Lesson Title:	Examination of a Live Tree and a Decaying Log
Grade(s):	7
Prepared by:	Ann Sturgeon
Appropriate Science Areas:	Life Science
Science Concept(s):	Life Science- changes
Lesson Objective:	Compare and contrast a living tree with a decaying log.
Georgia QCC Standards:	**Grades 6, 7 & 8** • Scientific Inquiry Process: Uses process skills of observing, classifying, communicating, measuring, predicting, inferring, identifying, and manipulating variables. Also uses recording, analyzing, and operationally defining, formulating models, experimenting, constructing hypotheses and drawing conclusions. **Grade 7** • Living Things/ Plants: Identifies the characteristics and structure of nonvascular, plants, (e.g., mosses, liverworts, and hornworts). 16.1 Identifies the characteristics and structure of vascular plants, e.g., ferns and seed plants (gymnosperm vs. angiosperms). • Ecology/Interdependence of Life: Explains the food web/food chain cycles in nature that affect living things.
Background:	Trees have a life cycle. They grow and develop just like humans. Their life cycle includes birth, growth, injuries, disease, and death. During the various stages of growth, a tree's physical characteristics change. Eventually, a tree will die and fall to the ground where decomposing agents (microorganisms, insects, and fungi) go to work breaking down the wood. The act of decomposition recycles nutrients in the forest ecosystem.
Materials:	• Live tree • decaying log • paper • pen or pencil • copies of Venn diagram on $8^1/_2$"x 11" paper
Preparation Time:	Time to locate fallen log(s) close to living trees.
Teaching Time:	2 class periods
Procedures:	Lead students in a discussion of characteristics of both a living (biological and chemical processes) and a decaying log. Let them examine both representative samples with a partner. Each team will complete a Venn diagram.

	During the next class period, students will write a comparison and contrast essay about the live tree and decaying log. One partner may write the comparison paragraph while the other writes the contrast paragraph, and finish with the concluding paragraph, or they can write the entire essay together.
Key Questions:	(Answer for both tree and log) 1. What is the condition of the bark? 2. What plants and animals live in it and on it? 3. What are the benefits of this habitat?
Student Evaluation:	Evaluate completed essays according to teacher's criteria.
Helpful Hints:	• If no decaying logs are present, bring several pieces of fire wood and place it on the ground. Loosen the soil around each piece, place soil around the edge. • Return the logs to their original position after inspection. • Inform students to be careful when turning over logs.
Related Activities:	• Microhabitats
Suggested Extensions into Other Curriculum Areas:	Math: Measure and compare size of tree and log and individual parts, using a line graph. Social studies: Make a map to show how to get to area of tree and log. Art/Music: Draw living tree and fallen log in their habitats. Language Arts: Write a poem about tree or log.

Venn Diagram

Name(s):_____

Compare and contrast the live tree and the decaying log you examined. Put differences in the parts of the circles that don't overlap, and similarities in the parts that do.