



Generation Green Schools

CLIMATE LITERACY TOOLKIT

Weather vs Climate

- **Weather:** Short-term atmospheric conditions (eg rain today, sunny tomorrow)
- **Climate:** Long-term patterns over decades (eg. cold winters in Northern Ireland)

Think: Weather tells you what to wear today; climate tells you the type of clothing to have in your wardrobe.



Global Warming vs Climate Change

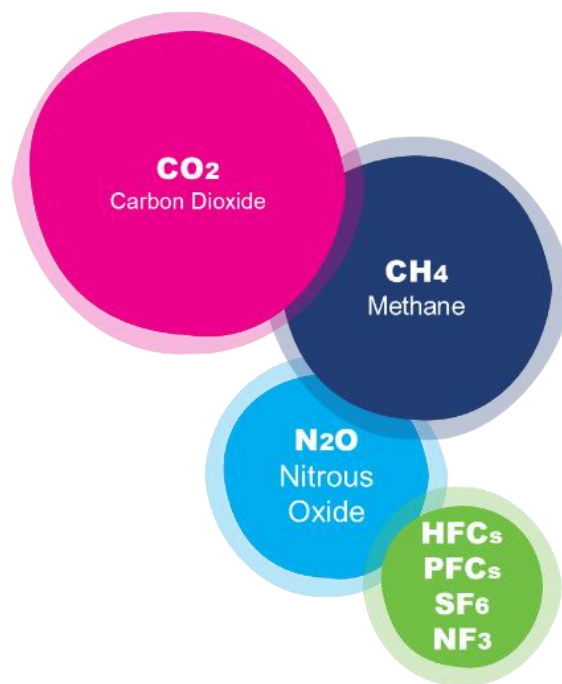
- **Global Warming:** Increase in Earth's average temperature due to pollution (mainly CO₂)
- **Climate Change:** Broader shifts in weather patterns—more storms, floods, droughts

Greenhouse Gases (GHGs)

- Greenhouse gasses trap heat in Earth's atmosphere like a blanket
- Natural GHGs: Carbon Dioxide, Methane and Nitrous Oxide

How do humans add greenhouse gasses to the atmosphere?

- Carbon Dioxide: burning fossil fuels
- Methane: livestock, food waste
- Nitrous Oxide: fertilizers, industrial processes
- F-gases: refrigerants, electronics





The Greenhouse Effect

- Sun's energy reaches Earth → some heat escapes, some is trapped
- GHGs form a "blanket" that keeps Earth warm enough for life
- Human activities thicken the blanket → more heat trapped → global warming
- Started intensifying during the Industrial Revolution (around 1850)



Impacts of Climate Breakdown

- **Extreme heat:** More frequent and intense heatwaves
- **Wildfires:** Hot, dry conditions increase fire risk
- **Sea level rise:** Melting ice and warming oceans add water
- **Super-storms:** Stronger hurricanes and typhoons
- **Drought:** Long dry periods affect water supply

- **Flooding:** Heavy rain and rising seas cause floods
- **Biodiversity Loss:** Fewer species, weaker ecosystems



Extreme heat



Drought



Rising sea levels



Fires



Soil infertility



Flooding



Super-storms



Biodiversity loss

Why It Matters

- **Understand the World:** Learn how Earth's systems work
- **Protect your future:** Climate affects health, safety, opportunities
- **Be part of the solution:** Small actions matter—recycle, save energy, speak up
- **Inspire others:** Share knowledge, lead change
- **Policy advisor:** Shape laws and regulations