



# Trees: Long Term CO<sub>2</sub> storage!

How much carbon can a tree hold?

Activity Guide

*Through photosynthesis plants and trees store massive amounts of carbon. A complete forest pulls tons of carbon dioxide out of the atmosphere and stores it in branches, trunks, and roots of trees.*

## Try This!

**Step 1:** Set up the picture of the tree and the carbon dioxide puzzle pieces.

**Step 2:** Place the puzzle pieces on the tree image to represent how much carbon dioxide our tree can store.

**The smaller pieces = 5 kilograms**

**The larger pieces = 10 kilograms**

**Step 3:** How much carbon dioxide can the tree store?

What are some other places that carbon can be stored?

## Climate Connection

**Trees take up CO<sub>2</sub> through photosynthesis, converting it into the building blocks that form wood. Trees can live thousands of years without returning CO<sub>2</sub> back into the atmosphere, making them important players in the climate crisis.**

*Turn the page over to learn more!*

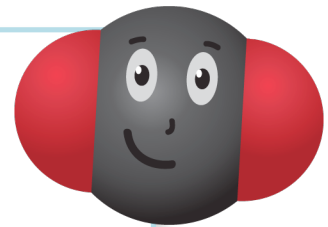


## What's Happening?

In order to grow, trees need sunlight to turn carbon dioxide (CO<sub>2</sub>) into energy. So trees are really made up of mostly oxygen and carbon atoms. Since trees use carbon dioxide to grow, they store carbon in all of their parts. Forests become what is known as a carbon sink. This just means that forests absorb a lot of carbon and store it the way a sink holds water.

45% of a tree is carbon. That means that if you take all of the water out of a 100 kg tree, 45 kilograms would be carbon. That's a lot of carbon! If we cut down or burn these trees, the carbon will be released into the atmosphere. Remember that forests are an important way to fight climate change!

***Did you know?*** When we burn fossil fuels we are accessing ancient carbon that has been stored in plants! Once it is burned the carbon combines with oxygen and forms carbon dioxide, the primary gas leading to climate change.



## Climate Detective Challenge

**Why is it important to preserve forests as a way of minimizing the effects of climate change?**

***Find the answer to this question on the Activity Map!***

