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# Unit 1: Climate Literacy

Generation Green

***Primary Schools 2026***

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# Icebreaker

## What do you know?

## Let’s think together!

Put your hand up if you:

1. are just starting to learn about climate
2. know a little already
3. know lots and want to help others

**There are no right or wrong answers, we’re learning together!**

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# Carbon and climate

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# Weather vs Climate

## What Is Weather?

- **Weather is what it is like outside today.**
- Weather can change:
  - During the day
  - From one day to the next
  - With the seasons
- For example: Rainy, sunny, windy, cold or warm

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# Weather vs Climate

## What Is Climate?

- **Climate is what the weather is usually like in a place over a long time.**
- Northern Ireland's climate is often cool and wet
- Some countries are usually hot and dry
- For example, Egypt, Saudia Arabia or large parts of Australia

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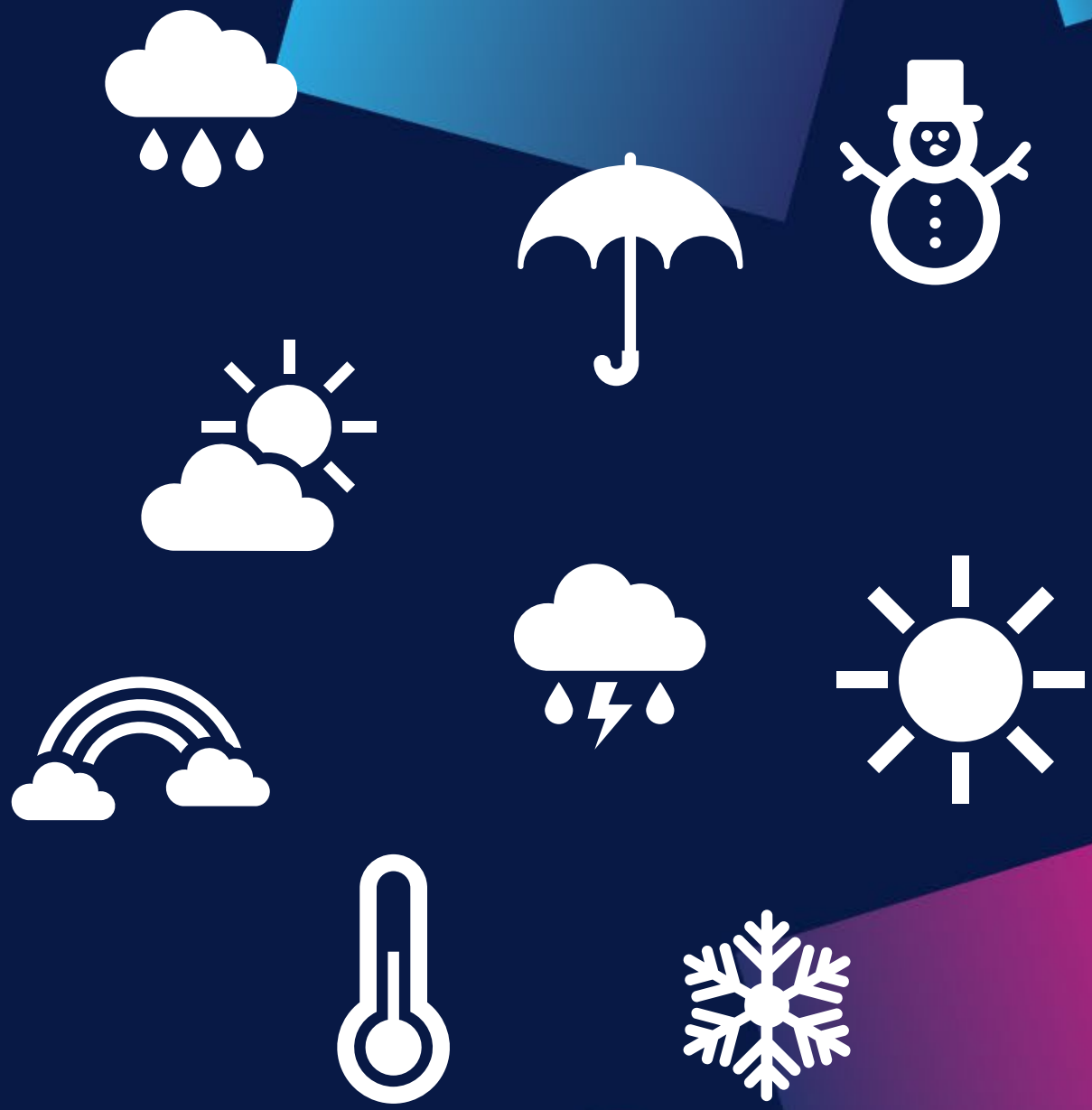
# Weather vs Climate

## Weather and Climate - Not the Same

**Weather and climate are different**

- Weather changes quickly
- Climate changes very slowly
- Both help us understand our world



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## WEATHER

Tells you what to wear each day

## CLIMATE

Tells you what types of clothes to have in your closet

# Global warming vs climate change

## What is Global warming?

- **Global warming means the Earth is getting warmer**
- This happens because:
  - Cars, factories and power stations make pollution
  - Pollution traps too much heat around the Earth

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# Global warming vs climate change

## What is Climate Change?

- **Climate change means long-term changes to weather patterns.**
- This can include:
  - More heavy rain
  - Hotter summers
  - Stronger storms
- These changes affect people, animals and plants


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# Greenhouse gases

## Greenhouse gases are like a blanket around the Earth

- They help keep the planet warm
- We need some of them

**But:**

- Too many gases = too much heat
- Main greenhouse gases:
  - Carbon dioxide (Co2)
  - Methane
  - Nitrous oxide

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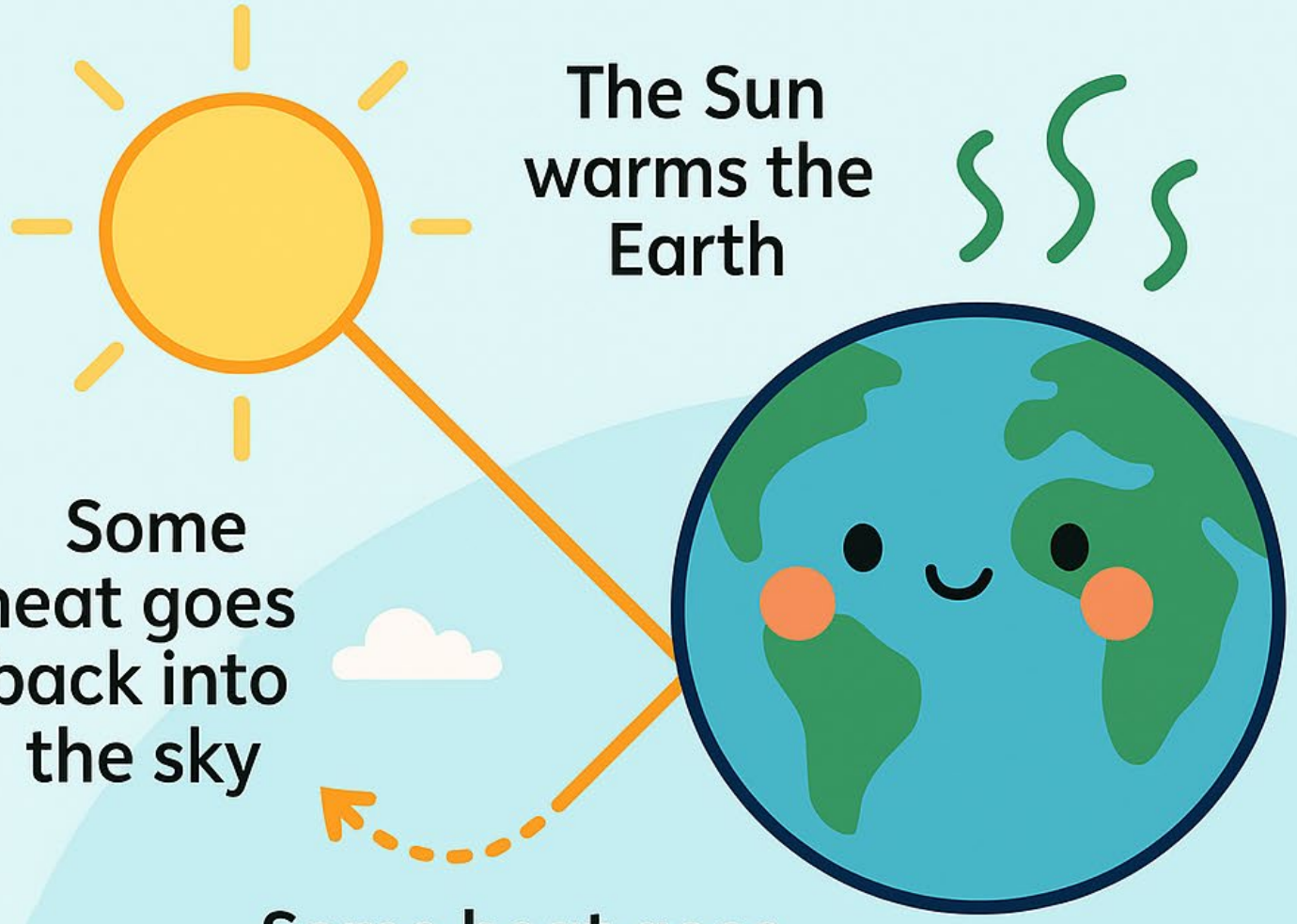
# The Greenhouse Effect




This keeps Earth warm enough for life

Greenhouse gases trap some heat

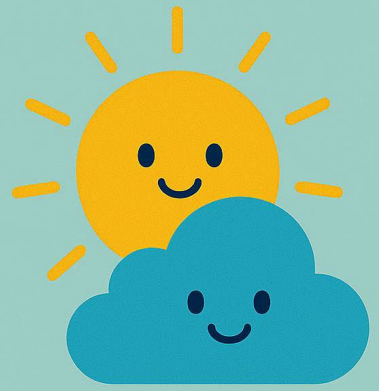
Earth is getting too warm

People have added too many gases

# Quick Quiz

**The Earth** has always had greenhouse gases –true or false?

TRUE FALSE



**Weather and climate** describe the same thing– true or false?

TRUE FALSE

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# Let's recap...

🌦️ **Weather:**
What's happening outside **right now** or over a few days - like rain, sunshine, wind, or snow.

**Fun fact:** *The UK's weather changes so quickly that people jokingly say you can get "all four seasons in one day."*

🌤️ **Climate:**
The *usual* weather in a place over a long time.

**Fun fact:** *The Sahara Desert gets almost no rain - some places only get a few drops every 10 years!*

🌍 **Global Warming:**
When the Earth gets hotter because of pollution from things like cars, factories, and burning fuels.

**Fun fact:** *If Earth didn't have any heat-trapping gases, it would be colder than the South Pole!*

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# Let's recap•

**Climate Change**
Big, long-term changes to the Earth's weather - like more storms, floods, heatwaves, or melting ice.

**Fun fact:** *Some penguins are having to move because the ice where they live is melting too fast.*

**Greenhouse Gases**
Gases that go up into the air and trap heat, making the Earth warmer.

**Fun fact:** 🌱 *Plants "breathe in" one of these gases (carbon dioxide) and use it to make their own food!*

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# What have we learned so far?

## Take a few minutes to complete your worksheet:

- What is climate change? Write your answer:
- Match the action to its impact:

| | |
|---|---|
| Walking to school | Saves energy |
| Turning off lights | Absorbs CO2 |
| Planting trees | Reduces car pollution |

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# What have we learned so far?

- Draw a picture of a 'Positive Climate Future':
- Tick the actions you can do this week:

| | |
|---|---|
| Turn off lights | |
| Recycle more | |
| Walk/cycle to school | |
| Avoid food waste | |
| Can you think any others? | |

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# The impacts of climate breakdown

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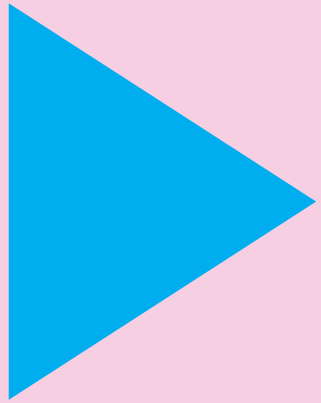
# What is the Impact of Climate Change - Video

- Watch the following video. Write down or try to remember:
  1. The different things climate change makes happen
  2. Do these affect people or the environment?
  3. Write down the different weather events that are mentioned



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# Let's recap•

## Impacts of climate change?

### On the Environment:

- Floods (too much rain)
- Droughts (not enough rain)
- Wildfires (very dry and hot weather)

### On People

- Damage homes
- Harm animals and plants
- Make it harder to grow food
- Affect our health

**Weather events mentioned in the video?** Droughts, wildfires, floods

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# Carbon footprint

## If you don’t measure it, you can’t manage it

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# Carbon footprint

**A carbon footprint means how much pollution we cause**

We make pollution when we:

- Use electricity
- Travel by car
- Buy lots of new things

**We can make our footprint smaller by making good choices**


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# Why this matters

## Learning Gives You Power

- You Can Now:
  - Look after your environment
  - Help your school
  - Protect your future
  - Encourage others to care too

**Everyone has the right to a clean, healthy planet. Protect Your Future!**

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# Green jobs – what subjects are important

- If you are interested in a Green Job these subjects will help you as you move through your school journey:
  - **Biology**: careers in ecology, conservation, biodiversity
  - **Chemistry and physics**: careers in solar and wind energy and tackling pollution
  - **Geography**: for understanding climate systems and land use
  - **Maths**: for data analysis
  - **Computer** science: green technology and climate modelling
  - **Technology** and design: useful for careers in sustainable product design
  - **Art and Design**: eco-friendly architecture and sustainable fashion

**Volunteering is a great way to try different jobs to see what you might like!**

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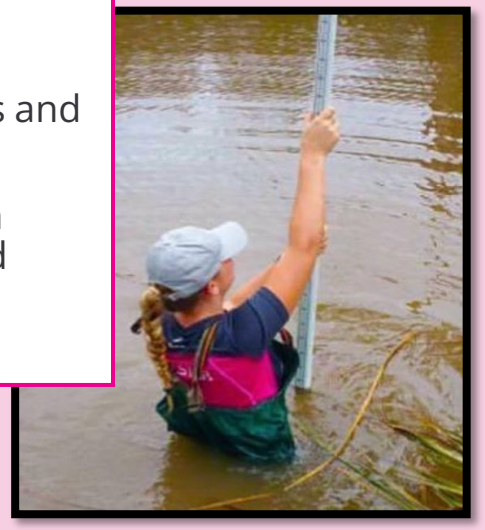
# Climate careers

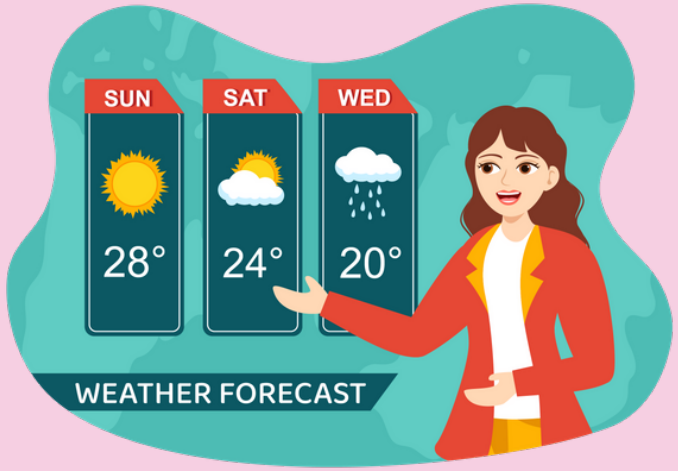
## Environmental Consultant

- Collect data from sites, such as soil samples and water samples
- Write scientific reports and present findings
- 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
- Study weather patterns and climate change
- Use research to predict floods and droughts
- Study how the weather affects people all around the world




## Climate Scientist

- Gather and analyse data from the atmosphere, oceans and land
- Monitor ice, sea levels and temperatures
- Investigate ways to tackle climate change
- teach or lecture in schools/universities

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# Green jobs – what are they?

🌎 **Here are some careers** connected to climate change, sustainability, and Carbon Literacy

### 🧪 Environmental Scientist

Environmental scientists study the environment and find ways to protect nature, reduce pollution, and understand climate change. They help solve real problems like pollution, water quality, air quality, and ecosystem protection.

### 🔧 Renewable Energy Engineer (Wind, Solar, Hydropower)

These engineers design and build the clean-energy systems that replace fossil fuels. Renewable energy and low-carbon technologies are central to the UK's 2030 green jobs strategy. These roles help achieve net-zero and are part of the government's major green-sector investment areas.

### 📢 Climate Educator/ Outreach Officer

They teach communities, schools, and organisations how to take climate action. Climate education is recognised as essential for preparing young people for green careers. Green careers now involve climate communication, teaching and community engagement

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# Green jobs – what are they?

### 🌿 Ecologist

These professionals look after habitats, help wildlife, restore forests, and protect natural spaces. Green careers include ecosystem restoration, conservation, and protecting biodiversity. Climate change careers increasingly focus on safeguarding natural resources.

### 🌱 Sustainability Officer (in businesses, councils, schools)

They help organisations reduce carbon footprints, cut waste, and meet climate goals. Sustainability officers are part of the green-job growth highlighted by Carbon Literacy Project research.

### ⚖️ Environmental Lawyer

Lawyers who protect the environment, challenge pollution, and help create climate policies. Environmental lawyers fight for climate justice, enforce environmental protection and work on sustainability issues.

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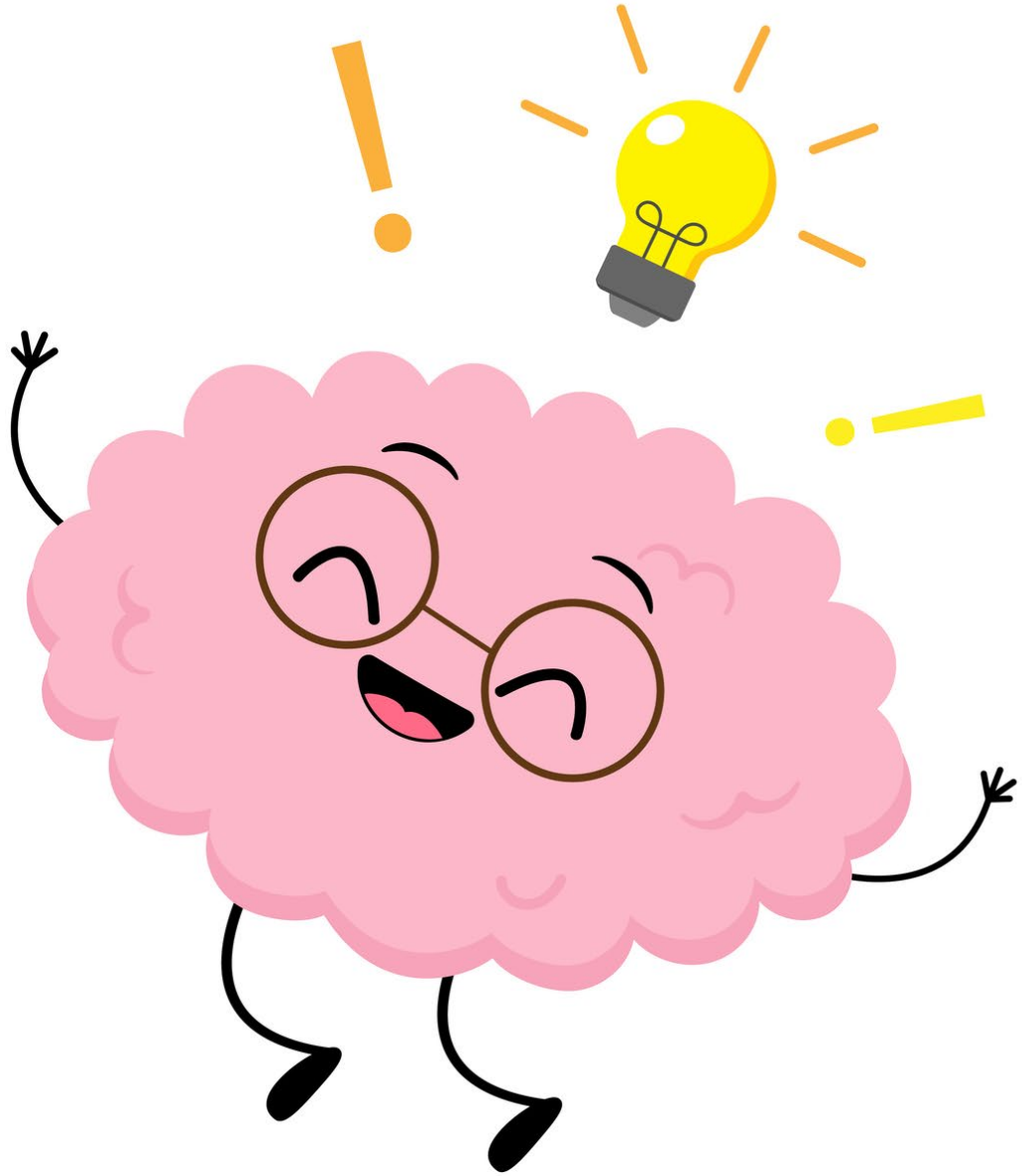
# What can you do in your school?

**Think together:**

- How can we save energy?
- How can we reduce waste?
- How can we help others care?

**Small actions make a big difference**



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Unit 2:

# Energy

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# What is energy?

**Energy is what makes things work**

Energy helps:

- Lights turn on
- Cars move
- Phones charge
- Our bodies run

**We use energy every day**

# Energy Is Everywhere

- You use energy when you:
- Walk or run
- Eat food
- Turn on a light
- Use a computer

**Energy powers everything; our homes, schools, phones and transport**


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# Where our energy comes from

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# Where does our energy come from?

Energy comes from different sources…

**Sources of Energy = *Where energy comes from***

- Solar Energy (The Sun)
- Wind Energy (Moving Air)
- Water Energy (Hydro Power)
- Fuels from the ground (Fossil Fuels – Coal, oil, gas)

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# Energy Scavenger Hunt

Take 2 minutes: work in small groups to write down examples of the following things:

Can you find...

- An object that produces sound
- Something that is moving
- A source of chemical energy
- Something that produces heat

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# Fossil Fuels

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# Fossil Fuels

## Fossil fuels are energy from the Earth

Examples:

- Coal
- Oil
- Gas

They were made a very long time ago

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# Fossil fuels...why are they a problem?

**Fossil fuels:**

- Will run out one day
- Cause pollution
- Make climate change worse

How many years do you think earth has left of **fossil fuels**?

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# Renewable Energy

## Renewable energy comes from sources that won't run out

- **Solar:** from the Sun
- **Wind:** from moving air
- **Hydro:** from flowing water
- **Geothermal:** from Earth's heat
- **Biofuel:** from plant and animal material

**Renewable energy is cleaner and better for the planet**

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# Question time

In Northern Ireland, where do you think most of our energy comes from?

a) Oil

b) Wind

c) Solar

d) Natural gas

Which is NOT a renewable energy source?

a) Wind

b) Natural Gas

c) Solar

d) Hydro

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# In Northern Ireland....

## We use lots of wind energy

| | |
|---|---|
| Wind | **45–50%** |
| Natural Gas | **35–40%** |
| Other Renewables (solar, biomass, hydro) | ~10% |
| Coal & Oil (fossil fuels) | **Very small or phased out** |

**Natural Gas** is not a RENEWABLE source of energy

We are using more renewable energy each year

**This helps protect our environment and the planet**

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# Quick Quiz

## Let’s Test Your Energy Knowledge

### What is energy used for?

a) Making things move
b) Powering lights
c) Heating homes
d) **All of the above**

### Which one is a renewable energy source?

a) Coal
b) Oil
c) Wind
d) Gas

### Why do we need renewable energy?

a) It helps protect the planet
b) It never runs out
c) It reduces pollution
d) **All of the above**

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# What is Energy Efficiency?

## Use less, waste less

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# Energy efficiency

**Energy efficiency means using less energy to do the same job.**

**Electrical efficiency**
Turn off lights when not needed

**Water efficiency**
Taking a shower instead of a bath

**Thermal efficiency**
Closing door to keep heat inside

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# Energy conservation

**Energy conservation means not wasting energy by:**

Reducing the amount of energy you use by changing your habits or choosing to use less of an energy service
e.g. wear warm clothes instead of turning up the heating

**To conserve energy, we can:**

Use only what we need
Share energy-saving ideas
Help our school save money and energy

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# Why saving energy matters

**“I’ve learnt that you’re never too small to make a difference”**

**Greta Thunberg, climate and political activist**

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# Why saving energy matters

When we use less energy we:

- create less pollution
- protect nature
- help slow climate change
- save money for schools and families

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# How can you help?

**You can:**

- Remind others to turn things off
- Share ideas through posters or assemblies
- Be a role model for your school

You are never too young to make a difference

**Thank you for helping to protect our planet**

Every action counts 🌱

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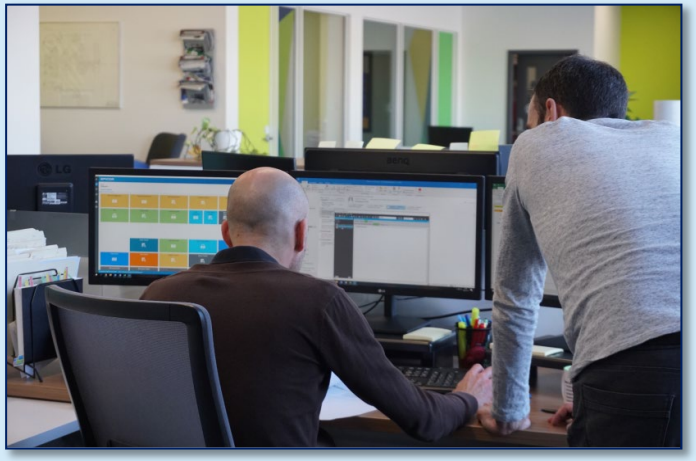
# Careers in energy

## Energy Technician

- Design wind turbines and solar panels
- Installing, maintaining, and repairing renewable energy equipment
- Fix or improve equipment
- Test systems to make sure they're working properly
- Visit sites to inspect new energy systems

## Energy Manager

- Check energy use in buildings or sites to spot waste
- Reduce energy consumption
- Improve energy efficiency
- Track bills and costs to see how much energy is being used and how much it costs
- Run awareness campaigns to help staff or students use less energy.



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Northern Ireland Electricity Networks

**Policy & Advocacy**

**Project Managers**

**Sales & Marketing**

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# Energy jobs – what are they?

### 📐 Renewable Energy Project Manager

They plan where to build wind or solar farms. They talk to landowners, engineers, government, and local communities to make sure the project is safe and environmentally friendly.

*They're the team captains who help big green-energy projects happen*

### 🌀 Wind Turbine Technician

They climb tall wind turbines and check or fix the turbine parts to make sure turbines keep spinning and making clean electricity. They keep wind turbines safe and working so we can use less fossil fuels.

*Wind turbine technicians are like doctors for giant windmills!*

### 🔧 Renewable Energy Electrician or Technician

They install and repair electric systems in solar farms, wind farms, and batteries to make sure electricity flows safely to homes and schools.

*They are like electricity superheroes making sure clean power reaches everyone.*

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# Energy jobs – what are they?

### 🌞 Solar Panel Installer

They fit solar panels on roofs and connect wires that carry solar power to help families and schools use sunshine as energy.

*They take sunlight and turn it into electricity we can use!*

### 🦜 Environmental Scientist (Renewables)

They Check how wind or solar farms affect animals, birds, and nature. Make plans to protect wildlife.

*They help make sure wind turbines and animals can share the land safely.*

### 🌞 Solar Energy Researcher

They work to discover new ways to use sunlight, design better solar panels and study weather, sunlight, and energy usage.

*They study sunshine like detectives!*

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# Thank you!

**Contact us: environment@bitcni.org.uk**

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