit will be used within the unit on renewable and nonrenewable resources.

STANDARDS: 4.2.10A Explain that renewable and nonrenewable resources supply energy and materials; 4.2.10B Evaluate factors affecting availability of natural resources; 4.2.10C Analyze how human-made systems have impacted the management and distribution of natural resources.

**Prior to this class, discuss how to use a dichotomous key.

DAY 1

OBJECTIVE: Students will collect and identify leaves from trees around campus.

MATERIALS: Copies of the “Summer Key for PA Trees”; leaf presses

PROCEDURE:

1. Place students into teams of 3 or 4.
2. Explain that their goal is to come back from outside with 4 different leaf samples (remind them that some leaves are needle-like).
3. Students will go out on the school campus and collect their samples.
4. After returning to the classroom, students will identify their leaf samples by using the provided keys.
5. A recorder from each group will make sure to write down the steps used to identify each of the leaf.
6. A reporter from each group will tell the entire class the names of the four leaves they found.
7. A class recorder will keep a list of all of the types of leaves on the chalkboard.
8. Students will then place all of the leaves into a leaf press.

HOMEWORK: Students will need to collect a leaf, a twig, and/or a seed from each tree in their yard for a yard map activity.

EXTENSION: Students may be able to create twig wreaths as gifts for the secretarial staff in the building.

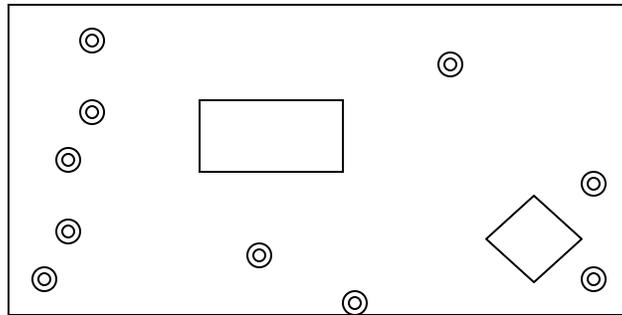
DAY 2

OBJECTIVES: Students will create a yard map to display the variety of trees near their house and they will again use a key to identify any unknown trees.

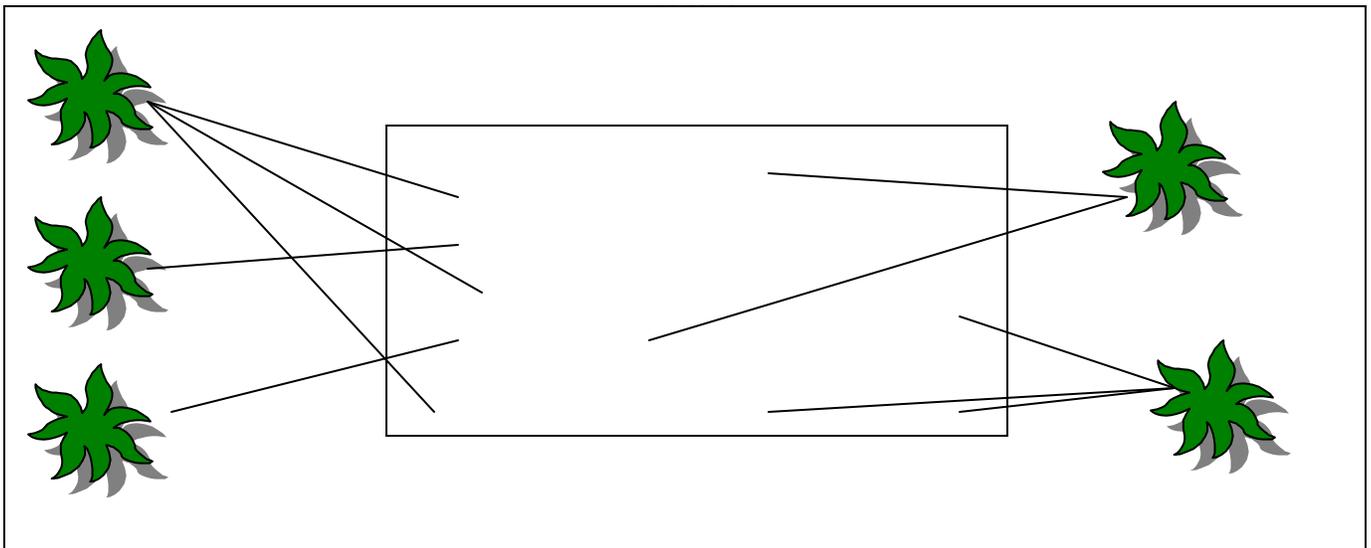
MATERIALS: Leaves, twigs, and seeds collected by students; 11 x 17 paper; "Summer Key for PA Trees"; 3 X 5 cards; art supplies (crayons, markers, colored pencils, glue, yarn, etc.)

PROCEDURE:

1. Using the 3 x 5 card to represent the lot around their house, students will draw a diagram of their yard including all trees.



2. After gluing this card onto the center of the 11 X 17 sheet of paper, students will glue leaves, twigs, and/or seeds from each different species to the paper too. Yarn will be used to make a line from each tree on the diagram to the leaves, etc.
3. Students will then label each leaf with its common and scientific name (they may need to refer to the dichotomous key).



4. When finished, students will be placed in different groups where they will share their diagrams (the focus is to be variety of species).

DAY 3

OBJECTIVES: Students will examine the array of products that we get from our forests.

MATERIALS: Copies of “From the Woods” series: Hardwood Lumber, Maple Syrup: A Taste of Nature, Incredible Wood, Hardwood Veneer, Paper! and Harvesting Trees; teacher made worksheets for each pamphlet

PROCEDURE:

1. Students will get back into their groups from Day 1.
2. Each group will be given one of the “From the Woods” series pamphlets.
3. All team members will take turns reading until each team has completed their pamphlet. At that time, the team will be given a worksheet to complete.
4. After completing the sheet, the group will come up with 5 key points to share with the entire class.
5. Each group will share their points with the class (individuals are responsible for taking their own notes).

HOMEWORK: Students should study for a quiz on leaf identification and today’s notes.

DAY 4

OBJECTIVES: Students will make and use some tools used by people who work with trees (Foresters, loggers, wildlife biologists, ecologists, etc.).

MATERIALS: Teacher made quizzes; cloth measuring tapes, permanent markers, meter sticks, and tape

PROCEDURE:

1. Students will take a quiz on leaf identification and uses of trees.
2. Teams of students will make a D-tape and Biltmore stick using directions provided by the teacher (Use 4-H Trees + Me as guide).
3. Once each team has one of each tool, the class will go outside where the teacher will demonstrate how to use each instrument.

4. The students will the tree volume of 5 pre-measured trees and then return to the classroom.
5. Once back in the room, student recorders will place each teams measurements on the chalkboard.
6. The class will discuss the results and any variations in measurements. Examples of calculations will be shown on the chalkboard.

DAY 5

OBJECTIVES: Students will create flashcards of local tree varieties and identify the uses for those trees.

MATERIALS: Leaves from DAY 1's collection; Students individual yard maps; 5 x 8 cards, clear adhesive paper, and permanent markers

PROCEDURE:

1. Each group will take their leaves from DAY 1 out of the press.
2. Leaves will be made into flashcards. Side 1 will contain the leaf while side 2 will contain the common and scientific names, as well as, the major characteristics used to identify that particular type of leaf.
3. After the information on each card is checked by two other people from different groups, the students should cover the flashcard with adhesive paper.
4. When all flashcards are completed students will move across the hall to the computer lab where they will need to research 3-5 uses for each type of tree on their yard map.
5. Completed yard maps must be submitted to the teacher by the end of the class period.

HOMEWORK: Students will write a three paragraph essay on "What would happen within our community if viruses and blights would wipe out the 5 most common types of trees?"