

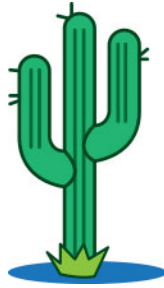
What is "global climate change"?

Is the climate of the whole Earth really changing?



Yes! Earth has been getting warmer—and fast.

Global climate is the average climate over the entire planet. And the reason scientists and folks like you are concerned is that Earth's global climate is changing. The planet is warming up fast—faster than at any time scientists know about from their studies of Earth's entire history.



What is climate?

"Climate" describes conditions over the long term and over an entire region.

Climate is the big picture. It is the big picture of temperatures, rainfall, wind and other conditions over a larger region and a longer time than weather. For example, the **weather** was rainy in Phoenix, Arizona, last week. But this city usually gets only about 7 inches of rain each year. So the **climate** for Arizona is dry. Much of Southern California also has a dry, desert climate. Brazil has a tropical climate, because it's warm and rains there a lot.



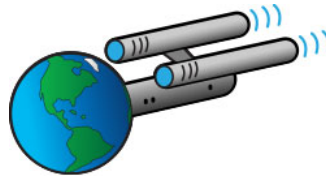
What is weather?



TV weather reporters need all the information they can get in order to predict the weather for just a few days.

Weather is local and temporary.

On our own Earth, we cannot control weather by turning a thermostat up to make it warmer or down to make it cooler. The best we can do is try to predict the weather. Weather scientists, called meteorologists, try to foresee what's going to happen next.



Weather happens at a particular time and place. Rain, snow, wind, hurricanes, tornadoes—these are all weather events.



What is making Earth's climate warmer?

Scientists have discovered that humans are causing this warming.

Do we care if Earth is getting warmer?



The whole Earth as seen from 22,300 miles away, out in space.

Yes, we care! After all, Earth is our spaceship.

It carries us on a 583-million-mile cruise around the Sun every year. It even has its own "force field." Earth has a magnetic field that protects us from killer radiation and brutal solar wind. For its life-support system, Earth has all the air, water, and food we need.

Does what we do matter?



**Yes! Earth's fate is in our hands.
Everything that happens here affects something over there.**

Earth has its own control system. The oceans, the land, the air, the plants and animals, and the energy from the Sun all affect each other to make everything work in harmony. Nothing changes in one place without changing something in another place. The overall effect gives us our global climate.



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