








Experimental Design:



1. Assess your choices of trees. How healthy are they? Record your findings and order them by healthiest to least healthy *See Health-O-Meter For Trees*
2. Find a small branch or twig with a few leaves growing on it from each tree. Using clippers, precisely cut one of those leafy branches off from each tree. Try to make the cuttings about the same size, or try to find a branch of similar diameter/size from each tree.
3. Label the cuttings. You can color code with post-it notes, twist ties, or something of similar nature to ensure you can tell which cuttings are from which trees.
4. Take close-up pictures of each of the cuttings and record what the leaves are initially like (size, shape, color, quantity) and determine the overall health of each of the cuttings *See Health-O-Meter For Leaves*
5. Carefully store the cuttings flat in a cool environment (i.e. garage, basement, etc).
6. Observe the cuttings daily for two weeks. Record any change in size, shape, color, or overall health appearance. Refer to the Health-O-Meter For Leaves to grade the health of the cuttings in a similar way to the trees.
7. After two weeks, take close-up pictures of each of the cuttings and compare the initial pictures to the final pictures. Based on the picture comparisons and recorded changes in appearance, determine which of the cuttings had the most change (closest to dying in comparison to where it started). How did the health of the leaves and the tree initially affect how the leaves decayed?

Health-O-Meter

Health-o-meter Number	For Tree	For Leaves
10	Museum quality tree - everything is perfect not a leaf out of place or munched (Fully green, trunk is fully intact, no peeling, very few rotting leaves, no bald spots, roots are underground)	Lush, green spring of life and happiness - fairy tale level leaves (very green, straight out of a postcard) 

<p>9</p>	<p>That's a really nice tree ya got there,,, would you mind,,,,, selling it to me????? - People come to your house and compliment your tree (Mostly green, a few leaves might be damaged or weak looking, no major bald spots and the trunk is healthy, no peeling rotted or hollow, the roots are underground and the leaves evenly cover the tree)</p>	<p>Slight discoloration maybe in the center of the leaf</p> 
<p>8</p>	<p>Your rich neighbor's tree that the gardener takes care of (only slightly yellowing leaves, maybe a few marks or missing pieces of bark)</p>	<p>Looks like it needs more water but still somewhat greenish but leaning on the yellow side, just not as vibrant</p> 
<p>7</p>	<p>The nice tree everyone wanted to hang out next to in elementary school (significant, normal looking damage to trunk, leaves are a little yellow/eaten/torn, there are a couple spots on the tree where leaves are sparse)</p>	<p>Starting to get brittle, little bit of yellow, maybe slight discoloration/crispy on the edges</p> 
<p>6</p>	<p>Just an average lookin' tree Not too shabby (some branches don't have leaves that are maybe more dead than others, leaves are kinda yellow/eaten/torn, damage to trunk isn't suspicious, a root might be exposed but the tree is not in danger of dying)</p>	<p>Almost completely yellow, there's still some green on it. Maybe most of the leaf is a yellow-ish green</p> 

<p>5</p>	<p>This tree is constantly singing the song “Never Gonna Give You Up”, as it is hanging in there. It keeps trying to get healthier, but it faces many challenges that keeps it at #5. (leaves are yellowed or crispy/brown from too much sun, branches are cut/broken/damaged, trunk has considerable damage)</p>	<p>Dark yellow color and shrink up on the edges</p> 
<p>4</p>	<p>“All around me are familiar faces” (not as many leaves as there should be, leaves are yellow/brown/torn/eaten, trunk has some unusual damage)</p>	<p>Completely yellow (or not green), brown crinkly edges</p> 
<p>3</p>	<p>Imagine it's the end of the semester and you have a 69.99%, that's the pain of this tree (lots of missing leaves or spot without as many leaves, looks a little empty, scarring or unusual damage to trunk, leaves are not fabulous)</p>	<p>Still a little yellow, starting to get brown, starting to shrink a bit, if it were on the tree still you would probably want to clip this branch off cause it ain't pretty</p> 

<p>2</p>	<p>Barely there...struggling boi. The leaves are falling down faster than my grades...this tree is the embodiment of sadness. Theme Song: Chocolate Rain (almost no leaves, leaves are brown and shriveled, trunk is unusual size or marked and peeling,broken branches, brown/dead branches, looks sad in general, you're kinda scared it's gonna die)</p>	 <p>Almost all brown, starting to shrivel, maybe the leaves have fallen off the branch</p>
<p>1</p>	<p>Dead - that's it, dead Tree: "what are leaves?" Another Tree: "You don't have them right now, probably because it's winter." Tree: "It's Winter?????" Theme song: Photograph - Nickelback (no leaves/very few leaves, broken branches, brown/dead branches, usual shape or size or color, its gonna die like tomorrow)</p>	 <p>Brown, shriveled, ready to fall apart, shrunk (tiny) or irredeemably moldy</p>
<p>0</p>	<p>Literally dead - beyond hope - never to be resurrected (no leaves, damaged trunk, rotting, brittle branches, you think the tree has been nothing more than driftwood for years, you could probably pull it out of the ground easily with a big enough shovel)</p>	<p>brown/black, shriveled and crunchy, disintegrating, will fall apart if you touch it with a toothpick - a twig</p> 