

Carbon Tradies: Worksheet 5 – Charlotte the Chef

Go to www.missionco2.com, click on Play and watch the introduction to meet the Carbon Tradies. Enter your name to begin.

Select Charlotte the Chef and watch her introduction for information that will help you with the following questions and activities.



1. Charlotte recommends that you check the efficiency of any kitchen appliance before you buy it. For dishwashers you should check both the water rating (WELS) and the energy rating. Go to www.savewater.com.au/products/Dishwashers. From the list, what are the lowest and highest water star ratings of these dishwashers? List five dishwashers with at least 4 stars for water efficiency.

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2. On the basis of water and energy efficiency which dishwasher would you buy? Explain why. How many litres of water per wash does it use? How much energy per 365 uses does it consume?

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3. You can cook potatoes by roasting them in the oven, steaming or boiling them on the hotplates or cooking them in the microwave. Let's say it takes 1 hour to roast the potatoes, 15 minutes to boil or steam them and 5 minutes to cook them in the microwave. The size of kitchen appliances can vary. If you have a 2,100 watt electric oven, a 1,600 watt hotplate and a 1,200 watt microwave, calculate how much energy is used to cook the potatoes in each of these appliances. Example, if you used a 1,500 watt appliance for 30 minutes it would use 0.75kWh of energy because $1,500 \text{ watts} = 1.5\text{kW}$, $30 \text{ minutes} = 0.5 \text{ hours}$ and $1.5\text{kW} \times 0.5\text{h} = 0.75\text{kWh}$.

Oven:

Hotplate:

Microwave:

4. If the usage cost per hour of these appliances is 52 cents for the 2,100 watt oven, 40 cents for the 1,600 watt hotplate and 30 cents for the 1,200 watt microwave, calculate how much it will cost to cook the potatoes in each of these appliances.

Oven:

Hotplate:

Microwave:

5. What conclusion can you draw about the use of the stove, the hotplate and the microwave from these calculations?

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6. Charlotte explains that the less distance the food has travelled the better. By looking at the packaging or labelling or asking the supplier (eg, at the supermarket) find out where each of the following has come from: a banana, a carton of milk, a package of cheddar cheese, a box of breakfast cereal, a can of salmon, a packet of crisps and a bottle of soft drink. Add another five items of your own choice. On the map of Australia provided (on the next page) mark in where you live and where each of the above food products come from using a numbering system and legend. For any that are imported list them separately stating which country they come from.

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|--------------------|----------------|
| 1. banana..... | 2. milk..... |
| 3. cheese..... | 4. cereal..... |
| 5. salmon..... | 6. crisps..... |
| 7. soft drink..... | 8. |
| 9. | 10. |
| 11. | 12. |

7. For at least three of these products find an alternative which comes from somewhere closer to where you live. List the item and the different places it can come from. What advantage to the environment is there by buying food products that come from an area more local to you?

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8. Most fruit and vegetables are ripe and ready to eat in particular seasons. Name five that are grown reasonably close to where you live and state which season they are ripe and ready to eat.

You may need to ask your local supplier. You might like to try growing some of these at home!

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9. Go to the Mission CO2 Home page, click on Fun Stuff and Meet the 'Carbon Tradies' and select Charlotte. What suggestion has she that will help you reduce the amount of energy used when cooking on a hotplate and hence help you save money?

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Further information

For more information on how you can save water at home, work or school visit www.savewater.com.au or contact your local water provider.



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