Global Warming

Global warming is the slow increase in the average temperature of the earth’s atmosphere because an increased amount of the energy (heat) striking the earth from the sun is being trapped in the atmosphere and not radiated out into space.

Global warming occurs when carbon dioxide (CO2) and other air pollutants and greenhouse gases collect in the atmosphere and absorb sunlight and solar radiation that have bounced off the earth’s surface. Normally, this radiation would escape into space—but these pollutants, which can last for years to centuries in the atmosphere, trap the heat and cause the planet to get hotter. That’s what’s known as the greenhouse effect. In the United States, the burning of fossil fuels to make electricity is the largest source of heat-trapping pollution, producing about two billion tons of CO2 every year. Coal-burning power plants are by far the biggest polluters. The country’s second-largest source of carbon pollution is the transportation sector, which generates about 1.7 billion tons of CO2 emissions a year.

Scientists agree that the earth’s rising temperatures are fueling longer and hotter heat waves, more frequent droughts, heavier rainfall, and more powerful hurricanes. In 2015, scientists said that an ongoing drought in California—the state’s worst water shortage in 1,200 years—had been intensified by 15 percent to 20 percent by global warming. The earth’s ocean temperatures are getting warmer, too—which means that tropical storms can pick up more energy. So global warming could turn a category 3 storm into a more dangerous category 4 storm. In fact, scientists have found that the frequency of North Atlantic hurricanes has increased since the early 1980s, as well as the number of storms that reach categories 4 and 5.

Each year, scientists learn more about the consequences of global warming, and many agree that environmental, economic, and health consequences are likely to occur if current trends continue.