

Ranking activity



Ages: 10+



Time: 30 mins

Setup:

To learn about the differences between countries in contributions to and effects of climate change.

Youth work outcomes:

Outcome 4: Young people participate safely and effectively in groups

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

Outcome 7: Young people broaden their perspectives through new experiences and thinking

Sustainable development goals:



How it works:

In person:

Names of the different countries on separate pieces of paper.

Online:

Google Jamboard would give you the functionality to create moveable cards. Alternatively, you could run the activity in a question/answer format via Zoom.

Description:

Hand out a country name to each participant or lay them all out on a table or other suitable surface. Ask participants to take turns ranking the countries in order, highest to lowest (either by participants standing in line or by arranging the cards on a flat surface), for each of the 4 following criteria:

1 Total annual greenhouse gas emissions

Once the task has completed check and re-arrange any that are not in the correct order. Which countries are the highest emitters and why is this?

2 Total population

Once the task has completed check and re-arrange any that are not in the correct order. Which countries have moved compared to their total emissions?

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3 Greenhouse gases per population

Once the task has completed check and re-arrange any that are not in the correct order.
Which countries have moved the most for this criteria?
What do you think this criteria means in terms of responsibility for climate change?

4 Vulnerability to climate change

Once the task has completed check and re-arrange any that are not in the correct order.
Which countries have moved the most for this criteria and why do you think that is?
What do you think this means with regards to the potential injustice of climate change?
Are there any countries that are high emitters per person and highly vulnerable?

Some notes on each country are included at the end of this document for this activity. You can also create your own cards by looking up the statistics online (see below for the links).

Introduce the concept of climate justice and lead a discussion with the group. This is an example definition: "Addressing the climate crisis whilst also making progress towards equity and the protection and realization of human rights." What does climate justice look like between countries? What does it look like within countries? Do we have a responsibility to support people more vulnerable to climate change?

Discussion questions:

- Which results surprised you? Why?
- How can solutions to climate change benefit different people equally?
- What aspects might impact the way in which people within countries experience climate change differently?

Actions/Next steps:

- Try out negotiating global climate change solutions with the [climate negotiations activity](#).
- Learn more about climate justice and the fashion industry in this [activity on fast fashion](#).
- Explore more about the local impacts of climate change in [Scotland 2100 activity](#).

Countries

USA 

Brazil 

Saudi Arabia 

China 

Nigeria 

Australia 

India 

Russia 

Trinidad & Tobago 

UK 

Ethiopia 

Iceland 

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Statistics

Annual Greenhouse Gas Emissions (production based 2017):	
1 China	12,500,000,000 tonnes
2 USA	6,700,000,000 tonnes
3 India	2,400,000,000 tonnes
4 Russia	2,200,000,000 tonnes
5 Brazil	1,000,000,000 tonnes
6 Australia	580,000,000 tonnes
7 Saudi Arabia	547,000,000 tonnes
8 U.K.	546,000,000 tonnes
9 Nigeria	300,000,000 tonnes
10 Ethiopia	125,000,000 tonnes
11 Trinidad & Tobago	26,000,000 tonnes
12 Iceland	3,000,000 tonnes

Source:
https://en.wikipedia.org/wiki/List_of_countries_by_greenhouse_gas_emissions

Population (2020):	
1 China	1,440 million
2 India	1,380 million
3 USA	330 million
4 Brazil	210 million
5 Nigeria	206 million
6 Russia	145 million
7 Ethiopia	115 million
8 U.K.	68 million
9 Saudi Arabia	35 million
10 Australia	25 million
11 Trinidad & Tobago	1.4 million
12 Iceland	0.3 million

Source:
<https://www.worldometers.info/world-population/population-by-country/>

Annual Per Capita Greenhouse Gas Emissions (production based 2018):	
1 Trinidad & Tobago	26.2 tonnes
2 Saudi Arabia	18.6 tonnes
3 Australia	16.8 tonnes
4 USA	16.1 tonnes
5 Russia	12.1 tonnes
6 Iceland	12.1 tonnes
7 U.K.	8.1 tonnes
8 China	8.0 tonnes
9 Brazil	2.4 tonnes
10 India	1.9 tonnes
11 Nigeria	0.6 tonnes
12 Ethiopia	0.2 tonnes

Source:
https://en.wikipedia.org/wiki/List_of_countries_by_carbon_dioxide_emissions_per_capita

Vulnerability to Climate Change:	
1 Ethiopia	Ranked 159
2 India	Ranked 131
3 Nigeria	Ranked 127
4 Trinidad & Tobago	Ranked 77
5 China	Ranked 66
6 Saudi Arabia	Ranked 61
7 Brazil	Ranked 53
8 USA	Ranked 22
9 Russia	Ranked 18
10 Iceland	Ranked 13
11 U.K.	Ranked 8
12 Australia	Ranked 5

Source:
<https://gain.nd.edu/our-work/country-index/rankings/>

USA:

Industrialised country with a large population. Most emissions come from transport due to high amount of freight and large inefficient private vehicles. 63% of energy is produced from fossil fuels (mostly coal and gas). The USA is a major oil, gas and coal producer.

China:

Developing industrialised country with world's highest population. Emissions are largely due to reliance on coal for power with it producing about 60% of all energy use. Construction and manufacturing also contribute to major emissions to satisfy demands for products mainly from the EU and USA.

India:

Increasingly industrialised country with second highest population. Overly reliant on coal energy. Large population, geographical location and high levels of poverty make India highly vulnerable to climate change. Potential impacts on the monsoon and Himalayan glacier fed rivers could be catastrophic.

U.K.:

Heavily industrialised country with historically high emissions. Quite a large population with emissions mostly due to transport and energy production. Energy emissions are falling due to major investment in renewable energy, however emissions per person remain high overall.

Brazil:

Increasingly industrialised country with a high population. Large source of emissions is land use change mainly from deforestation to make way for agriculture. Has one of the largest renewable energy sectors in the world and is one of the highest users of bio-fuels. Quite vulnerable to climate change due to high population, relatively high levels of poverty and increasingly fragile eco-systems.

Nigeria:

Increasingly industrialised and the highest populated country in Africa. Land use change is main source of emissions due to urban expansion and agriculture. Nigeria is also a major oil producer. The country is vulnerable to climate change due to high population, its range of ecosystems and low lying population centres close to the coast.

Russia:

Highly industrialised country with a large population. Russia is a major oil, coal and gas producer and user. Over 50% of emissions come from burning fossil fuel, while over 25% are from leaks and waste. Large forests help absorb a significant proportion of emissions. Vulnerable to climate change due to its size with some regions such as Siberia particularly vulnerable.

Ethiopia:

Relatively low industrialisation with a relatively large population. One of the poorest and most drought prone countries make this extremely vulnerable to climate change. High levels of food insecurity and conflicts over resources add to the vulnerability.

Saudi Arabia:

Major oil and gas producer with relatively small population. Its geographical location make it highly vulnerable to climate change with higher temperatures likely to make vast parts of the country unliveable.

Trinidad and Tobago:

Small population and a major oil producer. The country has a large high energy industrial sector with power produced entirely from fossil fuels. Being an island nation in the tropics it is particularly vulnerable to climate change due to sea level rises, increased risk of extreme weather events and vulnerable eco-systems.

Australia:



Resource rich industrialised nation with relatively small population. A major producer and user of coal means climate emissions are very high. Also a major smelter of aluminium using carbon intensive heat sources. Very limited renewable and low carbon energy sources even though huge potential. Due to its wealth and low population Australia is ranked very low in terms of vulnerability to climate change, however, recent events such as wildfires and coral bleaching shows that climate change can still have a major impact.

Iceland



Highly industrialised country with small population. Has a large renewable energy sector but major heavy industries such as metals manufacture release large amounts of greenhouse gases, even when powered by low carbon energy sources. The relative wealth of the nation and stability of the climate make it less vulnerable to climate change.