



Climate Literacy

Generation Green Schools





“Climate change is sometimes misunderstood as being about changes in the weather. In reality, it is about changes in our very way of life.”

Paul Polman, Business leader, climate and equalities campaigner



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What we will learn today

- Carbon and Climate
- Impacts of Climate Breakdown
- Carbon Footprints
- Why it matters, what can be done?



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Carbon and climate



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Icebreaker

What rating would you give your knowledge of Climate and Carbon?

1. None at all
2. Only a little bit
3. Not sure
4. I know quite a lot
5. I know a LOT



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Icebreaker

How worried are you about climate change?

- a) Not at all
- b) A little
- c) Quite a bit
- d) Very worried



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Weather vs Climate

Weather?

Daily elements such as temperature, rain and wind. These can change hour by hour, day by day, season to season



Climate?

How the weather changes over a long period of time, typically over 30 years. It can be thought of as the average weather over a long period

Global warming vs climate change

Global warming?

When the Earth gets hotter because of pollution from things like cars and factories.

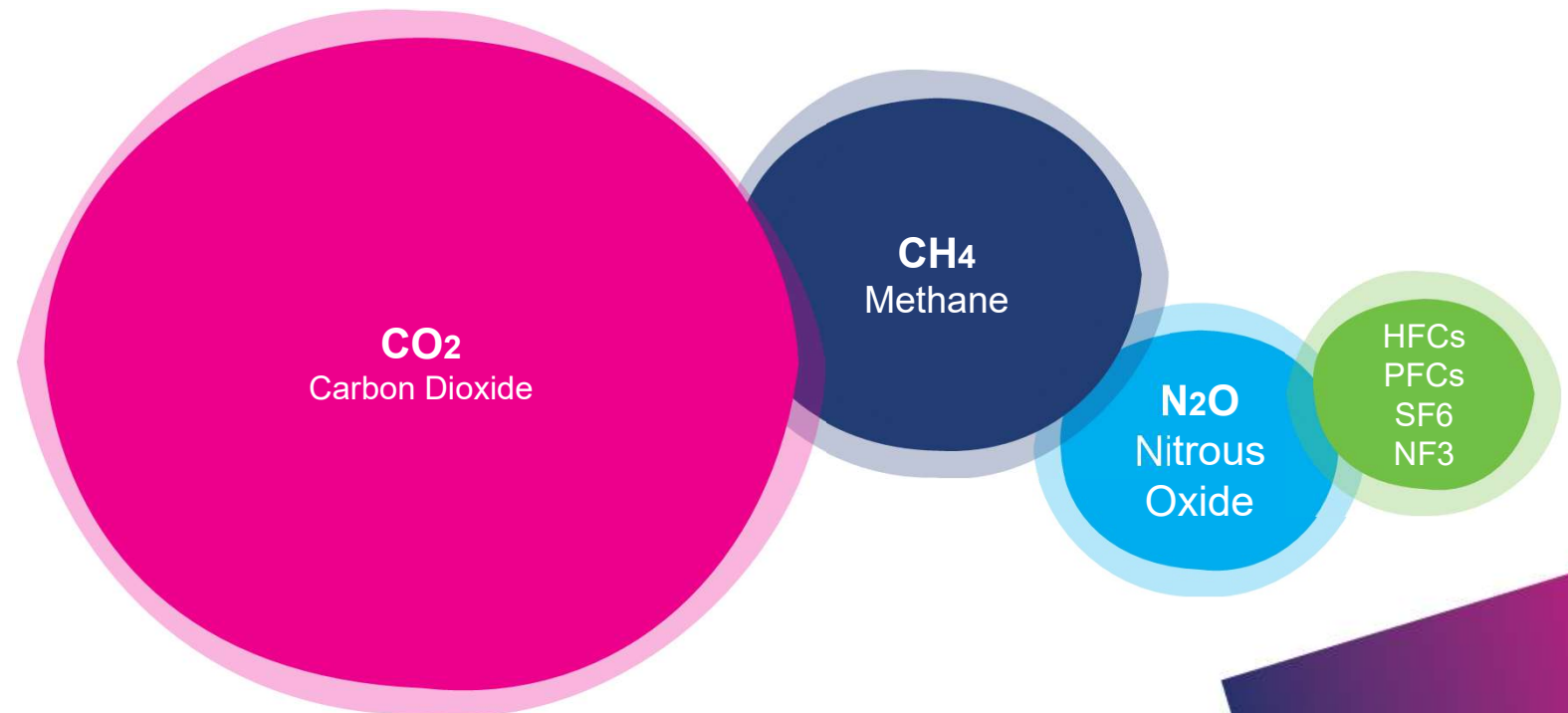


Climate change?

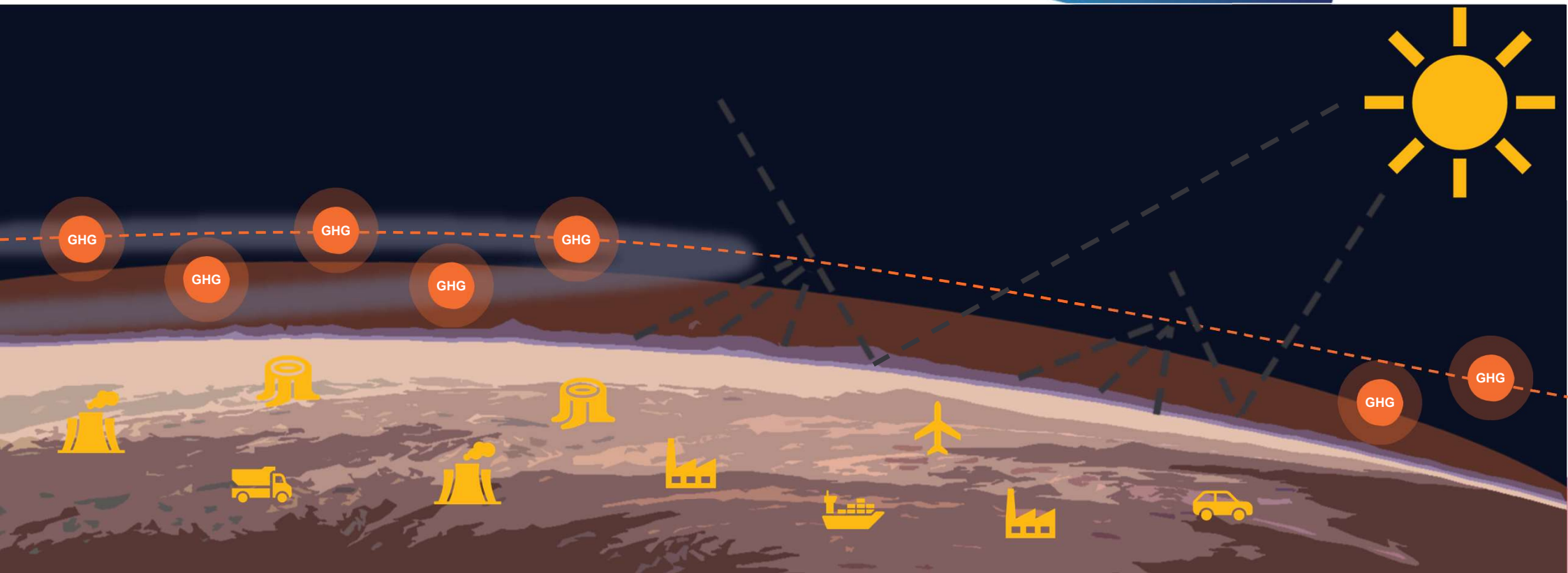
Big, long-term changes in the Earth's weather, like more storms, floods, or heatwaves.

Greenhouse gases

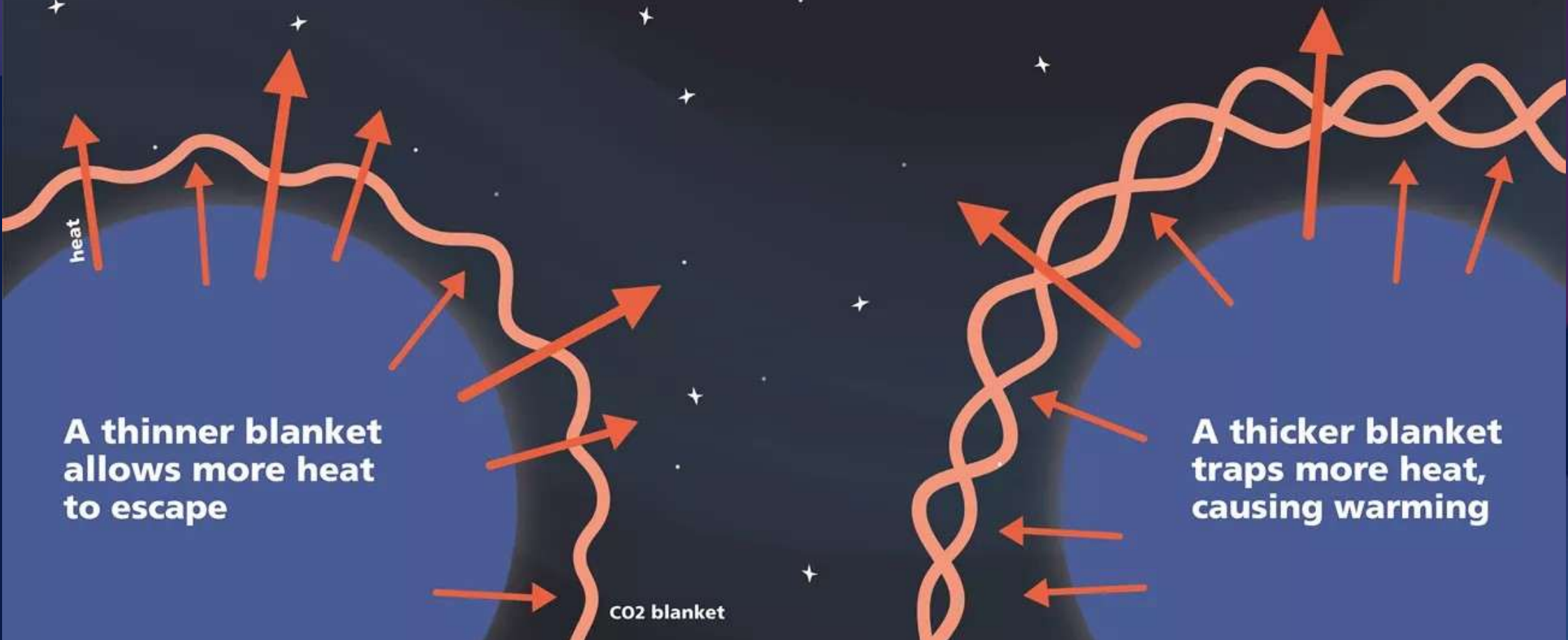
Greenhouse gases are gases in the Earth's atmosphere — like **carbon dioxide (CO₂)**, **methane (CH₄)**, and **water vapour (H₂O)** — that **trap heat from the sun** and keep our planet warm, like a **blanket around the Earth**.



The greenhouse effect

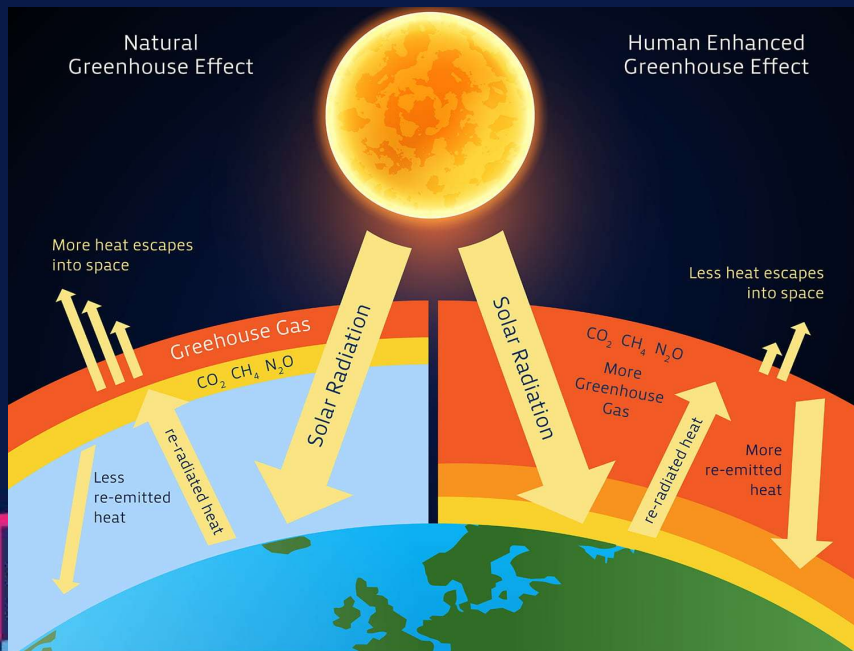


Think of It Like A Blanket...



Quick Quiz

The Earth has always had greenhouse gases — true or false?



Weather and climate describe the same thing — true or false?



Let's recap...

Global Warming

When the Earth gets hotter because of pollution from things like cars and factories.



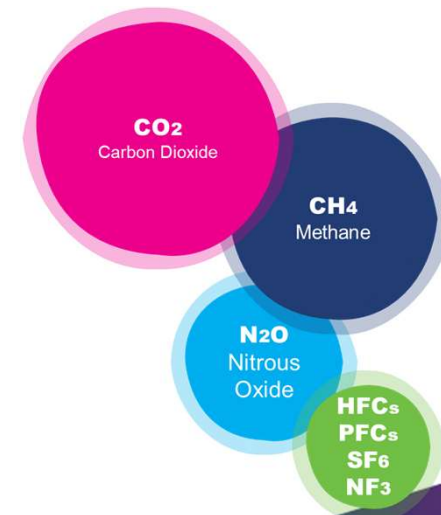
Climate Change

Big, long-term changes in the Earth's weather, like more storms, floods, or heatwaves.



Greenhouse gases (GHG)

Gases like carbon dioxide that trap heat in the air and make the planet warmer.



The impacts of climate breakdown



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Human activity and greenhouse gas rise





Environmental impacts of climate breakdown



Extreme heat



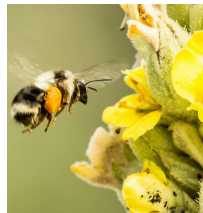
Wildfires



Sea Level Rise



Super-storms



Biodiversity loss



Drought



Flooding



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_____ has occurred at an average rate of **73% globally** between **1970 and 2020**.

Between 2000 and 2023, up to **70% of U.S. land** was under _____ conditions at some point.

In 2022, Northern Ireland **emergency services** responded to **over 1,000** _____, many linked to **dry spells and rising temperatures**—a number that has been increasing due to climate change.

Global _____ has increased by **21–24 cm** since 1880, with the **highest annual average recorded in 2023**.

4 billion people—about **49% of the global population**—experienced at least **30 days** of _____ between May 2024 and May 2025.

Climate change has made _____ **from extreme rainfall up to four times more likely** in the UK compared to pre-industrial times.

8 of the 10 most active hurricane years since 1950 have occurred **since the mid-1990s**, showing a rise in _____ intensity.

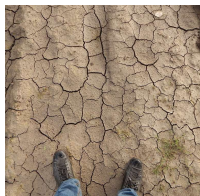
Environmental impacts of climate breakdown



Extreme heat



Sea Level Rise



Drought



Wildfires



Super-storms



Flooding



Biodiversity loss



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Biodiversity Loss has occurred at an average rate of 73% globally between 1970 and 2020.

Between 2000 and 2023, up to 70% of U.S. land was under **drought** conditions at some point.

In 2022, Northern Ireland emergency services responded to over 1,000 **wildfires**, many linked to dry spells and rising temperatures—a number that has been increasing due to climate change.

Global **sea level rise** has increased by 21–24 cm since 1880, with the highest annual average recorded in 2023.

4 billion people—about 49% of the global population—experienced at least 30 days of **extreme heat** between May 2024 and May 2025.

Climate change has made **flooding** from extreme rainfall up to four times more likely in the UK compared to pre-industrial times.

8 of the 10 most active hurricane years since 1950 have occurred since the mid-1990s, showing a rise in **super storm** intensity.

Carbon footprint

If you don't measure it, you can't manage it



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Carbon footprint

The total amount of greenhouse gases (such as carbon dioxide) that are released into the air because of your actions—like using electricity, travelling, eating, and buying ‘stuff’.



Global
National
Local
Organisation
Product/service
Individual

Can you guess the Carbon footprint of these items?

One hour on TikTok vs charging your phone for a week

1 hour on TikTok: $\sim 2.6\text{g CO}_2\text{e}$ (streaming data use)

Charging for a week: $\sim 0.6\text{g CO}_2\text{e}$

Higher: 1 hour on TikTok



One portion of McDonald's fries vs washing clothes once at 40°C

Large Fries: $\sim 0.36\text{ kg CO}_2\text{e}$

One 40°C wash: $\sim 0.6\text{ kg CO}_2\text{e}$

Higher: Washing clothes at 40°C



One hour journey by petrol car (solo driver) or by bus (20 people on board)

Car: $10.3\text{ kg CO}_2\text{e}$ (solo driver)

Bus: $1.7\text{ to }6\text{ kg CO}_2\text{e}$ per passenger

Higher: Car



BUSINESS
IN THE
COMMUNITY



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[Source: Find out the CarbonFootprint of Common Items | Clever Carbon](#)

Why it matters and what can be done

“We cannot solve our problems with the same thinking we used when we created them.”

Albert Einstein, theoretical physicist



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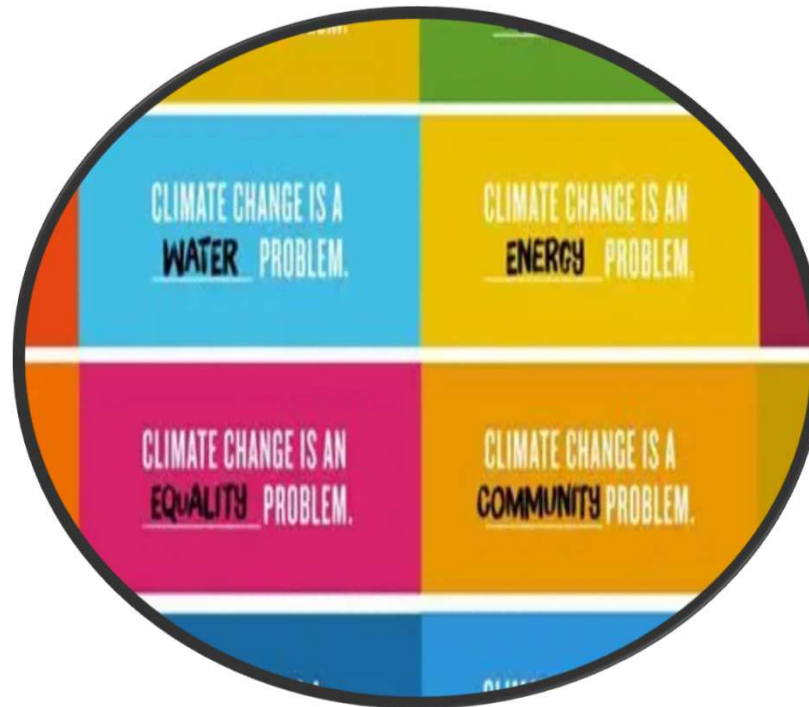
Why it matters

Knowledge is power — and with it, you can help build a better, greener future.

Understand the world around you

Inspire Others

Be a Climate Hero



Be part of the solution

Protect Your Future



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What can YOU do?

Use your voice: write to MLAs, attend rallies and debates

Make change in schools: start an eco committee

Live the change: ditch fast fashion, choose active travel

Protect local nature: volunteer, join tree-planting days

Think globally, act locally: support local sustainable businesses



**Ulster
Wildlife**



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Climate Careers

Environmental Consultant

- assess potential impacts from development projects
- collect data from sites, such as soil samples
- write scientific reports and present findings
- respond to environmental accidents and manage clean-up operations
- provide policy advice to businesses, landowners and the government
- advise organisations on environmental laws and regulations



Meteorologist

- collect data from satellite images and weather stations
- forecast the weather by analysing information and using computer models
- give weather information and reports to customers
- study weather patterns and climate change
- use research to predict floods and droughts
- study how the weather affects the spread of pollution or disease



Climate Scientist

- gather and analyse data from the atmosphere, oceans and land
- monitor ice, sea levels and temperatures
- investigate ways to tackle climate change
- advise policy makers
- teach or lecture in education



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What can you do in your school to make positive changes for climate action?

Discuss in groups and come up with an individual or group action that supports climate action.



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Any questions?

Big change is the result of hundreds of tiny steps,
and they all count.



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