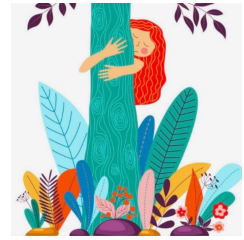


22+ Benefits of Trees



Trees combat climate change

In one year, an acre of mature trees absorbs the same amount of CO₂ produced by a car driven 26,000 miles. Trees absorb CO₂, removing and storing the carbon while releasing oxygen back into the air. Excess carbon dioxide (CO₂) is building up in our atmosphere, contributing to climate change.

Trees clean air

Trees absorb odors and pollutant gases (nitrogen oxides, ammonia, sulfur dioxide and ozone) and filter particulates out of the air by trapping them on their leaves and bark.

Trees provide oxygen

In one year, an acre of mature trees can provide enough oxygen for 18 people.

Trees cool city streets

Trees cool the city by up to 10°F, by shading our homes and streets, breaking up urban “heat domes” and releasing water vapor into the air through their leaves.

Trees conserve energy

Three trees placed strategically around a single-family home can cut summer air conditioning needs by up to 50 percent. By reducing the energy demand for cooling our houses, we reduce carbon dioxide and other pollution emissions from power plants.

Trees save water

Trees are magical ‘light-eaters’ and as they transpire, they increase atmospheric moisture. Shade from trees slows water evaporation.

Trees help prevent water pollution

Trees reduce runoff by allowing the water to flow down the tree trunk and into the soil. Trees act like a sponge filtering water and using rain to recharge groundwater supplies without carrying pollutants to the ocean.

Trees help prevent soil erosion

Trees slow runoff and hold soil in place on hillsides or steep stream slopes.

Trees shield us from UV rays

Trees reduce UV-B exposure by about 50 percent protecting us outdoors.

Trees provide food

Trees provide food for birds and wildlife. An apple tree can yield up to 15-20 bushels of fruit per year on even the tiniest urban lot.

Trees heal

Exposure to trees and nature aids concentration by reducing mental fatigue. People heal faster and with fewer complications with views of trees out their windows. People with depression, anxiety, and ADHD who have access to nature have fewer symptoms.

Trees reduce violence

Trees and landscaping in neighborhoods reduce incidences of violence inside and outside of the home.

Trees reduce noise

Trees reduce noise pollution by providing a buffer from cars and people.

Trees create economic opportunities

When cities value mulching and its water-saving qualities, small business opportunities in green waste management and landscaping thrive.

Trees are teachers and playmates

Trees provide space for play, meditation, creative and spiritual inspiration.

Trees bring diverse groups of people together

Tree plantings build community that improves the quality of life in our neighborhoods.

Trees promote healthy soils

By using structured soils critical to the establishment of trees, healthy soils allow for adequate root growth and tree health.

Trees provide a canopy and habitat for wildlife

Maple and oak trees provide excellent urban homes for birds, bees, possums and squirrels.

Trees beautify space

Trees offer a canopy of green from parking lots and concrete as well as absorb dust and wind and reduce glare and even muffle sound from cars.

Trees help with drought mediation

Drought-tolerant native species have water-seeking roots that penetrate deep into the soil to tap into local groundwater to draw to the surface. A tree's roots absorb water and nutrients, utilizing roots as sensors to detect water-deficit conditions and send signals to baby shoots above ground.

Trees help capture rainwater

Tree canopies increase the surface area where stormwater falls that decreases the amount of runoff and resulting flooding. Root systems also serve as water catchment areas that promote infiltration.

Trees help people get outside and engage with their city

City trees and landscaping increase the likelihood that the community will engage with local businesses.

Trees are cost-effective solutions to combat climate change

Trees are cost-effective solutions to combat the adverse effects of climate change, such as extreme heat, droughts, and floods. Trees are the only piece of infrastructure that gains value over time!

Source: <https://treepeople.org/22-benefits-of-trees/>

Tools to explore your neighborhood tree equity

A mature tree is often 70 times as beneficial to the environment as a newly planted tree because they: sequester carbon, lower the temperatures, produce more oxygen, filter stormwater, slow runoff, and also provide habitat for wildlife. Trees are essential to public health as well as being critical to urban infrastructure. The National Tree Benefit Calculator (treebenefits.com) and i-Tree (itreetools.org) are two tools for calculating the cost benefits of urban trees by species, by size and by location. Only the treebenefits.com tool takes into consideration the property value benefits, the i-tree tool doesn't. The tree equity score tool (<https://www.treeequityscore.org/>) helps identify environmental neighborhood inequities to prioritize wellbeing in urban dense areas.

How Trees (and Plants) “Sing” Using a Device Called Plants Play

The sounds they make are responses to things in their environment or their internal workings--stuff moving around and processing inside of them. Frank Telewski, a plant biologist at Michigan State University, notes that plants make sounds related to external factors like wind, and also to “the cavitation in the hydraulic pathway resulting from tiny bubbles forming in the xylem. Neither of these sounds are made intentionally by the plant to communicate, but they can indicate something about the plant’s structure or physiological status.”

Plants Play turns its electrical variations into music by monitoring the plant's biorhythms in real-time by means of two sensors set on the leaves, needle, petals, or bark. By touching the plant we can monitor how the melody changes: each plant, in fact, reacts differently to different stimuli, thus the music played by the plant will always be unique .

The advanced biofeedback circuit engineered by the Plants Play team picks up the electrical impedance variation of the plant\tree thru two sensors set on the leaf/log. The central processor assigns a note at each electrical impedance of the plant. The frequency value of the note is based upon a Gaussian analysis of the plant by a static algorithm that converts electrical impedance into notes, on the basis selected by the user thru the app. The sound intensity is related to the "Ramp Parameter", to wit how much the plant's electrical impedance has changed in a certain lapse of time . Polyphony can reach up to 5 notes simultaneously. To sum it all up in an easier way:

Tree or Plant: Composer who generates music.

Phone: Musician who plays the notes generated by the tree or plant and sends the notes through the Plants Play device.

User: Conductor who transforms the notes into music using the App.

About Me

I am a quiet Ph.D. researcher and documentary film enthusiast. I am passionate about guiding friends, neighbors, and independent travelers who enjoy meandering through parks and forest to share the awe and wonder of listening to trees, understanding of tree communication, biodiversity, and my mentors who are devoted to saving our forests.

I welcome visitors of all genders and have a deep commitment to and belief in diversity and respect

Contact Julie and plan a private custom guided tree listening walk or join a public group Airbnb walk at WalkAboutWithJulie.com

