Activity 8A
Control week results

Aim

- Analyse your control week results.

Students need

- To visit www.originenergy.com.au/efficiency or use the Home Energy Project CD
- Access to computers
- All your data collection devices from the control week
- A hand-held calculator
- Energy journal
- Table 7.1 from Assignment 7A, *Collate control week data*

For the teacher

- Plan ahead for computer access.
- Explain to students that, while they are completing their experimental week, they will be analysing their results from the control week.
- Refresh students' memories on how the energy efficiency calculator works. Be sure to remind them of the hints in entering data (see page 17 for details).
- Ask students to form small groups to discuss their experiences from the control week.

Action plan

1. In small groups discuss your control week. Refer to your energy journal and share your experiences.

   Topics for discussions include:

   - Did the energy team record the data as required?
   - Did anything unusual occur that might effect your results?
   - Did anything funny or controversial occur?
   - Were the results as you expected?

2. Now it's time to analyse your results. Using your findings from Assignment 7A, Table 7.1, transfer the saving idea/appliance listed to Table 8.1, Column 1, and the total usage into Column 2. Now you are ready to use the energy efficiency calculator.

   Insert the usage totals for each appliance from Column 2 into the energy efficiency calculator. When you have finished entering the data go to 'My Results', then to the energy summary. Print a copy of each by selecting the 'File' menu, then 'Print'. Transfer the results from the energy summary to Column 3.

- Total energy cost for measured appliances per year ($):

  _____

- Total CO_2 emissions (kg) per year from the measured appliances:

  _____

- This is the equivalent to how many cars driving on the road per year?

  _____

Paste or stick these results in your energy journal, as you will need to refer to them later.

Table 8.1. Control week

	Column 1	Column 2	Column 3	
	Saving idea / appliance	Usage totals	Energy costs per year ($)	CO_2 emissions per year (kg)
1				
2				
3				
4				
5				
	Total			

Activity 8B
Progress report of the experimental week

Aim

- To share your experiences of the experimental week.

Students need

- Energy journal

For the teacher

- Explain that it's important to get feedback regarding the experimental week.
- Ask students to form small groups to discuss their experiences.
- Ask the group spokesperson to keep the progress report general and not refer to specific energy teams.

Action plan

1. In small groups discuss your experimental week experiences so far.

   Make sure you discuss the following:
   - What day and time did your experimental week start?
   - What are you measuring and how?
   - Are you checking the data collection?
   - Are the energy team members following instructions?
   - Have any unusual events occurred?
   - Include any additional observations from the experimental week.

2. Discuss the reaction of the energy team to using their energy saving ideas?

   Make sure you discuss the following.
   - Do the energy team members understand what they need to do?
   - Are people following the saving ideas? If not, what's happening?
   - Are your reminders working?
   - Do any of the experimental week results surprise you?

3. Each group is to select a spokesperson who will give a progress report to the class on the experimental week experiences.

4. Listen to the group reports and make any suggestions to help the energy teams.

In the next lesson you will be completing Activity 9A, which looks at the experimental week results and energy team savings. Make sure you complete your calculations in Assignment 8B as they will be discussed in class.

Assignment 8B
Collate experimental week data

Aim

- To collate the experimental week data.

Students need

- Energy journal
- All your data collection devices from the experimental week
- A hand-held calculator
- Table 6.6 from Activity 6B, *Principles of collecting data*

For the teacher

- Explain to students that their results from this assignment will be used in Activity 9A, *Experimental week results*.
- Explain that this assignment is to be completed only when students and their energy teams have completed the experimental week.

Action plan

1. When your experimental week is completed bring together all the record keeping devices for the appliances monitored.
2. Now it's time to calculate the total usage for each appliance over the week. In each of your data recording sheets add all of the values in the column that was used to record usage. This will provide you with the total usage for each appliance.

   Remember: It's essential that you use the same units as used in the energy efficiency calculator. Check Activity 6B, Table 6.6 to see what unit is being used for each appliance. For example, TV is hours/week. If you have recorded the time in minutes you will need to convert to hours.
3. Write each appliance in Table 8.2, Column 1, sum together the total usage and record your final results in Column 2.

Paste or stick this assignment in your energy journal. The results you have calculated will be used in a later lesson.

Table 8.2. Experimental week results

	Column 1	Column 2
	Saving idea / appliance	Usage totals
1		
2		
3		
4		
5		