

THE CARBON CYCLE AND CLIMATE CHANGE

The Impact and Insight on the Carbon Cycle and Climate Change on the World.

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OUR TREE DATA



At the beginning of the process of learning more about our tree and its part in the carbon cycle, we needed to do some calculations first. We had to know how tall and how much of carbon dioxide (CO₂) in the atmosphere there is about 780 to 800 parts per million of carbon dioxide in the atmosphere. Through the process of measuring carbon dioxide is pulled into the atmosphere and then taken back into life to perform the process of photosynthesis. Carbon dioxide helps affect the amount of water vapor there is in the air and also carbon dioxide affects the temperature. The more CO₂ that is in the atmosphere, the warmer Earth's environment becomes, this is known as global warming, the assumption scientists predicted about global warming has been occurring less of sea ice, accelerated sea level rise and longer, more intense heat waves" (NASA).

2051.557.8 grams of Carbon.

CARBON DIOXIDE?



What is carbon in the atmosphere? When we breathe carbon dioxide (CO₂) in the atmosphere, there is about 780 to 800 parts per million of carbon dioxide in the atmosphere. Through the process of measuring carbon dioxide is pulled into the atmosphere and then taken back into life to perform the process of photosynthesis. Carbon dioxide helps affect the amount of water vapor there is in the air and also carbon dioxide affects the temperature. The more CO₂ that is in the atmosphere, the warmer Earth's environment becomes, this is known as global warming, the assumption scientists predicted about global warming has been occurring less of sea ice, accelerated sea level rise and longer, more intense heat waves" (NASA).



CLIMATE CHANGE EVIDENCE

Climate Change vs. Sea Levels



- The change in sea levels is a clear evidence of climate change and carbon dioxide problem.
- Sea levels are rising more rapidly now than ever before. This is due to the fact that the amount of carbon dioxide in the atmosphere is increasing rapidly.
- There is a yearly increase of 0.1% of carbon emissions from 2000-21.

HUMAN CONTRIBUTE TO CO2

California is responsible for 13% of the country's share of CO₂ emissions. That's why the state has the highest number of wind turbines in the world, to reduce its carbon footprint.

Texas is the largest producer of oil in the world, and it's also one of the largest producers of natural gas. This means that Texas is a major contributor to CO₂ emissions.

HUMAN CONTRIBUTION TO CO2

Due to human activity such as burning fossil fuels, carbon dioxide levels increase. According to NASA, they suggest that due to humanity relying heavily on machinery and industrialization to run their countries, it has caused carbon dioxide to increase from 280 parts per million to 400 parts per million in the last 100 years! Due to all human activity involving burning fossil fuels, nearly 90% percent of the carbon dioxide in the atmosphere is from this damaging human activity (NASA Global Climate Change).

SOLUTIONS

Planting trees can help reduce CO₂ levels. Trees absorb CO₂ from the atmosphere and store it in their trunks and branches. Planting more trees can help reduce the amount of CO₂ in the atmosphere.

Using renewable energy can help reduce CO₂ emissions. Renewable energy sources like wind, solar, and hydro power do not produce CO₂ emissions when they are used to generate electricity.

Reducing energy consumption can help reduce CO₂ emissions. Simple actions like turning off lights when you leave a room, using energy-efficient light bulbs, and driving a fuel-efficient car can help reduce the amount of energy used and the amount of CO₂ emitted.

REFERENCES

1. American Association of Economic Professionals. (2017). *Carbon Dioxide and Climate Change*. Washington, DC: American Association of Economic Professionals.

2. National Oceanic and Atmospheric Administration. (2017). *Global Climate Change*. Washington, DC: National Oceanic and Atmospheric Administration.

3. NASA. (2017). *Global Climate Change*. Washington, DC: NASA.

4. United States Environmental Protection Agency. (2017). *Climate Change*. Washington, DC: United States Environmental Protection Agency.

5. World Bank. (2017). *World Development Indicators*. Washington, DC: World Bank.

6. Intergovernmental Panel on Climate Change. (2017). *Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva, Switzerland: Intergovernmental Panel on Climate Change.

7. National Aeronautics and Space Administration. (2017). *Global Climate Change*. Washington, DC: National Aeronautics and Space Administration.

8. United States Department of Energy. (2017). *Energy Efficiency and Renewable Energy*. Washington, DC: United States Department of Energy.

9. United States Department of the Interior. (2017). *Land Conservation*. Washington, DC: United States Department of the Interior.

10. United States Department of Agriculture. (2017). *Agriculture*. Washington, DC: United States Department of Agriculture.