SUPPORT MATERIAL #9:
Pardon my carbon!

Calculate: Activity 6

Further explanation and possible discussion notes for *Activity 6: Carbon detectives.*

Possible discussion notes

Please note: It's important that students see the value in behavioural change to improve energy efficiency, rather than believing they can simply trade against wasteful behaviours by planting a tree to offset emissions.

After initially focusing on how students might reduce their emissions through behavioural change, discuss other options to reduce carbon emissions.

E.g. once the students have done all they can do to reduce their carbon emissions, they might like to look into one of the following options.

- **Green energy**: using or having energy supplied from renewable sources, such as solar, wind, hydropower, biomass and geothermal.
- **Offsetting emissions**: donating to energy efficiency or renewable energy projects. Projects might focus on planting trees (which absorb CO_2), investing in renewable energy projects, capturing methane from rotting garbage in tips or collecting animal poo and putting it in a digester to rot and turn it into methane. These projects can help to offset the carbon we can't avoid producing even when we have reduced our emissions through behaviour change.

Replicate the 'Pardon my carbon!' table below on the board and discuss the headings. This can be used to start discussions and students' suggestions can be added.

Pardon my carbon!

Carbon source	Specific examples	Simple changes everyone can make to reduce carbon emissions	What else can you do to reduce your carbon emissions?
Energy generators	Electricity and gas used in homes, schools and at work	Reduce your use e.g. shorter showers	Use green energy or gas
Transport	Cars, planes, taxis	Reduce your use e.g. walk, ride	Offset your emissions by planting trees
Natural and/or biological processes	Rubbish/ tips (rotting material), animals, sewerage	Reduce your use of packaging/ rubbish	Offset your emissions by supporting methane capture projects

Teacher hint

A useful explanation for using offsets to reduce greenhouse gases.

Using offsets to reduce your greenhouse gases from energy or transport is like spilling milk and using a sponge to clean up the spill.

The alternative is not to spill the milk in the first place. Changing how you use energy every day to use less of it is the most effective thing to do.

Using green energy is another way of not spilling the milk. Green energy comes from clean, renewable generators that don't produce greenhouse gases, so you don't have to clean up afterwards. But there are some situations in life when you cannot avoid producing greenhouse gases, such as driving a car. You could walk, ride or take public transport when you can, and for those trips when you have to drive the car, buy offsets and clean up your emissions afterwards.

Please note: Students should understand that if they change some activities but adopt others that use the same or a similar amount of energy, then overall there is no difference. They are just moving the energy use to somewhere else and the outcome does not change.