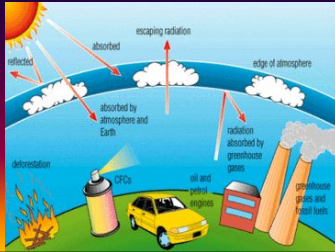


People and Climate Change



Atmospheric Gases

GAS	% Abundance
Nitrogen	75-78%
Oxygen	21-23%
Argon	1%
Water Vapor	0.3%
CO₂	0.06%

Key Greenhouse Gases (indicated by a bracket on the right side of the table)

Natural vs. Enhanced Greenhouse Effect

Natural

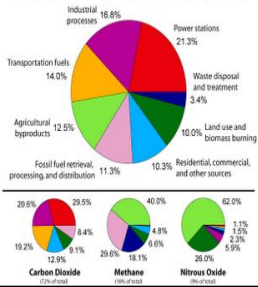
- Responsible for Earth's slow cooling at night
- Sources of gases:
 - Evaporation & transpiration
 - Volcanoes
 - Forest fires
 - Respiration by organisms
 - Weathering of rocks

Enhanced

- Responsible for an abnormally high amount of heat retention at night
- Sources of gases:
 - Burning fossil fuels
 - Deforestation
 - Respiration by people (?)
 - Factory outputs

Human Causes

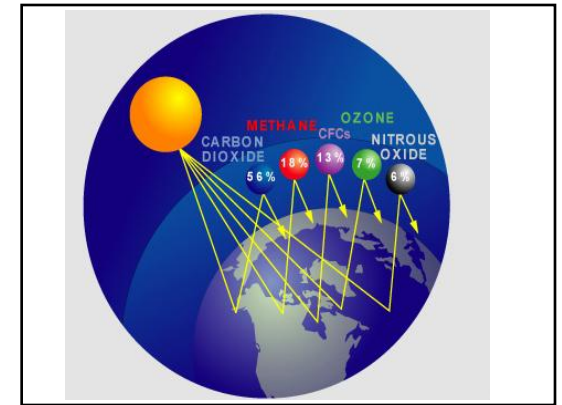
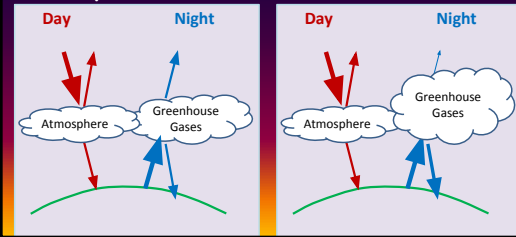
Annual Greenhouse Gas Emissions by Sector



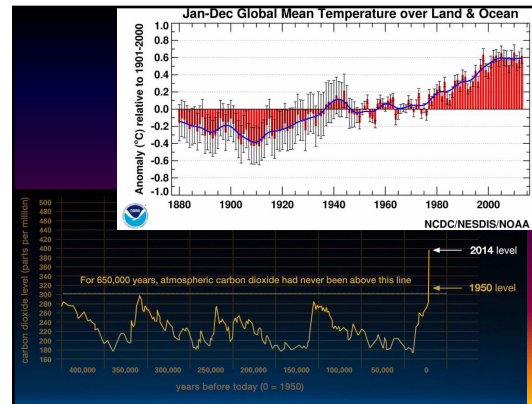
- Burning **fossil fuels**
 - coal, natural gas, petroleum
- Clearing **forests**

Enhanced Greenhouse Effect

- Increased greenhouse gases = increased trapping of heat energy = increased global temperatures



Explain how city traffic can increase Earth's average temperature.



Climate Change

- Last 100 years . . .
 - 1.53°F increase in global temperature
 - Much more RAPID than in the past
- Land areas = a larger temperature increase than water (specific heat capacity)
- People have increased the amount of greenhouse gases present . . .



Impacts of Global Warming

- Changes in weather patterns
 - More intense heat waves
 - Increased droughts and floods
- Decrease in human health
 - More respiratory disease
 - More infectious diseases (most diseases tolerate heat better than cold)
 - Malnutrition (no longer can grow same crops/amounts)

Impacts of Global Warming: More Respiratory Disease

- The Air Quality Index (AQI) indicates . . .
 - How clean or polluted the air is
 - Associated health concerns
 - Indicates who is at the most risk—usually the elderly, children, & the ill
- 2 greatest threats in US:
 - Ground-level ozone
 - Airborne particles

Potential Impacts of Global Climate Change on Human Health

