

Lesson Title:	Leaf Scavenger Hunt
Grade(s):	9 (10-12)
Prepared by:	Nancy Morales, Griffin High School
Appropriate Science Areas:	Botany, Environmental
Science Concept(s):	Characteristics of Leaves
Lesson Objective:	Students will demonstrate their knowledge of various leaf characteristics and explain how different species of trees can be identified by their leaves.
Georgia QCC Standards:	<p>Botany:</p> <ul style="list-style-type: none"> • Inquiry, Process and Problem Solving: Uses science process skills in laboratory or field investigations, including observation, classification, communication, metric measurement, prediction, inference, collecting and analyzing data. • Inquiry, Process and Problem Solving: Uses traditional reference materials to explore background and historical information regarding a scientific concept. • Classification: Applies the rules associated with the construction and use of a dichotomous key. <p>Environmental:</p> <ul style="list-style-type: none"> • Inquiry, Process and Problem Solving: Uses science process skills in laboratory or field investigations, including observation, classification, communication, metric measurement, prediction, inference, collecting and analyzing data. • Inquiry, Process and Problem Solving: Uses traditional reference materials to explore background and historical information regarding a scientific concept. • Measurements, Tools, and Careers: Identifies the significance of accurate, precise and subjective/objective measurements, use of reliable tools, safety measures, and career training in environmental monitoring.
Background:	Several different characteristics can be used to identify trees (leaves, bark, twigs, fruit, shape, buds). Leaf characteristics such as: margins (smooth, saw-toothed, etc.); venation (parallel, pinnate, palmate); and arrangement are useful in identifying various tree species.
Materials:	<ul style="list-style-type: none"> • Plastic sandwich bags • Plastic grocery bags • A list of leaf characteristics • Slips of paper listing the same characteristics

	<ul style="list-style-type: none"> • Pictures (or actual leaves) that show the various leaf characteristics.
Preparation Time:	Time required to gather materials and separate for each group.
Teaching Time:	1 class period
Procedures:	<ol style="list-style-type: none"> 1. Divide each class into small groups. 2. Each group should receive the following items: <ol style="list-style-type: none"> a. a plastic grocery bag containing sandwich bags (one for each characteristic on the leaf list) b. a list of leaf characteristics (10-15) that the students are required to find (a simple leaf, a leaf with pinnate veins, etc) c. slips of paper listing the same characteristics (to be put in the sandwich bag with the leaf) 3. Students should be sent to a designated area outside. Each group is to find one leaf that demonstrates each required characteristic. BE SURE TO TELL STUDENTS TO FIND LEAVES OFF THE GROUND, NOT OFF THE TREES! The leaf is placed in a sandwich bag along with the slip of paper naming the appropriate characteristic. The sandwich bags are to be placed in the plastic grocery bag. Students cannot use the same type of leaf more than one time! 4. The teacher can collect the grocery bags (for grading purposes) or the groups can compare their collections if time allows.
Key Questions:	<ol style="list-style-type: none"> 1. What leaf characteristics can be used to distinguish between angiosperms and gymnosperms? 2. Which leaf characteristic is most helpful in identifying trees? 3. What other characteristics can be used to identify different tree species?
Student Evaluation:	Participation: collecting, and accuracy in gathering leaves with the specified characteristics.
Helpful Hints:	A time limit will help speed along the collecting process. Students can use a key to identify tree species.
Related Activities:	<ul style="list-style-type: none"> • Colors of the Forest Science Lessons 1 & 2 • Colors of the Forest Language Arts Lessons 1 & 2 • Diversity in a Forest
Suggested Extensions into Other	Art: Make "leaf stencil packets"; 1) Select 5 to 10 commonly found trees; 2) Trace leaf shape on poster board; 3) cut out and bundle for distribution to local elementary school science programs.

Curriculum Areas:	
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