



Tree height differences



Trees are like superheroes for our planet! One of the main reasons that they matter so much is because they clean the air. Trees take in carbon dioxide (a gas we breathe out and that comes from cars and factories) and give us fresh oxygen to breathe. Trees also help keep the earth cool, as they provide shade and cool the air around them, which is important as the world gets warmer. Trees help the environment as they are homes to animals, for example birds, squirrels, insects, and many other creatures. They can stop flooding, as tree roots hold soil in place, soak up rainwater, and stop it from washing everything away. Lastly, trees make us feel happy; being near trees and nature can help people feel calm and cheerful.

Unfortunately, people sometimes hurt trees and forests. This can be by cutting down too many trees, as forests are often cleared for houses, roads, or farms. This means animals lose their homes, and we lose clean air. Humans also produce pollution from driving cars or making things in factories. This produces dirty air and water that can make trees sick. Climate change can also impact trees; as the planet warms, some trees struggle to survive because they can't handle the heat or dry conditions. Finally, leaving rubbish or carving into trees can harm their bark and roots.



Trees come in all shapes and sizes. Some are short and bushy, and some are tall and towering. Why do you think some trees are taller than others? Why might this matter? Tall trees can stretch way up to grab sunlight before it reaches the ground. This helps them make food through photosynthesis. The leaves on tall trees also help catch rain and slow it down so it gently soaks into the ground, giving water to smaller plants and trees below. Tall trees make safe homes for birds, squirrels, insects, and even bats. Some animals live high in the branches, while others stay near the ground. Tree height also matters in windy places, as tall trees need strong roots so they don't fall over, while shorter trees often grow in windy areas where being small helps them survive. Tall trees create shade, which keeps the ground cool and moist. This helps little plants and animals live safely underneath.



There are lots of different ways to measure the height of a tree, some are more difficult but accurate (closer to the truth), than others. The stick method is an easy way to measure tree height. First, find a stick the length of your arm and stand away from a tree so that you can see all of it. Then hold the stick upright in your hand, with your arm stretched out. Walk forwards or backwards until the top of the stick matches the crown of the tree and the bottom of the stick lines up with the tree base. Mark the spot you are standing on and then measure the distance (either using steps or a tape measure) between the marked spot and the base of the tree. Watch this YouTube video for more information

<https://www.forestryengland.uk/video/calculating-tree-height>.



A more accurate, but tricky, method involves measuring the diameter at breast height (1.4 m above the ground) of the tree, the diameter is roughly 5% of the tree height, so just multiply the diameter by 20 to get the height. This may depend on the tree species. Watch this YouTube video for more information: <https://www.youtube.com/watch?v=ckGy98hPxI> You could also use an app to measure tree height, for example "Tree Height Measurement".

