



THE CLIMATE IS CHANGING! WHAT ARE THE CONSEQUENCES FOR OUR COASTAL ISLANDS?

Link to our exhibit: "Louisiana's Present: Bird life on a coastal island"

THE CLIMATE IS CHANGING

The Earth's surface temperature has risen by about one degree Fahrenheit in the past century, melting ice caps and causing a global sea level rise of 4-8 inches. One-foot rise is predicted for 2050. In the Gulf of Mexico, this rise will inundate wetlands, erode beaches, and intensify flooding. If we don't act, places such as the coastal islands on the coast of Louisiana will soon be part of the past!

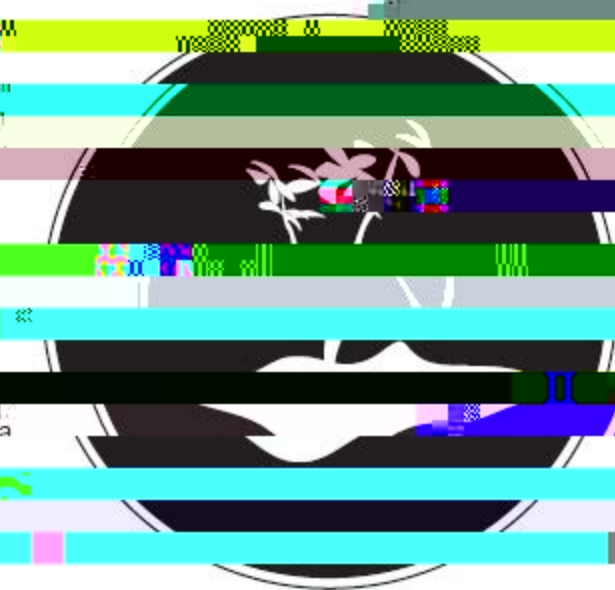
What is global warming?

First, you need to know the difference between weather and climate. Weather is the day-to-day conditions (cold, hot, etc.). The climate is the long-term average of a region's weather events. For instance, Louisiana is a state with a humid subtropical climate.

Global warming means that the average temperature of the Earth has increased by about 1°F over the past 100 years. Of course, Earth's climate has been evolving naturally since its beginning, but now human activities are contributing to the important temperature changes. Some of these activities are called "Climate Warming" and that our "Climate Warming" is not entirely natural.

How do scientists investigate changes in the Earth's climate? They can study fossils present in rocks; they can analyze sediments; they can study ice cores from the poles; and they can use weather balloons, weather balloons, and even satellites.

One factor that increases the Earth's temperature is the Greenhouse Effect. Greenhouse gases trap energy from the sun in the atmosphere. The most common greenhouse gases are water vapor, carbon dioxide, nitrous oxide, and methane. They are called greenhouse because they act very much like the glass in a greenhouse.



Greenhouse Effect is bad for us, but that's not true. Without it, the Earth would not be warm enough for us to live in. Actually, it could be as much as 60°F colder! The problem is that modern human activities produce too much gas in the atmosphere (industrial pollution, car exhaust, electrical power plants, etc.). This extra gas traps too much heat, warming the Earth. We can reduce the amount of gas present in the atmosphere by cutting trees and lowering the amount of CO₂ in the atmosphere!

But it is not too late. We can all make a difference by helping reduce the emission of greenhouse gases (save electricity, recycle, bike instead of drive, plant trees).





GAME 1: Now that you have learned some of the basics about climate change, let's test your knowledge. Draw a line between the following questions on climate change, draw a line between the text/questions and the images/answers.

1. What should you do to reduce your carbon footprint?
glass bottles, your cars and

2. What can you ride instead of your car to lower pollution?

3. What can you plant to help control CO₂ levels?

4. What can you save by switching a button?

5. What object, when it melts, causes the elevation of the sea level to rise?





GAME 2: TEST YOUR KNOWLEDGE!

Check in the box with the correct answer.

Question 1:

Which of these is an example of climate?

- A windy day
- A rainy day
- A hot summer
- A sunny day

Question 2:

Where is the climate most stable?

- In the atmosphere
- In the mountains
- In outer space
- In the soil

Question 3:

Which one of these is a greenhouse gas?

- Oxygen
- Carbon dioxide
- Wind
- Sulfur dioxide

Question 4:

For how long has Earth's climate been changing?

- One hundred years
- One million years
- One billion years
- Five billion years

Question 5:

What's one reason why scientists think that the sea level is getting higher?

- Ships make the sea level higher
- Melting glaciers add more water to the sea
- The ozone hole is warming the ocean
- All of the above

Question 6:

When in history did humans start to add lots of greenhouse gases to the atmosphere?

- The little Ice Age
- The Great Depression
- The Industrial Revolution
- Mesozoic Era

Question 7:

What is the most common mode of transport?

- Riding in a car
- Riding your bike
- Walking
- Sailing

Question 8:

What do scientists study in order to learn more about past climate?

- Sediments
- Ice
- Tree rings
- All of the above

Question 9:

Why have plants and animals been able to survive through changes in climate in the past?

- Humans selected them from climate change
- Plants and animals adapt to changes in climate
- The climate has not changed in the past, so plants and animals did not have to adapt to a new environment
- Plants and animals always benefit from changes in climate

Question 10:

How can you help to slow global warming?

- Save electricity
- Plant trees
- Recycle

The content of this game is based on the EPA climate change website.

