JUST FOR U.S.*

GRADES 4 - 6

*UNDERSTANDING SCIENCE

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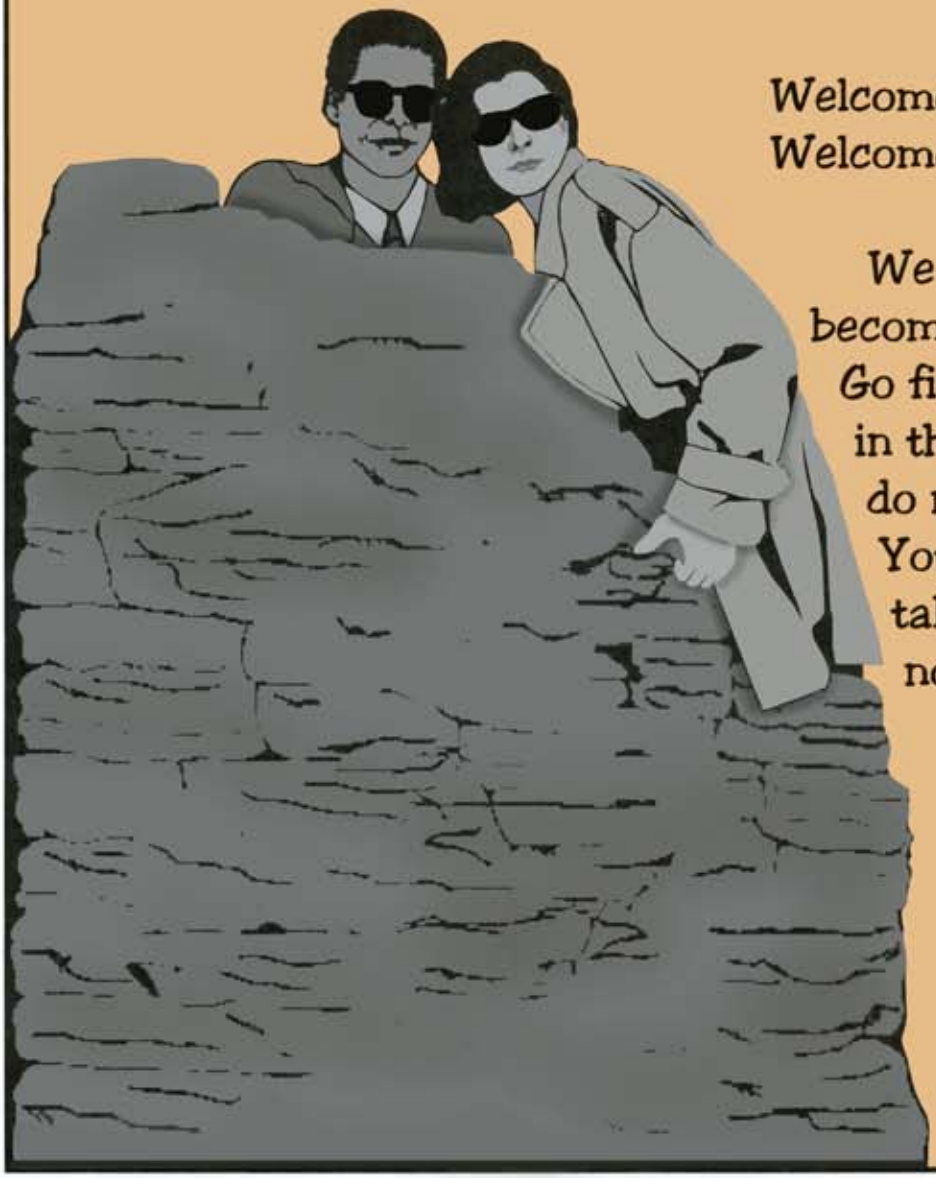
MISSION IMPOSSIBLE!



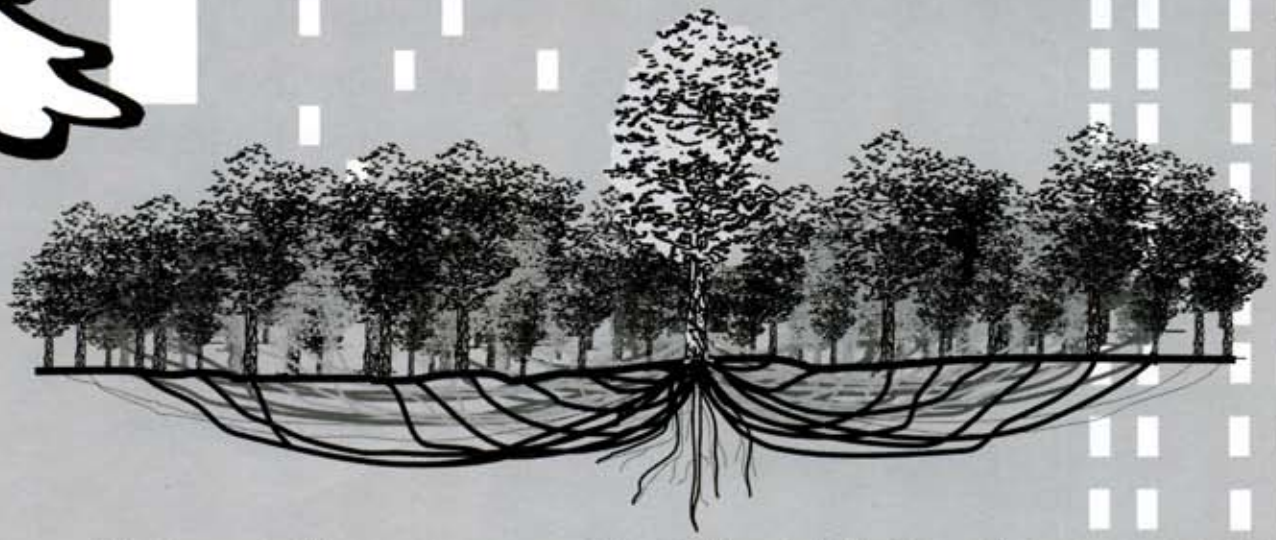
Welcome Agent Boulder!
Welcome Agent Gully!

We need you to become Big Tree Hunters. Go find the largest trees in the United States but do not get "treeked"! You must beware the tallest trees. They may not be the largest!

GOOD LUCK IN YOUR QUEST!

Sound silly? Well, Big Tree Hunters that look for the biggest trees really exist. The biggest tree found is a Giant Sequoia in California. It is 275 feet tall, as tall as a 30 story building . The trunk circumference is 84 feet. This tree is an awesome sight. It is larger than any animal that ever lived, including whales and dinosaurs.

For a long time, scientists thought this Giant Sequoia was the largest living thing on earth Now scientists have found even larger living things. Underground fungi that spread for miles are larger than Giant Sequoias. Another larger living thing is a single tree that has sprouted thousands of trees from its roots. These trees are connected by their root system, so they are considered to be a single living thing.



National Champions are the biggest trees of every species in the United States. Even little species have a National Champion. The smallest National Champion is the Florida Crossopetalum. It is only 11 feet tall! Big Tree Hunters have found twenty-four National Champions in Georgia.

Every year the champions change because people discover bigger trees. Recently Big Tree Hunters have found two Coastal Redwoods that are almost as big as the Giant Sequoia. Big Tree Hunters will be measuring carefully next year to determine if the Giant Sequoia is still bigger.

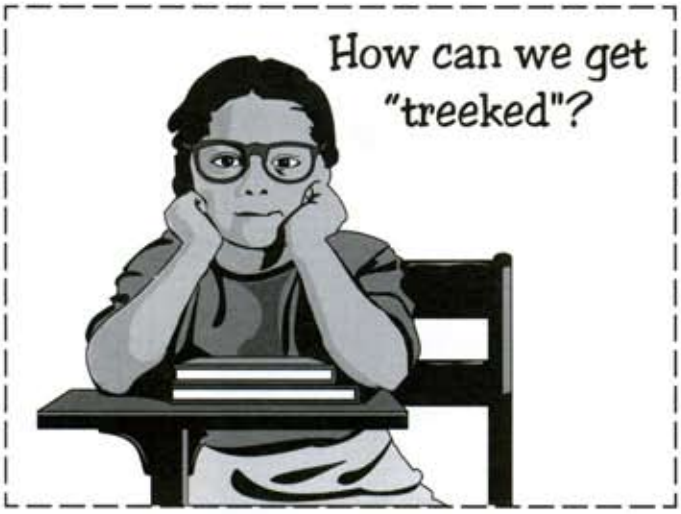
Anyone can be a Big Tree Hunter.
Would you like to help Agent Boulder and Agent Gully?

Champion Tree Search

1. Measure the trees at your school using the instructions in this newsletter.
2. Record and compare the measurements to find the biggest tree.

Your school may want to place a marker at the tree showing the measurements you collected!

Be careful. Don't get "treeked"!



The tallest tree might not be the biggest tree.

Why not? I don't understand.

We need to measure three parts of the tree: height, trunk circumference and crown spread.

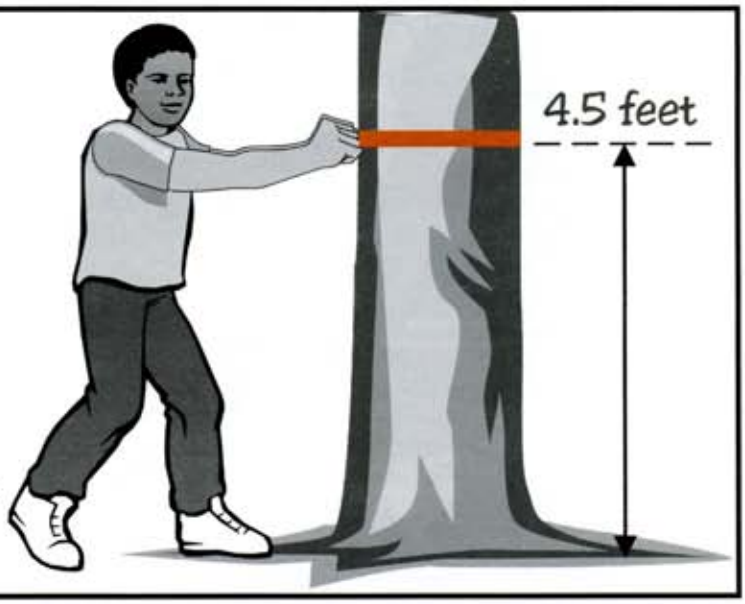
I get it! A short tree with a wide trunk and a big crown could be bigger than a tall tree with a skinny trunk and a narrow crown.

That's right! For instance, some Coastal Redwoods are over 320 feet tall, but the Giant Sequoia has a larger trunk and crown.

RULES FOR MEASURING TREES

CIRCUMFERENCE

- Measure 4.5 feet up the tree trunk.
- Wrap string around the tree trunk one time.
- Cut the string and measure it.
- This is the circumference of the tree trunk.

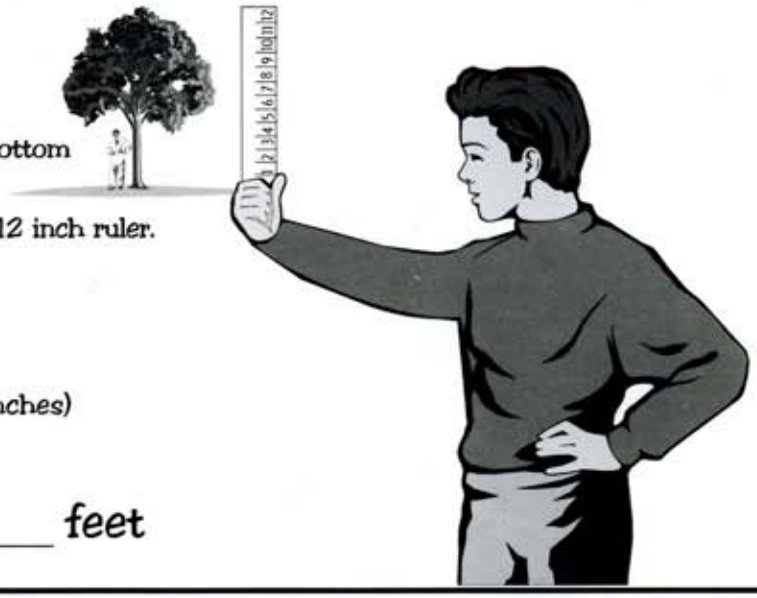


CIRCUMFERENCE = _____ inches

HEIGHT

- Measure a person's real height in inches.
- Have the person stand in front of the tree.
- Take a 12 inch ruler, hold it vertically and line up the bottom of the ruler with the person's feet.
- Move back until the tree looks the same height as the 12 inch ruler.
- Look at the ruler. Measure how tall the person looks.
  This measurement should be less than 12 inches.
- Calculate the height of the tree using this formula:

$$\frac{\text{Person's real height x 12}}{\text{Person's apparent height}} = \text{Tree's real height (inches)}$$



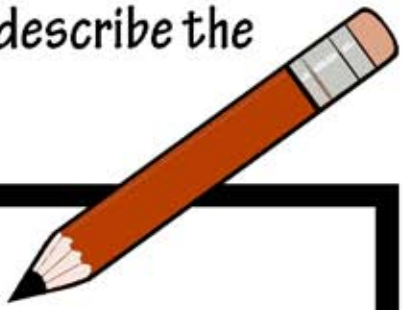
HEIGHT = _____ inches /12 = _____ feet

AVERAGE CROWN SPREAD

- Find the branch that extends farthest away from the trunk.
- Have one person stand under the end of that branch.
- Have another person stand at the end of the branch that is opposite.
- Measure the distance between the two people in feet (A - B).
- This is the maximum crown spread.
- Find the two branches opposite each other that end closest to the trunk.
- Have a person stand under the end of each branch.
- Measure the distance between the two people in feet (C - D).
- This is the mimimum crown spread.
- Add the minimum and maximum crown spread.
- Divide this number by two.
- This is the average crown spread.

AVERAGE CROWN SPREAD = _____ feet

In the space below, draw a picture or use words to describe the "Champion Tree" at your school.



For more information on Champion Trees, see this website - American Forests,www.americanforests.org/resources/bigtrees/

Just for U.S. was written by Rachel Fiore with graphics by Sheila Ward. Theme and references provided by Georgann Schmalz.