



English
Lecture (2)

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Lecture Topics

➤ Climate Change

<https://climatekids.nasa.gov/climate-change-meaning/>

➤ Grammar: Using this, that, these, those

DR. SANAA ALHADIDI

What Is Climate Change?

Climate change describes a change in the average conditions — such as temperature and rainfall — in a region over a long period of time.

Global climate change refers to the average long-term changes over the entire Earth. These include warming temperatures and changes in precipitation, as well as the effects of Earth's warming, such as:

- Rising sea levels.
- Shrinking mountain glaciers.
- Ice melting at a faster rate than usual in Greenland, Antarctica and the Arctic.
- Changes in flower and plant blooming times.

What Is Climate Change?

Earth's climate has constantly been changing — even long before humans came into the picture. However, scientists have observed unusual changes recently. For example, Earth's average temperature has been increasing much more quickly than they would expect over the past 150 years.



Alaska's Muir glacier in August 1941 and August 2004. Significant changes occurred in the 63 years between these two photos. Credit: USGS

What Is Climate Change?

How Much Is Earth's Climate Changing Right Now?

Some parts of Earth are warming faster than others. But on average, global air temperatures near Earth's surface have gone up about 2 degrees Fahrenheit in the past 100 years. In fact, the past five years have been the warmest five years in centuries.

Many people, including scientists, are concerned about this warming. As Earth's climate continues to warm, the intensity and amount of rainfall during storms such as hurricanes is expected to increase. Droughts and heat waves are also expected to become more intense as the climate warms.

What Is Climate Change?



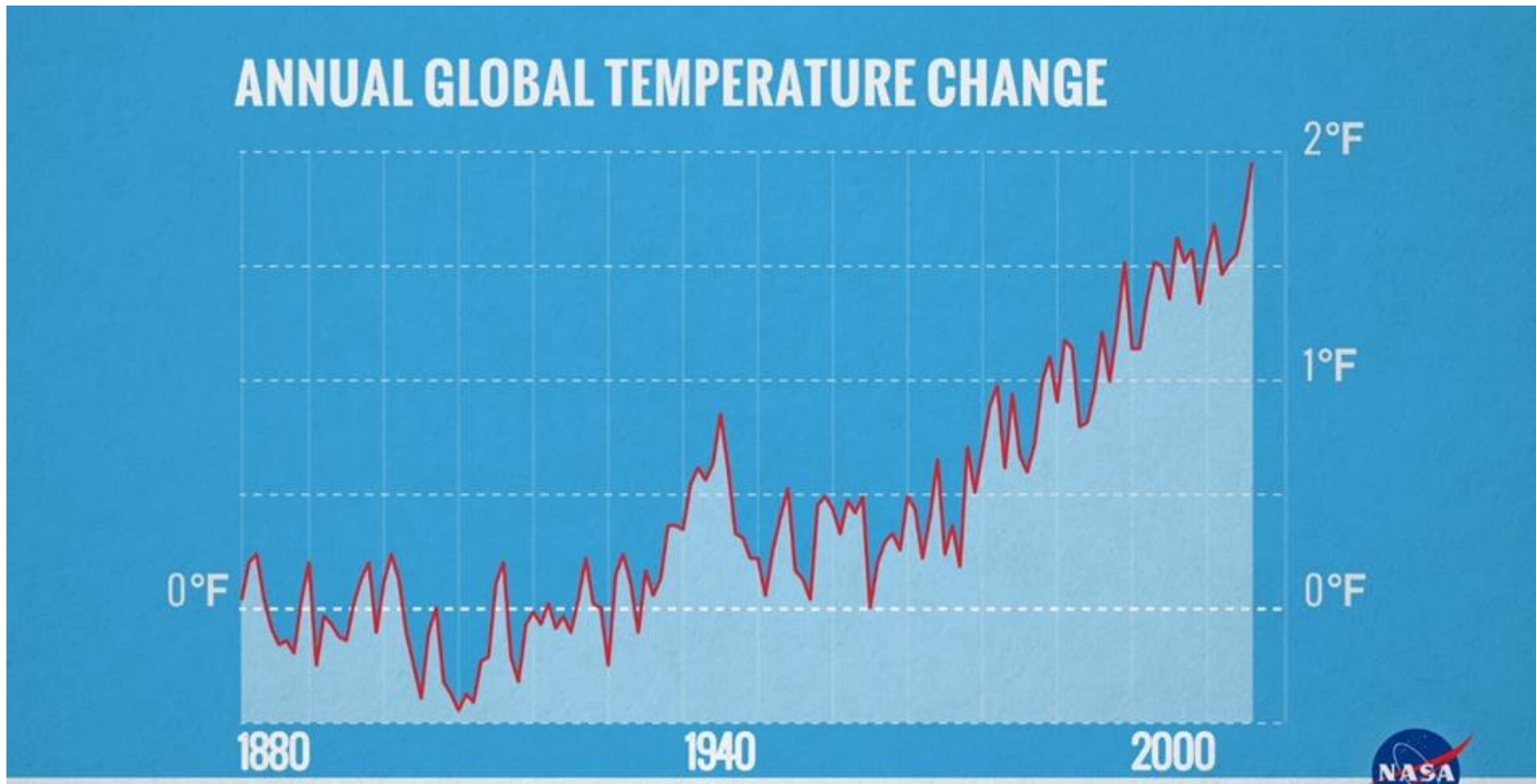
The potential future effects of global climate change include more frequent wildfires, longer periods of drought in some regions and an increase in the number, duration and intensity of tropical storms.

Credit: Left - Mellimage/Shutterstock.com, center - Montree Hanlue/Shutterstock.com.

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

What Is Climate Change?

When the whole Earth's temperature changes by one or two degrees, that change can have big impacts on the health of Earth's plants and animals, too.



Graph of change in annual global temperatures, compared to the average of global annual temperatures from 1880-2000. Credit: NASA's Goddard Space Flight Center

What Is Climate Change?

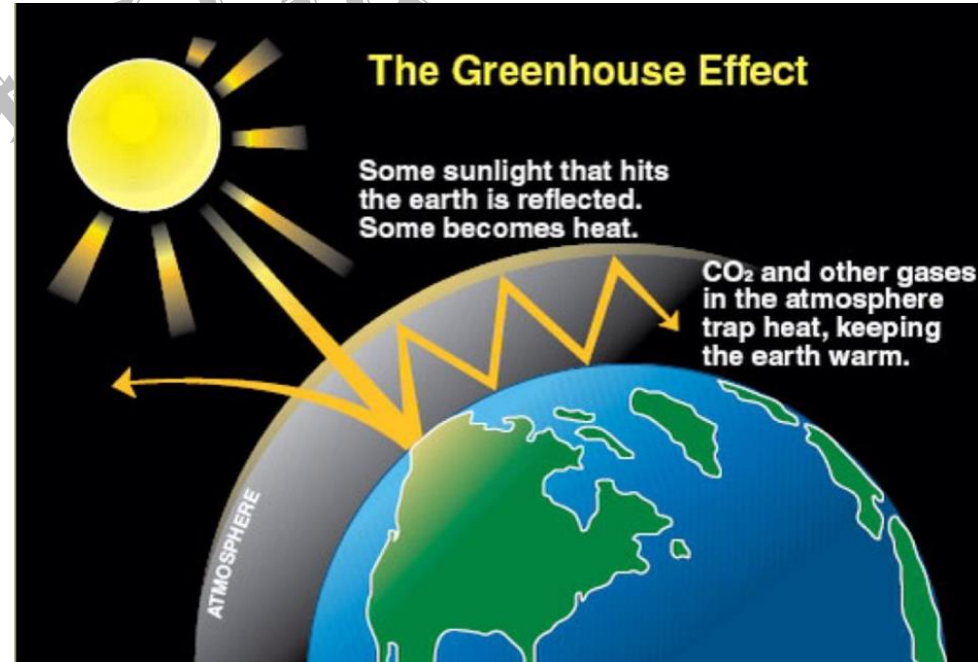
What Causes Climate Change?

There are lots of factors that contribute to Earth's climate. However, scientists agree that Earth has been getting warmer in the past 50 to 100 years due to human activities.

Certain gases in Earth's atmosphere block heat from escaping. These gases keep Earth warm like the glass in a greenhouse keeps plants warm.

Human activities — such as burning fuel to power factories, cars and buses — are changing the natural greenhouse gases.

These changes cause the atmosphere to trap more heat than it used to, leading to a warmer Earth.



Greenhouse effect. Credit: NASA/JPL-Caltech

Grammar

Using this, that, these, those

We use this, that, these and those to point to people and things. This and that are singular. These and those are plural. We use them as determiners and pronouns.

determiners

What's in this box?

That water tastes strange.

I might get myself a pair of those shoes.

pronouns

Come and look at this.

That's a very good idea.

Can I have one of these?

Grammar

Pointing to things

We use this and that with singular and uncountable nouns:

Try to repeat this exercise every morning and evening. (this + singular countable noun)

What does this music make you think of? (this + singular uncountable noun)

I've never been to that part of France. (that + singular countable noun)

Can I have some of that juice, please? (that + singular uncountable noun)

We use these and those with plural nouns:

You can use any one of these computers. (these + plural noun)

I need to paint those windows. (those + plural noun)

Grammar

Time phrases

We often use this with words describing time and dates like morning, afternoon, evening, week, month, year to refer to ‘the one that’s coming’ or ‘the one we’re currently in’:

I’ll be with you some time this evening.

Johan seemed very happy this afternoon.

Ian is in Germany all this week

Referring to things or ideas

We normally use this, that, these and those as pronouns to refer to things or ideas:

We’re going to eat first and then go to the film. Are you happy with that? (Are you happy with the idea of eating first, then going to the film?).

Grammar

[talking about the TV]

Can you turn that off if you're not watching it?

[talking about shoes]

What colour are those? Black or dark blue. I can't see.

Referring to people

We can use this and that as pronouns to refer to people when we want to identify ourselves or others, or to ask the identity of other speakers:

Linda, this is my mother, Anne.

Is that your brother over there?

We often do this in telephone calls and in answer-phone messages:

Hello, is that Ken Orm? This is Jane Bromham here.

A polar bear is standing on a large, irregular piece of white ice that floats in the ocean. The bear is facing left, looking towards the horizon. The water around the ice is a dark, murky green color. In the background, the ocean extends to a flat horizon under a pale, overcast sky. There are other smaller pieces of ice visible in the distance.

Thanks for
being here, I
hope you was
listening