

Intro

- **Climate** is the average of weather patterns occurring over a period of years in an area. When these patterns begin to change (even slightly), it's referred to as climate change. [5s]

Body

- **Natural climate change** throughout the years: On the broadest scale, the rate at which energy is received from the Sun and the rate at which it is lost to space determine the equilibrium temperature and climate of Earth. This energy is distributed around the globe by winds, ocean currents, and other mechanisms to affect the climates of different regions.
 - Volcanism
 - Plate tectonics
 - Solar variation
- **Greenhouse effect:** Earth's atmosphere "acts like a blanket and traps important gases like water vapor, carbon dioxide, nitrous oxide and methane to help keep us warm,". As the sun heats the Earth, these gases keep the heat on Earth's surface. "The greenhouse traps heat, otherwise it would be much colder,". However, over the years, we have added to these gases -- creating excess heat. [10s]
- **Human Contributions:**
 - Understand the difference between Anthropogenic climate change(global warming and natural climate change).[10s]
 - Carbon Dioxide: Also known as CO₂, this is the primary greenhouse gas emitted through humans' everyday activities. [5s]
 - The Age of Industrialization Has Increased Carbon Dioxide: The vehicles people drive and airplanes they ride emit carbon dioxide gas as a result of the combustion engine process. Most of the energy people use is made by burning fuels like coal, gas and oil, and also gives off carbon dioxide. [5s]
 - Deforestation
 - Global Warming is Real: "Ninety-seven percent of scientists agree that our actions are warming the atmosphere and significantly changing climate and weather patterns," says Carver. Climate change has already started to affect certain parts of the world, and weather patterns have begun to change. [8s]
 - In the context of climate variation, anthropogenic factors are human activities which affect the climate. The scientific consensus on climate change is "that climate is changing and that these changes are in large part caused by human activities," and it "is largely irreversible."
 - Increase in CO₂ levels. This is due to emissions from fossil fuel combustion, followed by aerosols (particulate matter in the atmosphere).
- **Effects:** [10s]
 - Glaciers
 - Arctic sea ice loss
 - The result is rising sea and water levels, causing floods and massive destruction to low-lying towns and cities along water bodies.
 - 5% of species could become extinct

Conclusion

- **Efforts to help:** [10s]
 - Four R's:

- **Reduce:** the most important. If you don't buy so much stuff in the first place, then you don't need to reuse or recycle it.
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- Reuse whatever you can (like plastic supermarket bags). If you can't reuse something,
- Recycle it! Or if you or someone in your family is handy, why not try to
- **Repair** it!