FLORIDA 4-H FOREST ECOLOGY CONTEST
FOREST HEALTH
JUNIOR

1a Tree damage is caused by an insect.....go to 2
1b Tree damage is not caused by an insect .....go to 7

2a Damage is caused by a larvae or caterpillar.....go to 3
2b Damage is not caused by a larvae or caterpillar .....go to 4

3a The insects live in a web that is no bigger than a basketball, is found in the branch unions of fruit trees (apple, cherry, plum) and the insects leave their webs to feed.....Eastern tent caterpillar
3b The insects live in and feed inside of their web, the web can cover large parts of hardwood tree canopies.....Fall webworm

4a The tree damage is caused by a large insect depositing its eggs in 1/4-1/2" diameter branches using an ovipositor.....Cicada
4b The insects are not as described above and are beetles.....go to 5

5a The beetle is the largest bark beetle in the southeastern United States, its damage is seen in the lower 10 ft of the tree stem, as is associated with large globs of resin .....Black turpentine beetle
5b The beetle is not as described above.....go to 6

6a The beetle makes "noodles" of wood tissue that it pushes out of the tree as it bores into the wood, it has a symbiotic relationship with a fungus that it eats .....Ambrosia beetle
6b The beetle has 1/8" exit holes, its galleries are made up of individual chambers for their grubs to mature in and feed on the inner bark of the tree.....Southern pine beetle

7a The damage is caused by a fungus or living organism .....go to 8
7b The damage is caused by environmental occurrences, human-made, or parasitic plant .....go to 13

8a The damage to the tree is best described as a canker.....go to 9
8b Not as described above.....go to 10

9a The canker is often found on oak trees and other hardwoods, it can appear smooth black or grey .....Hypoxylon canker
9b The canker is found on pine and is associated with a lot of resin or pitch production by the tree .....Pitch canker

10a The disease has two different host plants from two different tree species.....go to 11
10b Not as described above.....go to 12

11a The two hosts are red cedar (*Juniperus virginiana*) and apples or crabapple (*Malus* species), on the cedar it produces large round galls and on the apple causes orange leaf spots.....Cedar apple rust
11b The two hosts are pine (loblolly and slash, especially) and oak (water, willow, and laurel), the fungus causes galls to form on branches of the pine and leaf spots on the oak.....Fusiform rust

12a The fungus grows as clusters of mushrooms at the base of trees like a little "army", it can also grow rhizomorphs that look like black-brown shoestrings.....Armillaria root rot
12b The fungus infects the needles of pine trees and causes them to turn red-brown and be prematurely dropped from the tree.....Needlecast

13a The damage are V-shaped grooves cut into the bark of trees, it was caused by humans during the collection of pine resin from trees to make turpentine, is sometimes associated with metal attached to the tree.....Catface
13b Not as described above.....go to 14

14a Damage looks like vertical slashes in the tree's bark and is caused by giant sparks of electricity.....Lightning
14b The damage looks like a green plant growing on the branches of its host tree, it does not lose its leaves in the winter, is a higher parasitic plant.....Mistletoe