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Hour: \_\_\_\_\_

## Ozone, Greenhouse Gases, and Global Warming

Ozone Layer - is a layer of gases in the atmosphere that help block damaging UV rays from the Sun from reach Earth

- CFCs and pollutants break down the ozone layer
- There is a hole in the ozone that is growing over the Antarctic
  - Australia is very close to this area and experiences some of the highest rates of skin cancer anywhere in the world
- As the ozone layer is broken down we are exposed to more UV rays leading to...
  - Increase in Sunburns
  - Increase in skin cancer
  - Killing off of algae (one of the main producers in many ecosystems)
    - Too much exposure to UV rays can cause algae to not reproduce

Greenhouse Effect - a layer of gases that trap in heat, this is essential for life on Earth

- As the layer of gas increases however the more heat gets trapped, altering our climate and weather patterns
  - Water vapor (H<sub>2</sub>O)
  - Carbon dioxide (CO<sub>2</sub>) ← humans contribute to a LOT
  - Methane (CH<sub>4</sub>)
  - Nitrous Oxide (N<sub>2</sub>O)

Global Warming - Over the past 50 years, the average global temperature has increased at the highest rate in recorded history. And experts see the trend is accelerating: ALL but 1 of the 16 hottest years in NASA's 134 year record have occurred since 2000.

- Contributed to by...
  - Deforestation - trees are no longer removing carbon from the atmosphere causing it to build up as a greenhouse gas
  - Burning fossil fuels (also causes acid rain and air pollution)
  - Gases from landfills
- This causes...
  - Disruption in our weather patterns - superstorms
  - Melting of polar ice caps
    - Cause ocean levels to rise
    - Coastal flooding
  - Changing of climate patterns