

Solar Panels - Data collection

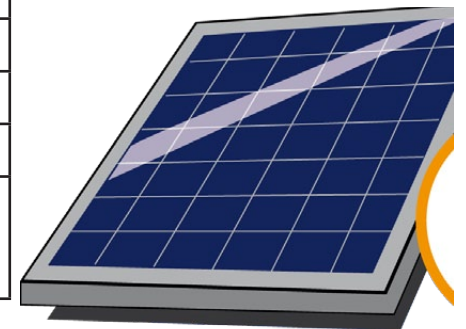
Use the table below to take hourly measurements of how much electricity your solar panels are producing. You may need help from staff at school for the early or late readings. Fill in as much of the table as you can.

On the last row you will need to use your maths skills to calculate the total electricity produced between 7am and 6pm.

Complete the accompanying weather journal at the same time. Can you spot any patterns between the two sets of results?

	Monday	Tuesday	Wednesday	Thursday	Friday
DATE					
7am					
8am					
9am					
10am					
11am					
12noon					
1pm					
2pm					
3pm					
4pm					
5pm					
6pm					
Total produced between 7am and 6pm					

Remember to write in your units of measurement.



Solar Panels - Data graph

Use the total electricity produced each day that you calculated in Solar Sheet 1. Plot the totals on the graph below.



Questions

1. On average, what time of day is the most electricity generated?
2. Why do you think this is?
3. Do you think this will change depending on the season? Why?

Solar Power - Weather Journal

Complete the weather journal below.

Fill in the boxes of the table using the key below.	Monday	Tuesday	Wednesday	Thursday	Friday
Is it cloudy? No clouds <input type="checkbox"/> Some clouds <input type="checkbox"/> Lots of clouds <input type="checkbox"/>					
Is it rainy? No rain <input type="checkbox"/> Some rain <input type="checkbox"/> Lots of rain <input type="checkbox"/>					
Temperature? Hot <input type="checkbox"/> Warm <input type="checkbox"/> Cold <input type="checkbox"/>					
Fill in the number of kWh your panels have produced each day from Solar Sheet 1.	kWh	kWh	kWh	kWh	kWh

Compare your weather journal with your graph of average electricity produced.
 What effect has the weather had on the amount of electricity your solar panel has produced?
 Can you spot any patterns between the two sets of results?

Extension

Whilst you are filling in your weather journal, take a measurement of the temperature at the same time each day.
 If you repeated this exercise in another season, what differences would there be in the results?