

<b>Title of Lesson Plan</b>	Life Cycle of Trees
<b>Prepared By</b>	Glenna MaKosky
<b>City and State</b>	Rochester, MN
<b>Grade Level(s)</b>	2
<b>Keywords (subjects covered)</b>	Life cycle (seed, seedling, sapling, adult tree, senescent tree, log); parts of a tree; tree leaf key
<b>Brief Description</b>	This lesson begins with an introduction to the parts of a tree and tree life cycles, including physical growth and change. A student (optional) could be dressed up as a tree to illustrate the major parts of a tree and what trees require. There are 2 correlating activities: use dichotomous keys so each student becomes a “ <i>tree-etective</i> ” to identify different local trees using leaves. The other is an outside hike through the woods where students look for examples of the different stages of the tree lifecycle and unique features of trees. Other optional activities could include how a tree has multiple annual/seasonal cycles within its life cycle through the use of tree cookies or core samples.
<b>Total Time Required</b>	2+ hours
<b>Setting</b>	Classroom and school forest, park, etc.
<b>Lesson Objectives/Goals</b>	<p>All living organisms have life cycles that include being born, growing up, reproducing, and eventually dying.</p> <ul style="list-style-type: none"> <li>▪ Physical growth and change are natural parts of the tree life cycle.</li> <li>▪ Trees are more likely to survive and thrive in each stage of their life cycle when survival needs are met.</li> <li>▪ A tree has multiple annual cycles within its life cycle (tree rings).</li> <li>▪ Seeds are an important stage in the life cycle of a plant.</li> </ul>
<b>Materials Needed</b>	<p>Tree costume/props: <b>Trunk</b> - brown tagboard or felt material with armholes cut (could also have a piece of real bark attached and under this 2 layers of green construction paper with straws or tubing attached to represent the xylem and phloem located just under the bark); <b>Roots</b> – pieces of twine, yarn, or similar materials that stretch 2 times farther than branches; <b>Branches</b> – could use 2 real tree branches with leaves (paper or real) or an umbrella with leaves attached; <b>Crown</b> - a crown or hat with leaves on; <b>Nuts or other Seeds</b> from trees</p> <p>puppets or stuffed animals of animals that depend on trees</p> <p>Wood cookies (optional)</p> <p>Tree leaves and seeds to match tree keys</p> <p>Dichotomous tree keys (provided below)</p> <p>Worksheet (provided below)</p>
<b>Standards Addressed</b>	<p>(Correlation to MN Science standards):</p> <ul style="list-style-type: none"> <li>• The student will describe the life cycles of <i>plants</i> and animals. (Grade2.IV.B.1)</li> <li>• The student will observe and describe some features of <i>plants</i> and animals that allow them to live in specific environments. (Grade2.IV.C.1)</li> <li>• The student will know that animals need air, water, and food <i>and that plants require air, water, nutrients and light.</i> (Grade1.IV.F.1)</li> <li>• The student will sort and classify objects in terms of their color, <i>size, shape</i>, weight, texture, flexibility, and attraction</li> </ul>