

# How Do Trees Transport Water from Roots to Leaves?

## VIDEO TRANSCRIPT

This Douglas fir's thirsty roots draw nutrient-filled water toward its trunk...

The tree acts like a giant water pump.

Thick bark protects thin layers of tubes where fluids move up and down the tree.

Far above us, in the tree's needles, photosynthesis takes place. The tree uses sunlight to produce energy-rich, sugary sap that flows down the outermost layer of tubes...

But deeper inside, we find hair-thin fibers that transport water skyward. We're heading along a direct route that connects the deepest roots to the highest needles, which need water for photosynthesis.

Water escapes from tiny pores on the needles. This helps keep the forest cool, and water vapor can collect into clouds and eventually fall as rain.