What is Climate Change?

Climate Change - is the long-term shift in worldwide weather driven by a global increase in average temperatures.

What is the Difference Between Weather and Climate?

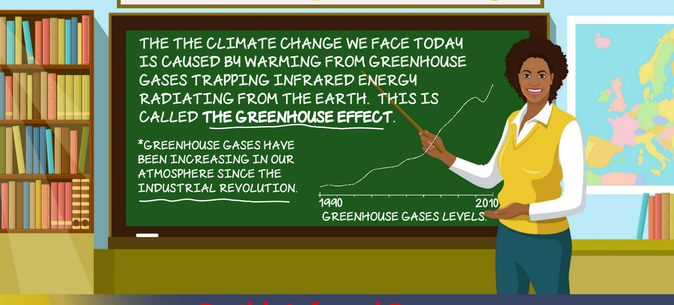
Weather refers to short-term changes in the atmosphere.

Weather is what we experience today.

Climate describes what the weather is like over a long period of time in a specific area.

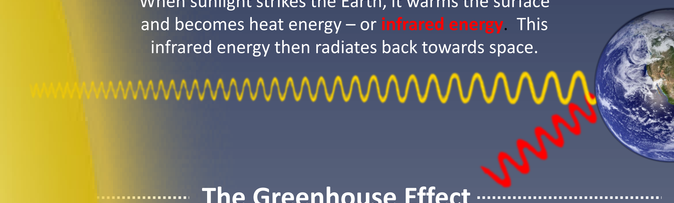
Climate is the likelihood of the weather we'll have.

What is Causing Climate Change?



Earth's Infrared Energy

When sunlight strikes the Earth, it warms the surface and becomes heat energy – or **infrared energy**. This infrared energy then radiates back towards space.

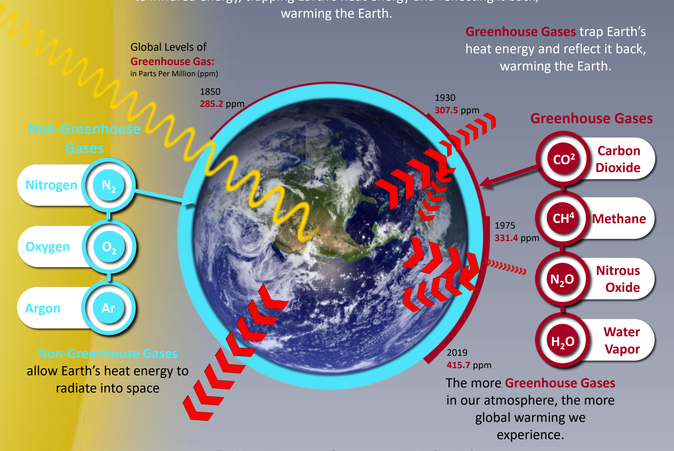


The Greenhouse Effect

Our atmosphere is made up of both **Non-Greenhouse** and **Greenhouse Gases**.

Non-Greenhouse Gases do not react to visible or infrared light, allowing both sunlight and infrared energy to pass unaffected. This mean's Earth's heat can radiate out into space.

Greenhouse Gases also do not react to visible light, however, they **DO** react to infrared energy, trapping Earth's heat energy and reflecting it back, warming the Earth.



Greenhouse Gases trap Earth's heat energy and reflect it back, warming the Earth.

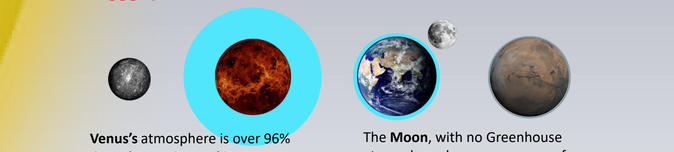
Non-Greenhouse Gases allow Earth's heat energy to radiate into space

The more **Greenhouse Gases** in our atmosphere, the more global warming we experience.

Earth is Not Alone With The Greenhouse Effect

We can see the **Greenhouse Effect** at work throughout our solar system:

Mercury	Venus	Earth	Mars
+333° F	+867° F	+59° F	-85° F



Venus's atmosphere is over 96% Greenhouse Gas and its average surface temperature is 867° F .

That's three times hotter than **Mercury**... which is half its distance to the sun.

The **Moon**, with no Greenhouse atmosphere, has an average surface temperature of 0° F.

Earth, with its Greenhouse Gas atmosphere, has an average temperature of 59° F

Where Do Greenhouse Gases Come From?

Transportation	Electricity	Industry	Buildings	Agriculture
29%	28%	22%	11%	9%

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