New Zealand Emissions

There are three main greenhouse gases in New Zealand: carbon dioxide, methane and nitrous oxide. The following section describes a bit about each one. On the greenhouse gas map, draw a picture to indicate where the gases are emitted from.

*Carbon Dioxide*

Carbon dioxide emissions come from the combustion of fuels. The fuels that we refer to when talking about climate change are fossil fuels, such as petrol, coal and natural gas.

The two main emitters of carbon dioxide in New Zealand are transport and energy (electricity) production.

*Methane*

Methane is a gas that is produced by the action of microbes. An example of a microbe is bacteria.

The microbes that emit methane are found in places that have food for the microbes, but no oxygen.

There are two places where this occurs: In the rumen of animals (animals which have a rumen include cows and sheep) and in landfills. A rumen is a digestion system that allows an animal to digest grass (our stomach does not have this ability).

Cows burp out methane as a result of the microbial action in their rumen (they don’t fart it out like a lot of people think).

Nitrous Oxide

Nitrous oxide emissions occur from the action of microbes on nitrogen compounds in the soil. Nitrogen compounds include urine and fertiliser. The conversion of nitrogen compounds to nitrous oxide by microbes is favoured in wet and compacted soils.

The two main situations that nitrous oxide is produced in is in urine patches (mainly from cows) and when there has been fertiliser applied to wet and trampled soils.

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When you’ve finished drawing or writing where emissions come from on the greenhouse gas map think of ways that emissions could be reduced and draw or write them on the outside parts of the map.