

Emissions matching



Ages: 9+



Time: 60 mins

Purpose:

To gain a deeper understanding of greenhouse gases.

Youth work outcomes:

Outcome 4: Young people participate safely and effectively in groups

Outcome 6: Young people express their voice and demonstrate social commitment

Sustainable development goals:



How it works:

In person:

Copies of the greenhouse gases and each of the emission sources for each group (part one); materials for chosen creative method (part 2).

Online:

Google Jamboard would give you the functionality to create moveable cards out of the emission sources and greenhouse gases. For part 2, participants could use digital tools to create their responses or could share them digitally once completed.

Description:

Part 1: In groups ask participants to arrange the two sets of cards to match the emissions to the main greenhouse gas being emitted. Once groups have matched the sets of cards, discuss the correct answers and see which have been correctly identified and which have not.

Carbon dioxide	Methane	Nitrous oxide	F - Gases
Burning of coal	Livestock	Crop fertilizers	Aerosols
Burning of oil	Decay of organic waste		Refrigerator gases
Burning of gas			
Cement production			
Deforestation			

Emissions matching

Discussion questions:

- Which gas do you think is most commonly emitted? (Answer: Carbon dioxide)
- What could be done to reduce emissions from these sources? Who has the power to do that?

Part 2: The Scottish Government have set a target for reaching net zero emissions (significantly reducing greenhouse gas emissions and balancing any remaining emissions through carbon removal) by 2045. These are some of the objectives:

- Electricity – By 2030 50% of all energy needs met by renewable energy
- Transport – By 2032 no new petrol or diesel cars/vans
- Waste – By 2025 33% less food wasted and 70% of all waste recycled

Share this information with participants. How will reaching net zero emissions affect your life? What will Scotland look like in 2045 if we reach this target?

Now is the chance to get creative! Ask participants to use any creative method (drawing, painting, music, poetry, collage, etc) to demonstrate and describe how reaching net zero emissions will impact young people. You could showcase the responses in your youth work setting to increase discussion amongst young people.

Discussion questions

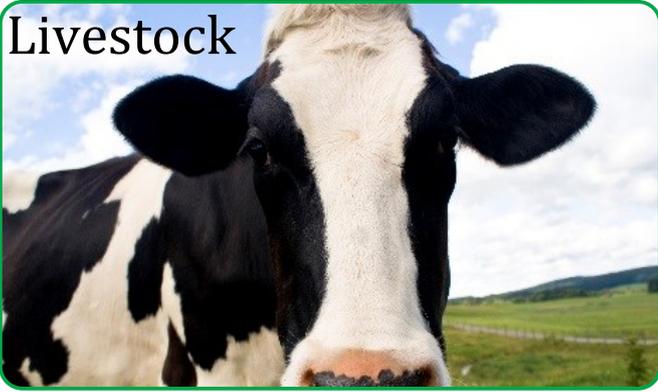
- What do you think of Scotland's target to reach net zero emissions by 2045?
- Should we focus on reducing emissions through our individual actions or by focusing on influencing governments and businesses?
- What can young people do to help reach net zero emissions?

Action/Next steps:

Now that participants understand more about emissions they could explore how to reduce their individual carbon footprint. WWF have a [Carbon Footprint Questionnaire](#) that gives helpful suggestions on how to make positive changes.

Different places in Scotland are creating their own local plans to achieve net zero emissions. Check out if there is already a plan for your area. If there is not, contact your local representatives and see if there's a way for young people to be involved in the development of a plan.

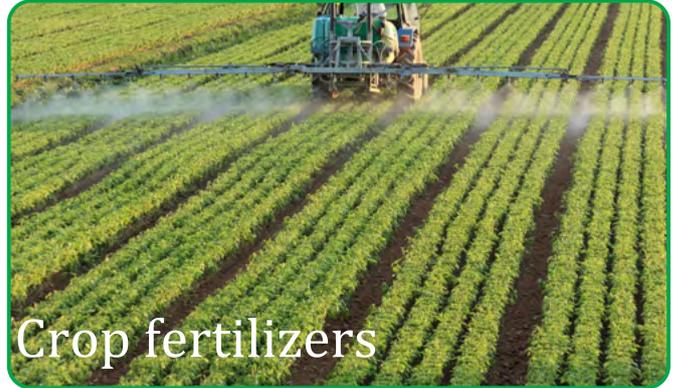
Livestock



Refrigerator gases



Cement production



Crop fertilizers

Burning of coal



Burning of oil

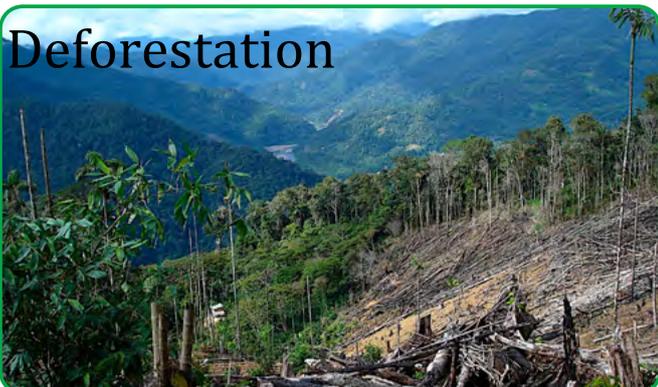
Burning of gas



Decay of organic waste



Deforestation

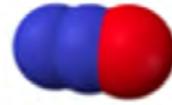


Aerosols

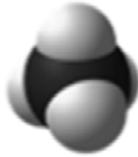




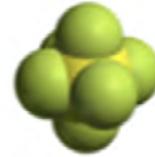
Carbon dioxide



Nitrous oxide



Methane



F-Gases