<https://climate.nasa.gov/>

How climate change has been happening:

“Earth's climate has changed throughout history. Just in the last 650,000 years there have been seven cycles of glacial advance and retreat, with the abrupt end of the last ice age about 11,700 years ago marking the beginning of the modern climate era — and of human civilization.”

“The current warming trend is of particular significance because most of it is extremely likely (greater than 95% probability) to be the result of human activity since the mid-20th century and proceeding at a rate that is unprecedented over decades to millennia”

“The planet's average surface temperature has risen about 2.05 degrees Fahrenheit (1.14 degrees Celsius) since the late 19th century, a change driven largely by increased carbon dioxide and other human-made emissions into the atmosphere.”

“The ocean has absorbed much of this increased heat, with the top 100 meters (about 328 feet) of ocean showing warming of more than 0.6 degrees Fahrenheit (0.33 degrees Celsius) since 1969.[6](https://climate.nasa.gov/evidence/#footnote_6) Earth stores 90% of the extra energy in the ocean.”

Human Activity:

“In its Fifth Assessment Report, the Intergovernmental Panel on Climate Change, a group of 1,300 independent scientific experts from countries all over the world under the auspices of the United Nations, concluded there's a more than 95 percent probability that human activities over the past 50 years have warmed our planet.

“The industrial activities that our modern civilization depends upon have raised atmospheric carbon dioxide levels from 280 parts per million to 414 parts per million in the last 150 years. The panel also concluded there's a better than 95 percent probability that human-produced greenhouse gases such as carbon dioxide, methane and nitrous oxide have caused much of the observed increase in Earth's temperatures over the past 50 years.”

“Scientists have high confidence that global temperatures will continue to rise for decades to come, largely due to greenhouse gases produced by human activities. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5 to 10 degrees Fahrenheit over the next century.”

<https://www.nrdc.org/stories/how-you-can-stop-global-warming>

Ways to help stop climate change:

#### “Invest in energy-efficient appliances: Energy efficiency is the lowest-cost way to reduce emissions. When shopping for refrigerators, washing machines, and other appliances, look for the Energy Star label. It will tell you which are the most efficient.”

“Reduce water waste: Saving water reduces carbon pollution, too. That's because it takes a lot of energy to pump, heat, and treat your water. So take shorter showers, turn off the tap while brushing your teeth, and switch to WaterSense-labeled fixtures and appliances. The EPA estimates that if just one out of every 100 American homes were retrofitted with water-efficient fixtures, about 100 million kilowatt-hours of electricity per year would be saved—avoiding 80,000 tons of global warming pollution.”

“Taken together, the outlets in your home are likely powering about 65 different devices—an average load for a home in the U.S. Audio and video devices, cordless vacuums and power tools, and other electronics use energy even when they're not charging. This "idle load" across all U.S. households adds up to the output of 50 large power plants in the U.S. So don't leave fully charged devices plugged into your home's outlets, unplug rarely used devices or plug them into power strips and timers, and adjust your computers and monitors to automatically power down to the lowest power mode when not in use.”

“LED lightbulbs use up to 80 percent less energy than conventional incandescents. They’re also cheaper in the long run: A 10-watt LED that replaces your traditional 60-watt bulb will save you $125 over the lightbulb’s life.”