



Count the Trees

Many of the things we do in our daily lives release **greenhouse gases** into the atmosphere. This activity will help introduce students to the concept of greenhouse gas **emissions** and the impact of several common activities. Your students will also be able to practise **division**, **multiplication** and **rounding** to the nearest whole number.

To learn more about the role trees can play in solving climate change, check out our YouTube video: [Can Trees Undo Climate Change?](#)

Following this activity, we recommend discussing the alternative, climate-friendlier activities that are listed below.

Answer Key:

1. Producing the meat in one hamburger releases 4 kg of greenhouse gas.

- a. How much gas would the whole class be responsible for if everyone ate one hamburger each?

$$[\text{number of students}] \times 4\text{kg} = y$$

- b. How many trees would be needed if everyone in your class ate one hamburger?

$$y \div [\text{number of students}] = z$$

2. Flying from New York to London releases 90 kg of greenhouse gas.

- a. How much gas would the whole class be responsible for if everyone took one flight from New York to London?

$$[\text{number of students}] \times 90\text{kg} = y$$

- b. How many trees would be needed if everyone in your class took one flight?

$$y \div [\text{number of students}] = z$$

3. Making seven plastic water bottles releases 71 kg of greenhouse gas.

- a. How much gas would the whole class be responsible for if everyone in your class bought seven water bottles each?

$$[\text{number of students}] \times 71\text{kg} = y$$





Teacher's Guide



- b. How many trees would be needed if everyone in your class bought seven water bottles each?

$$y \div [\textit{number of students}] = z$$

4. Driving a car releases 383 kg of greenhouse gas per year.

- a. How much gas would the whole class be responsible for if everyone drove their car to school for a year?

$$[\textit{number of students}] \times 383\text{kg} = y$$

- b. How many trees would be needed if everyone in your class drove their car to school for a year?

$$y \div [\textit{number of students}] = z$$

5. Making one cotton t-shirt releases 3 kg of greenhouse gas.

- a. How much gas would the whole class be responsible for if everyone bought one cotton t-shirt?

$$[\textit{number of students}] \times 3\text{kg} = y$$

- b. How many trees would be needed if everyone in your class bought one cotton t-shirt?

$$y \div [\textit{number of students}] = z$$

6. Bonus question!

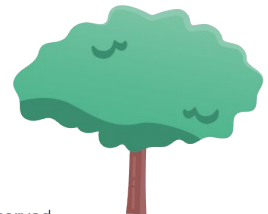
Riding a bicycle for one year releases 0 kg of greenhouse gas.

- a. How much gas would the whole class be responsible for if everyone rode their bike to school for a year?

$$[\textit{number of students}] \times 3\text{kg} = 0$$

- b. How many trees would be needed if everyone in your class rode their bike to school for a year?

$$0 \div [\textit{number of students}] = 0$$





Solutions

Producing the meat in a hamburger

Meat requires a lot of energy and resources to produce, so we recommend eating less meat.

Flying from New York to London

Aeroplanes produce lots of greenhouse gas emissions, so we recommend flying less. If you have to fly, try to fly in Economy Class. Seats in First Class often take up more space and therefore contribute more to emissions.

Producing seven plastic water bottles

Producing single-use plastic uses energy and resources and can contribute to plastic pollution. We recommend using a reusable water bottle instead.

Driving a car

Petrol and diesel cars burn fuel. Burning these fuels produces greenhouse gases. We recommend using public transportation, such as buses and trains, but the best option, if possible, is to use a mode of transportation (such as a bicycle, walking or even a kick scooter) that doesn't emit anything at all. Electric cars are also a good alternative because they don't burn fuel.

Making a cotton t-shirt

Producing clothing from cotton uses energy and lots of water. We recommend buying second-hand clothing or clothing made from organic cotton. If you do buy a cotton t-shirt, be sure to look after it well so that it lasts a long time.

We welcome feedback and would be delighted to hear your thoughts on this activity. Feel free to send an email to schools@climatescience.org and we'll be sure to get back to you soon :)

