



Trees!

Trees are a truly beautiful part of the natural environment, but they are also amazingly efficient machines—constantly working to make Earth a healthier planet. The *Trees for the 21st Century* program is designed to help you guide children and teens through activities that will deepen their understanding of how trees make a difference in their lives and in the world. Here are 10 proven ways that trees make a big difference:

1. Trees improve air quality.

Trees are sometimes called the lungs of the Earth because they absorb pollutants through their leaves, trapping and filtering (or “sequestering”) contaminants in the air. Like all green plants, trees also produce oxygen through photosynthesis.

2. Trees improve water quality, reduce flooding and erosion.

A tree’s leafy canopy catches precipitation before it reaches the ground, allowing some of it to gently drip and the rest to evaporate. Tree roots hold soil in place, reducing erosion. In these ways, trees lessen the force of storms and reduce the amount of runoff into sewers, streams and rivers, improving water quality. One hundred mature trees can intercept about 100,000 gallons of rainfall per year.

3. Trees temper climate.

Trees lower air temperatures and humidity; they can also influence wind speed. Evaporation of water from trees, or transpiration, has a cooling effect. Cities develop “heat islands” because dark roofs and pavement absorb solar energy and radiate it back. Trees in parking lots have been shown to reduce asphalt temperatures by 36 degrees and car interiors by 47 degrees Fahrenheit.

4. Trees conserve energy.

Three or more large trees strategically placed on sunny sides of a house shade it from the hot summer sun, reducing air-conditioning costs by as much as 30 percent. Deciduous trees are best for this use because they lose their leaves in winter, exposing the house to the warming winter sun, which lowers the energy needed to heat the house. Coniferous trees, because they retain their needles year-round, serve to reduce wind when placed on the north and northwest sides of a building, resulting in significantly lower winter heating costs.

5. Trees are good for the economy.

Economic analyses have found that the value of homes near trees is 9 to 15 percent higher than homes without. Research shows that shoppers linger longer along a shaded avenue than one barren of trees and are even willing to pay more for goods and services.

ONE PLANET. ONE FUTURE. SEND THE MESSAGE.



6. Trees create habitat for plants and animals.

Wherever trees are established, wildlife and other plants are sure to follow, ensuring a healthier ecosystem. Trees provide shelter and food for a variety of birds and small animals.

7. Trees improve health.

Recent research demonstrates that exposure to trees has a relaxing effect on humans, reducing stress and imparting a sense of well-being. Hospital patients with a window view of trees recover faster than those without. Children with Attention Deficit Disorder are better able to concentrate after time spent in outdoor green settings.

8. Trees reduce crime.

Data also show that apartment buildings with high levels of greenery had significantly fewer crimes than those without any trees.

9. Trees reduce noise pollution and can serve as screens.

A belt of trees 100 feet wide and 50 feet tall can reduce highway noise by up to 10 decibels, reducing the sound volume by half. Densely planted trees can also block unsightly views.

10. Trees promote community.

Trees can enhance a community's sense of pride, and ownership. Active involvement in tree planting programs leads to a stronger sense of community and the promotion of environmental responsibility and ethics. Planting programs also project a visible sign of change and provide the impetus for other community renewal and action programs.

It takes many years for a tree to grow large enough to give back many of these benefits. Existing trees are living things that will not last forever, so it is critical that we continue to replenish the forests and plant new ones in our communities. Young trees need our care and stewardship to grow strong—ensuring a healthy future for our planet and all its inhabitants.