

The SCIENCE **W.O.W.**!

factor

(**W**ord **o**f the **W**eek) #6

deforestation - *is the deliberate, accidental, or natural removal of trees and forests, which can lead to the conversion of land for other uses.*

Example:

*It can happen in any area with a dense population of trees, but most **deforestation** occurs in the Amazon rainforest.*



Deforestation is the purposeful clearing of forested land. Throughout history and into modern times, forests have been razed to make space for agriculture and animal grazing, and to obtain wood for fuel, manufacturing, and construction. Deforestation has greatly altered landscapes around the world.



- *Slash-and-burn* agriculture is a big contributor to deforestation in the tropics. With this agricultural method, farmers burn large swaths of forest, allowing the ash to fertilize the land for crops.
- The land is only fertile for a few years, however, after which the farmers move on to repeat the process elsewhere.
- Tropical forests are also cleared to make way for logging, cattle ranching, and oil palm and rubber tree plantations.

- Deforestation can result in more carbon dioxide being released into the atmosphere. That is because trees take in carbon dioxide from the air for photosynthesis, and carbon is locked chemically in their wood.
- When trees are burned, this carbon returns to the atmosphere as carbon dioxide. With fewer trees around to take in the carbon dioxide, this greenhouse gas accumulates in the atmosphere and accelerates global warming.
- Deforestation also threatens the world's biodiversity. Tropical forests are home to great numbers of animal and plant species. When forests are logged or burned, it can drive many of those species into extinction.

- Some scientists say we are already in the midst of a mass-extinction episode.
- More immediately, the loss of trees from a forest can leave soil more prone to erosion. This causes the remaining plants to become more vulnerable to fire as the forest shifts from being a closed, moist environment to an open, dry one.
- While deforestation can be permanent, this is not always the case. In North America, for example, forests in many areas are returning thanks to conservation efforts.

Vocabulary

biodiversity

noun

all the different kinds of living organisms within a given area.

carbon dioxide

noun

greenhouse gas produced by animals during respiration and used by plants during photosynthesis. Carbon dioxide is also the byproduct of burning fossil fuels.

clearcutting

noun

process of cutting down all the vegetation in an area, usually as part of an economic industry.

conservation

noun

management of a natural resource to prevent exploitation, destruction, or neglect.

deforestation

noun

destruction or removal of forests and their undergrowth.

erosion

noun

act in which earth is worn away, often by water, wind, or ice.

mass extinction

noun

extinction event in which a large number of species go extinct in a relatively short period of time.

photosynthesis

noun

process by which plants turn water, sunlight, and carbon dioxide into water, oxygen, and simple sugars.