

The Life-Giving Power of Trees:

How Trees Support Our Breath,
Climate, Water and Wildlife.

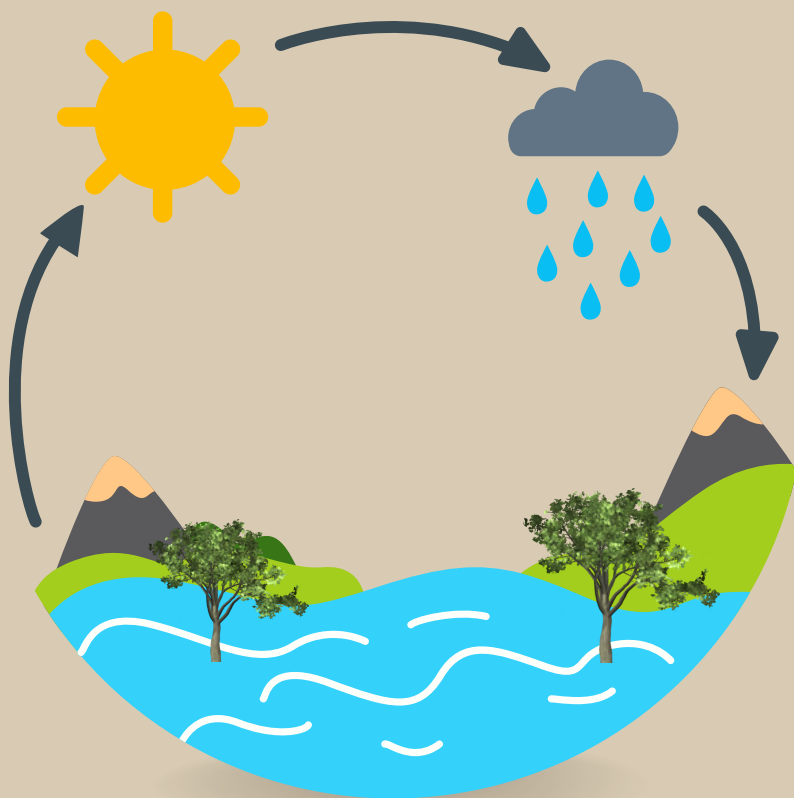


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INTRODUCTION

Trees are more than just beautiful. They are life-giving powerhouses that support our planet's air, water, and climate systems.

In this short guide, we'll explore how trees fit into Earth's carbon and water cycles, and how many trees each of us needs to breathe.

Understanding the role of trees helps us appreciate the importance of reforestation and why every tree planted is a testament to hope.

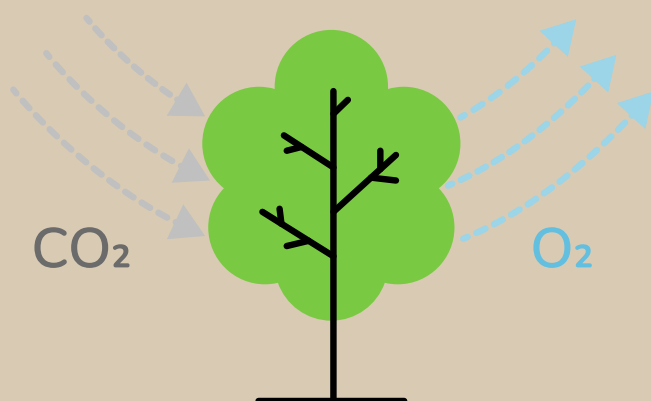


CHAPTER 1: THE BREATH OF THE EARTH

Trees & the Carbon Cycle

The carbon cycle is nature's way of moving carbon through the Earth's systems - air, land, water, and living things. When we breathe out, drive a car, or burn wood, carbon dioxide (CO_2) enters the atmosphere.

Trees are nature's filters. Through photosynthesis, they absorb CO_2 and convert it into oxygen and carbon-based sugars, which they use to grow.



CHAPTER 1: THE BREATH OF THE EARTH

Trees & the Carbon Cycle

A single mature tree can absorb around 22 kilograms of CO₂ per year. Across forests, this becomes a powerful tool for balancing global carbon levels. When forests are cleared, not only is this carbon-absorbing power lost, but the stored carbon is also released back into the atmosphere, contributing to climate change.

Reforestation projects like **TreeProject** help reverse this process - planting trees where they're needed most to restore balance and remove carbon from the air.



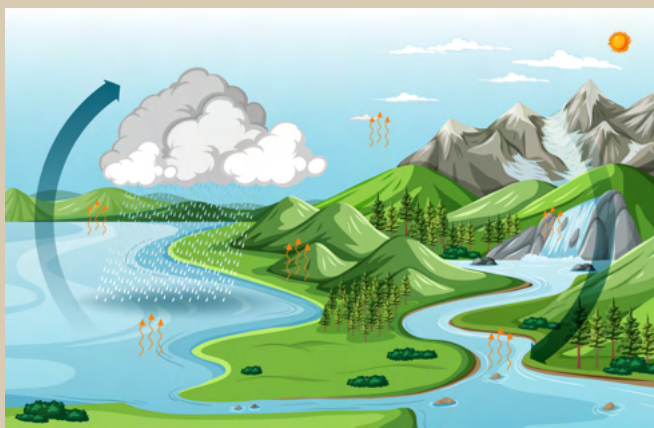
CHAPTER 2: TREES IN THE WATER CYCLE

Nature's Rainmakers

Trees play a quiet but vital role in the water cycle. They absorb water through their roots and release it into the air through a process called transpiration.

This moisture helps form clouds and can influence rainfall patterns.

Their roots also hold soil in place, reducing erosion and keeping water clean. In areas where trees are planted, the land is better able to absorb and retain water, leading to healthier rivers, creeks, and groundwater.



Without trees, rainfall runs off quickly, eroding soil and increasing flood risks. But with trees, the water is slowed, filtered, and shared more evenly across the landscape.



CHAPTER 3: WE NEED TREES

How Many Trees Do You Need to Breathe?

Oxygen is something we rarely think about - until it's gone. Each person uses about 740 kilograms of oxygen per year. A mature tree can produce around 100 to 120 kilograms annually.

That means you need at least 6–8 healthy, mature trees to produce enough oxygen for just one person each year. Over the course of an average lifetime, that adds up to nearly 500 trees just to supply your breath.

Multiply that by the population of a city, and the importance of urban forests and large-scale planting efforts becomes clear. Trees don't just clean the air - they create it.



CHAPTER 4: HABITATS

Trees as Homes for Life



Trees are not just carbon sinks and water managers, they are also vibrant ecosystems in themselves. Every tree can support hundreds of species:

- Birds nest and find shelter in branches and hollows.
- Insects feed on leaves, bark, and flowers.
- Possums, bats, frogs, and reptiles rely on tree canopies and understory plants.

Native tree planting is especially important in Victoria, where habitat loss has pushed many species to the brink. Restoring local ecosystems through TreeProject's work helps create essential corridors for wildlife to move, feed, and breed. By planting native trees, you are helping build homes for creatures great and small—and restoring balance to the natural world.



TREEPROJECT

How You Can Support TreeProject

TreeProject is a grassroots, volunteer-powered organisation working to restore Victoria's ecosystems one tree at a time.

Here's how you can support us:

- **Become a grower:** Help grow native seedlings from home or with your community.
- **Join a planting day:** Experience the joy of putting trees in the ground and see the immediate impact.
- **Sponsor a planting:** Donate funds to help us supply landholders and volunteers with everything they need.
- **Order seedlings** for your land
- **Spread the word:** Share our mission with your friends, family, school or workplace.
- **Corporate partnerships:** Engage your business in tree planting, employee volunteering, or carbon-offset initiatives.
- Visit **treeproject.org.au** to get involved, find out more and **Donate.**



BONUS: FAST FACTS & ACTIVITIES

Did you know?

- One mature tree can absorb 22 kg of CO₂ and produce over 100 kg of oxygen each year.
- Forests help regulate rainfall, reduce heat, and protect water quality.
- Planting native trees in the right place restores ecosystems and supports biodiversity.

Try this:

- Take a deep breath and imagine the 6–8 trees working silently each year just for you.
- Estimate how many trees your family needs to support your breathing - and how many you could help grow and plant!



LEARN MORE & SOURCES

Want to dive deeper?

Here are some trusted sources where you can explore the science behind this eBook:

- NASA Earth Observatory – [More here](#)
- Australian Government – DCCEEW – [More Here](#)
- USGS Water Science School – [More Here](#)
- Greening Australia – [More Here](#)
- The Conversation (Australia) – [More Here](#)
- Carbon Brief – [More Here](#)

These resources are great for students, educators, and anyone curious about trees and the environment.



CONCLUSION

Trees are life

They breathe with us, clean for us, and nourish the land. By understanding their role in our planet's systems, we become better caretakers of the Earth. Whether you grow, plant, donate, or learn—every action counts.

We hope you have enjoyed this ebook and look forward to working with you in the future.

-TreeProject.

Let's grow a greener future together.



Register here



DONATE



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