



## 4:2 Counting up My Carbon Emissions

### Teacher Notes

The purpose of this activity is to measure individual carbon dioxide output for the school week to give baseline data to be able to compare before and after affects of any actions. It will bring awareness to how much carbon we do emit and highlight where we could change our behaviour.

#### Homelink

Filling out the [My Trips: Weekly Carbon Counter Record Sheet \(LER 36\)](#) could be sent home to do with whānau as a homework activity or could be done in class time. Students could also use spreadsheets to calculate individual and class totals.

### Background Knowledge

**Trip Go Instructions** - <https://tripgo.com>

- Type your home address and school address in the search boxes.
- Click on the green 'Route' button.
- Find out how long each mode takes and the amount of carbon used.

### Learning Experience: Carbon Counting

- Reflect on the knowledge previously learned about carbon being a major contributor to greenhouse gases and also it being the one we contribute most to.
- Look at [Carbon as a Greenhouse Gas Graphic \(LER 34\)](#).
- Using the website Trip Go look at carbon emissions of one fictitious person's, or your own, journeys to school. [My Trips: Weekly Carbon Counter Example \(LER 35\)](#).
- Model how to keep a record of a school week of journeys using [My Trips: Weekly Carbon Counter Record Sheet \(LER 36\)](#).
- Calculate your personal carbon daily or do it all at once at the end of the week.
- Add up and display the total amount the class uses.
- Share what influenced their decisions to travel by car.
- What other questions could be developed to answer using this data eg.
  - How much carbon would I use over a full school year?
  - If I walked twice a week how much carbon could I reduce over a year?
  - What are the costs on the car for a year?
  - How much carbon am I saving by walking every day?

### Kia Mau! Extract the Essence

Record 3 facts that you have learned. I wonder .....

### Learning Intentions:

Students will...

- Know that collecting baseline data is important when looking at an action that encourages change.

### Success Criteria:

- Collect data on the amount of carbon dioxide produced as a comparison tool.

### Resources:

- [LER 34: Carbon as a Greenhouse Gas Graphic](#)
- <https://tripgo.com>
- [LER 35: My Trips: Weekly Carbon Counter example](#)
- [LER 36: My Trips: Weekly Carbon Counter Record Sheet](#)

# Greenhouse Effect

Carbon dioxide is one of the main gases

## Carbon Dioxide

Is one of the main waste products from vehicles

Carbon  
Dioxide

CO<sub>2</sub>



# LER 35

## My Trips: Weekly Carbon Counter example

**My Trips:** Carbon Calculator

**Name:** Ash

**Date:** Week 6 - 17-21 February

Keep a record for a school week of all the trips you make. This includes things like going to-school, sports practices, visiting friends etc. If you used active travel or a bus, train or an electrical vehicle put in zero carbon.

Record the start and finish place of each journey. Work out how much carbon you have used with Trip Go - <https://tripgo.com>. NB: Trip Go trips are calculated on the shortest route, rather than your actual route. Use this information as an approximate amount of carbon for this exercise.

The information we collect here will be used as a baseline for when we investigate how to reduce our carbon emissions.

Trips						Daily Total kg CO <sub>2</sub> e
<b>Monday</b> Dad drops off and picks up Ash and then later takes Ash to tennis	<b>From:</b>	Home	School	Home	Tennis	3.1
	<b>To:</b>	School	Home via shops	Tennis	Home	
	<b>kg CO<sub>2</sub>e:</b>	0.7	0.8	0.8	0.8	
<b>Tuesday</b> Ash is dropped off and picked up from school	<b>From:</b>	Home	School			1.4
	<b>To:</b>	School	Home			
	<b>kg CO<sub>2</sub>e:</b>	0.7	0.7			
<b>Wednesday</b> Ash walks to school on Walking Wednesdays	<b>From:</b>	Home	School	Hip Hop		1.7
	<b>To:</b>	School	Hip Hop	Home		
	<b>kg CO<sub>2</sub>e:</b>	0	0.9	0.8		
<b>Thursday</b> Ash walks to a friend's place after school	<b>From:</b>	Home	School	Jo's house		1.3
	<b>To:</b>	School	Jo's house	Home		
	<b>kg CO<sub>2</sub>e:</b>	0.7	0	0.6		
<b>Friday</b> Koro picks up Ash. Then drops Ash home	<b>From:</b>	Home	School	Koro's place		1.6
	<b>To:</b>	School	Koro's place	Home		
	<b>kg CO<sub>2</sub>e:</b>	0.7	0.4	0.5		
<b>Total Carbon Dioxide emissions produced for the week: kg CO<sub>2</sub>e</b>						<b>9.1</b>



# My Trips: Weekly Carbon Counter Record Sheet

**My Trips:** Carbon Calculator **Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Keep a record for a school week of all the trips you make. This includes things like going to school, sports practices, visiting friends etc. If you used active travel or a bus, train or an electrical vehicle put in zero carbon.

Record the start and finish place of each journey. Work out how much carbon you have used with Trip Go - <https://tripgo.com>. NB: Trip Go trips are calculated on the shortest route, rather than your actual route. Use this information as an approximate amount of carbon for this exercise.

The information we collect here will be used as a baseline for when we investigate how to reduce our carbon emissions.

<b>Trips</b>						<b>Daily Total kg CO<sub>2</sub>e</b>
<b>Monday</b> Dad drops off and picks up Ash and then later takes Ash to tennis	<b>From:</b>					
	<b>To:</b>					
	<b>kg CO<sub>2</sub>e:</b>					
<b>Tuesday</b> Ash is dropped off and picked up from school	<b>From:</b>					
	<b>To:</b>					
	<b>kg CO<sub>2</sub>e:</b>					
<b>Wednesday</b> Ash walks to school on Walking Wednesdays	<b>From:</b>					
	<b>To:</b>					
	<b>kg CO<sub>2</sub>e:</b>					
<b>Thursday</b> Ash walks to a friend's place after school	<b>From:</b>					
	<b>To:</b>					
	<b>kg CO<sub>2</sub>e:</b>					
<b>Friday</b> Koro picks up Ash. Then drops Ash home	<b>From:</b>					
	<b>To:</b>					
	<b>kg CO<sub>2</sub>e:</b>					
<b>Total Carbon Dioxide emissions produced for the week: kg CO<sub>2</sub>e</b>						