Grade Level(s): One and Two
Lesson Title: A Tree, by Any Other Name

Focus: (Concept or skills to be emphasized)
Classifying, sketching/drawing diagrams

Objectives: See end of lesson for objectives and standards achieved.

Background Information:

The story *Peter and the Wolf* is set in a meadow and a forest. Within each of these types of ecosystems several unique species of plants can be identified. This leaf-classification lesson seeks to help students understand the diversity of plant species in the environment and to show methods of identifying distinct species of trees.

Activities (Procedures):

1. Read the story of *Peter and the Wolf*, as found in the Teacher's Section under The Verizon Literacy Resource Section with your class. Discuss characters, setting, and sequence of events as the story progresses. Focus special attention on the forest, meadow, and tree that are mentioned in the story.
2. Compare different types of things that students know in the world around them, such as birds versus cats, trucks versus cars, etc., and the ways these things are different. Explain that similarities and differences between things help us with their identification and classification. Tell students that trees and other types of plants can also be identified based on similarities and differences among them.
    a. Organize students into groups of 3-4 and assign roles, such as recorder, reporter, sketcher, and material handler. SC.1.6.1, SC.2.6.2, SS.1.2.1 Ask the groups to think of ways that may be useful to help them differentiate between different types of trees, write their ideas, and then share them with the class. SC.1.1.1, SC.2.1.1
    b. Ask students whether trees, leaves, chairs, etc. are living things. SC.1.4.1, SC.1.5.1 Tell students that plants, as living things, require food. SC.1.4.2 Plants make food, with the help of the sun, in their leaves. SC.2.4.2 Explain that there are many different types of trees in the different habitats, such as meadows and forests, and that people often want to identify them for different reasons. SC.2.4.5 As a class, discuss why people may wish to classify trees (e.g., for use in manufacturing, to determine what types of trees will survive when we plant them, etc.).
    c. Explain that the shapes of leaves can help us to identify trees. Have students return to their groups and provide them with several leaf samples. Ask the

sketchers from each group to draw a picture of the leaves presented to them as they and the group discuss what features they could use to help differentiate among the samples. SC.1.2.4, SC.2.2.1, VA.1.1.6, VA.1.5.1, VA.2.5.1 As a group, ask students to identify their samples, using online or printed plant identification guides. TEC.1.5.1, TEC.1.5.2, TEC.2.5.1 Tell recorders to write down the identity of their samples. Bring students back into a full group and compare sketches and the results of their identification efforts.

d. To complete the lesson, take students on a "field trip" to examine trees on and around school property, or in a nearby park. Help students collect leaf samples, and/or take pictures of trees and their leaves to aid in their identification. Allow students to use online or printed tree identification guides.

Assessment/Evaluation*:

1. Student leaf drawings.
2. Student written leaf identification.

Supplemental Materials and Equipment Needed:

Paper
Pencils
Crayons
Access to the internet or plant identification book(s).
Samples of leaves from the local environment or prepared leaf drawings.
Camera (optional)

Resources:

Tree identification books:
Little, Elbert Luther. (May 12, 1980). National Audubon Society Field Guide to Trees: Eastern Region. Knopf: New York.

Tree identification websites:
http://www.fenton100.org/departments/departments/BiologySite/treeindex.htm
http://www.fw.vt.edu/dendro/forsite/key/intro.htm
http://www.cas.psu.edu/docs/CASDEPT/Hort/LeafID/
http://www.oplin.org/tree/
http://www.arborday.org/trees/treeguide/classification.cfm

National Standards Achieved:

Science

Content Standard A

Abilities necessary to do scientific inquiry:

- Ask a question about objects, organisms, and events in the environment
- Communicate investigations and explanations

Content Standard C

The characteristics of organisms:

- Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.

Technology

1. Use input devices (e.g., mouse, keyboard, remote control) and output devices (e.g., monitor, printer) to successfully operate computers, VCRs, audiotapes, and other technologies.
4. Use developmentally appropriate multimedia resources (e.g. interactive books, educational software, elementary multimedia encyclopedias) to support learning.

Social Studies

V. Individuals, Groups, and Institutions

a. identify roles as learned behavior patterns in group situations such as student, family member, peer play group member, or club member.

Visual Arts

Content Standard 1

Understanding and applying media, techniques, and processes

- Students use different media, techniques, and processes to communicate ideas, experiences, and stories

Content Standard 3

Choosing and evaluating a range of subject matter, symbols, and ideas

- Students select and use subject matter, symbols, and ideas to communicate meaning

WV Content Standard Objectives:

First-Grade

SC.1.1.1	ask questions about themselves and their world.
SC.1.2.4	collect, record and compare information using a variety of classification systems (e.g., ordering, sorting, sequencing) and using a variety of communication techniques (e.g., sketches, pictographs, models).
SC.1.4.1	classify objects as living or non-living.
SC.1.4.2	identify that most living things need water, food, light and air.
SC.1.4.4	identify the parts of growing plants as they develop.
SC.1.5.1	distinguish between natural and man-made objects.
SC.1.6.1	listen to and be tolerant of different viewpoints while working in collaborative groups.
VA.1.1.6	make art using various media to communicate ideas, experiences, and stories.
VA.1.5.1	recognize several reasons for creating art, e.g., aesthetic, functional, commercial, computer animation.
SS.1.2.1	identify and practice various group roles (e.g., group leader, recorder, reporter, collector) in the classroom.
TEC.1.5.1	participate as a group in locating information in a variety of developmentally appropriate technology resources (e.g., interactive books, educational software and elementary multimedia encyclopedias).
TEC.1.5.2	identify the Internet as a source for information.

Second-Grade

SC.2.1.1	recognize science as the human's search for an understanding of the world by asking questions about themselves and their world.
SC.2.2.1	demonstrate curiosity, initiative and creativity by observing, classifying and comparing the patterns, variations and interactions of natural objects in the environment.
SC.2.4.2	identify the structures of physical characteristics of living things and explain their functions (e.g., wings for flying, fins for swimming; roots for support and obtaining water).
SC.2.4.5	observe and compare simple models of different kinds of habitats, including a forest and a stream.
SC.2.6.2	listen to and be tolerant of different viewpoints while working in collaborative groups.
VA.2.5.1	examine different reasons for creating artwork, e.g., functional, nonfunctional, crafts, computer-aided design.
TEC.2.5.1	begin to locate information in a variety of developmentally appropriate technology resources (interactive books, educational software and elementary multimedia encyclopedias).

Kentucky Program of Studies:

S-P-SI-4

Students will design and conduct different kinds of simple scientific investigations.

S-P-SI-5

Students will communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.

S-P-PS-1

Students will understand that properties (e.g., size, shape) of materials can be measured and used to describe, separate, or sort objects.

S-P-LS-1

Students will understand that organisms have basic needs (e.g., air, water, nutrients, light) and can only survive when these needs are met.

AH-P-VA-5

Students will explore a variety of media (e.g., crayon, pencil, paint) and processes (e.g., drawing, painting, weaving) used for creating works of art.

Ohio Academic Content Standards:

First-Grade

Y2003.CSC.S02.GKG-02.BA.L01.I01

Characteristics and Structure of Life /

01. Explore that organisms, including people, have basic needs which include air, water, food, living space and shelter.

Y2003.CSC.S02.GKG-02.BB.L02.I06

Diversity and Interdependence of Life /

06. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

Y2003.CSC.S02.GKG-02.BB.L02.I06

Diversity and Interdependence of Life /

06. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

Y2003.CSC.S05.GKG-02.BC.L01.I08

Doing Scientific Inquiry /

08. Use oral, written and pictorial representation to communicate work.

Y2003.CSC.S05.GKG-02.BC.L01.I09

Doing Scientific Inquiry /

09. Describe things as accurately as possible and compare with the observations of others.

Y2003.CSS.S06.GKG-02.BA.L01.I01

Participation /

01. Demonstrate the importance of fair play, good sportsmanship, respect for the rights and opinions of others and the idea of treating others the way you want to be treated.

Y2003.CAV.S02.GKG-04.BA.L01.I01

Creative Expression and Communication /

01. Demonstrate skill in the use of art tools and materials.

Ohio Academic Content Standards: (Continued)

Second-Grade

Y2003.CSC.S02.GKG-02.BA.L02.I01

Characteristics and Structure of Life /

01. Explain that animals, including people, need air, water, food, living space and shelter; plants need air, water, nutrients (e.g., minerals), living space and light to survive.

Y2003.CSC.S02.GKG-02.BA.L02.I05

Diversity and Interdependence of Life /

05. Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, animals eat plants and/or other animals for food, food chain) and is important because it is a source of energy (e.g., energy used to play, ride bicycles, read, etc.).

Y2003.CSC.S02.GKG-02.BB.L02.I06

Diversity and Interdependence of Life /

06. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).

Y2003.CSC.S05.GKG-02.BC.L01.I08

Doing Scientific Inquiry /

08. Use oral, written and pictorial representation to communicate work.

Y2003.CSC.S05.GKG-02.BC.L01.I09

Doing Scientific Inquiry /

09. Describe things as accurately as possible and compare with the observations of others.

Y2003.CSS.S06.GKG-02.BA.L02.I01

Participation /

01. Demonstrate skills and explain the benefits of cooperation when working in group settings:

a. Manage conflict peacefully;
b. Display courtesy;
c. Respect others.

Y2003.CAV.S02.GKG-04.BA.L02.I01

Creative Expression and Communication /

01. Demonstrate skill in the use of art tools and materials.

*All Assessments are to be at the expected state assessment standard; in West Virginia this is mastery level; in Ohio this is benchmark level; and, in Kentucky, this is academic expectations level.