

# Ecological Footprints



The following activity expands on the Core Module to work out your school's and students' Eco-footprint. By getting students to work out their personal Eco-footprint they gain an understanding of how their lifestyle impacts sustainability and so engages them with the key concepts of the Core Module and sustainability. The students can then apply this thinking to how they can reduce the schools Eco-footprint.

## Procedure

1. Complete the Core Module baseline data.
2. You will need to find out some extra details in order to complete the EPA Eco-Footprint Calculator. Some of these details can be extrapolated from the baseline data, some will take extra research to track them down, and others will take some considered estimation! Details are on page 2 of this information booklet.
3. Use this information to complete the EPA eco-footprint calculator for your school using: <http://www.epa.vic.gov.au/Eco-footprint/Schools/default.asp>

## With the students

4. Each student will complete their own personal eco-footprint using either the attached CERES footprint calculator or an online calculator found at <http://www.earthday.net/footprint/index.asp>. This on-line version was designed by Mr Mathis Wackernagel, the person who introduced the concept of Ecological Footprinting.
5. Each student should work through their own ecological footprint then come up with 10 ways they are going to reduce their footprint. These could be written up as a signed contract, pinned on the wall, stuck on their lockers, made up as posters or as a chart for the whole class to display.
6. Using your school's Eco-footprint, as calculated by the EPA School Ecological Footprint Calculator, discuss the results and brainstorm ways the school could reduce it's own ecological footprint. Perhaps you could do a think- pair-share, or discuss as a whole class or in small groups. These brainstormed ideas could be presented at a Sustainable Schools staff professional development session, a staff meeting, at an assembly or to the Sustainable Schools committee for consideration and inclusion in the schools new sustainability policy, four year plan and curriculum plan.
7. Personal and school Eco-footprints can then be revised in 12 months time.



## Information to be located for the EPA School Ecological Footprint Calculator

Item	Amount
<b>School Buildings:</b>	
Total floor area of the school buildings (including floor areas of multi-floor buildings)	m <sup>2</sup>
Expected life of the buildings	Years
Age of the buildings	Years
Number of students	
Electricity use per year	KWh
Natural Gas use per year	MJ
Water use per year	ML
% of green power used	%
<b>Food: Survey your class or a couple of classes &amp; take an average to find out:</b>	
Number of students who have meat in their lunches (red or white – not fish)	%
Number of students who don't have meat in their lunches	%
<b>Travel: Survey your class or a couple of classes &amp; take an average to find out:</b>	
Number of students getting to school in a private car (just one family)	%
Number of students getting to school in a private car (carpooled with children from other families)	%
Number of students using public transport	%
Number of students using bicycles	%
Number of students walking	%
<b>Excursions this year:</b>	
By bus	Number of trips
	Average Distance
	Km
By train	Number of trips
	Average Distance
	Km
By car	Number of trips
	Average Distance
	Km
By plane – domestic	Number of trips
	Average Distance
	Km
By plane - international	Number of trips
	Average Distance
	Km
<b>Goods:</b>	
Copy paper used per year – total A4 sheets (copiers, printers, faxes)	sheets
Toner cartridges recycled per year	
Printed books (text books) per student for the year	Purchased New
	Purchased Second hand
Paper used for note taking (use the booklist)	pages
Number of computers in the school	
<b>Recycling and waste:</b>	
% of paper recycled – copy paper, publications, journals, newspapers, mail	%
% of cans and bottles recycled	%
% of IT equipment recycled (to a recycler or reseller)	%



# YOUR ECOLOGICAL FOOTPRINT

THERE ARE 4 SECTIONS – FOOD, HOUSING, TRANSPORT, GOODS AND SERVICES  
 CIRCLE YOUR FREQUENCY SCORE U = USUALLY S = SOMETIMES R = RARELY



## FOOD: 40% OF THE AVERAGE AUSTRALIAN ECOLOGICAL FOOTPRINT

QUESTION	FREQUENCY SCORE	WEIGHTING FACTOR	QUESTION SCORE
1. I include red meat (high on the food chain) in my diet	R S U	x 3	
2. I include white meat in my diet	R S U	x 1	
3. I include dairy products in my diet	R S U	x 1	
4. I include fish in my diet	R S U	x 1	
5. I avoid eating animals raised in modern factory-farm production	U S R	x 2	
6. I eat at fast food restaurants	R S U	x 3	
7. I prepare meals with minimum use of processed foods (such as canned foods or quick noodles)	U S R	x 1	
8. I avoid snacks and other foods with lots of packaging	U S R	x 1	
9. I grow my own food or eat food grown locally and in-season	U S R	x 1	
<b>SECTION A: TOTAL FOR FOOD</b>			

Scores in the left column score 1  
 middle column score 2  
 right column score 3

**Multiply your FREQUENCY SCORE by the WEIGHTING FACTOR and record the QUESTION SCORE**

**Add your QUESTION SCORES to find each SECTION TOTAL**



## HOUSING: 20% OF THE AVERAGE AUSTRALIAN ECOLOGICAL FOOTPRINT

QUESTION	FREQUENCY SCORE	WEIGHTING FACTOR	QUESTION SCORE
10. I choose to live in a small sized home	U S R	x 2	
11. I look for energy efficient house design when buying, renting or renovating a house	U S R	x 2	
12. I check the insulation and draught sealing in my house and improve it if necessary	U S R	x 1	
13. I use low wattage and/or energy saving light globes wherever I can	U S R	x 1	
14. I choose appliances having at least a 4 star energy rating	U S R	x 1	
15. I run a dishwasher only when it is full and let the dishes drip dry and/or I wash dishes by hand	U S R	x 1	
16. I use air conditioning in the summer	R S U	x 1	
<b>SECTION B: TOTAL FOR HOUSING</b>			



## TRANSPORT: 10% OF THE AVERAGE AUSTRALIAN ECOLOGICAL FOOTPRINT

QUESTION	FREQUENCY SCORE	WEIGHTING FACTOR	QUESTION SCORE
17. I rely on private cars for transport	R S U	x 3	
18. I drive a small fuel efficient vehicle	U S R	x 1	
19. I drive the same car for many years and keep it well maintained	U S R	x 1	
20. I car pool	U S R	x 1	
21. I use public transport	U S R	x 1	
22. I walk or ride a bicycle somewhere rather than driving	U S R	x 1	
23. I choose to buy goods which are locally made	U S R	x 1	
<b>SECTION C: TOTAL FOR TRANSPORT</b>			



## GOODS AND SERVICES: 30% OF THE AVERAGE AUSTRALIAN FOOTPRINT

QUESTION	FREQUENCY SCORE	WEIGHTING FACTOR	QUESTION SCORE
24. My large wheelie bin at home is full in a week	R S U	x 1	
25. I recycle aluminium can and steel cans, glass bottles, plastic bottles and paper	U S R	x 1	
26. I refuse plastic or paper bags for my purchases & take my own cloth or string bags to the shops	U S R	x 1	
27. I avoid using non-essential electrical appliances (eg. can-opener, hair dryer, toothbrush, leaf blower)	U S R	x 1	
28. My clothing purchases are dictated by the latest fashion	R S U	x 1	
29. I buy used clothing and recycle clothing and furnishings through charities	U S R	x 2	
30. I purchase newspapers daily	R S U	x 1	
31. I buy glossy magazines at least once a month	R S U	x 1	
32. I smoke more than 10 cigarettes a day or drink more than 3 standard drinks a day	R S U	x 1	
33. I keep one or more medium to large pets	R S U	x 1	
34. I limit my showers to five minutes and/or I install regulators on shower heads to reduce water flow	U S R	x 1	
35. I help restore degraded areas to their natural state	U S R	x 1	
<b>SECTION D: TOTAL FOR GOODS AND SERVICES</b>			



## PICTURE YOUR ECOLOGICAL FOOTPRINT

Transfer your section totals to the table below.

Add up the totals from each section to find your **ECOLOGICAL FOOTPRINT SCORE**:

<b>SECTION A TOTAL FOR FOOD</b>	
<b>SECTION B TOTAL FOR HOUSING</b>	
<b>SECTION C TOTAL FOR TRANSPORT</b>	
<b>SECTION D TOTAL FOR GOODS AND SERVICES</b>	
<b>ECOLOGICAL FOOTPRINT SCORE</b>	

Convert your **ECOLOGICAL FOOTPRINT SCORE** to hectares of biologically productive space (land, sea and water course).

SCORE < 70	5 HECTARES	SMALL FOOTPRINT
SCORE 70 – 110	9 HECTARES	MEDIUM FOOTPRINT
SCORE > 110	13 HECTARES	LARGE FOOTPRINT

The Australian Average Ecological Footprint is 7.7 hectares, but our “fair earth share” is only 1.8 hectares

- ☆ We have used the Australian average as our “medium footprint”, but in global terms it is very large.
- ☆ Even one of our “small footprints” is over twice our “fair earth share”.
- ☆ If every person in the world lived like an Australian, we would need 4.2 planets to support our consumption patterns!

Data Source:

Victorian EPA (2005) Publication # 975, Victoria’s Ecological Footprint.

[http://epanote2.epa.vic.gov.au/EPA/Publications.NSF/2f1c2625731746aa4a256ce90001cbb5/55be17bd1b4587f4ca256fe3000611f9/\\$FILE/975.pdf](http://epanote2.epa.vic.gov.au/EPA/Publications.NSF/2f1c2625731746aa4a256ce90001cbb5/55be17bd1b4587f4ca256fe3000611f9/$FILE/975.pdf)

WWF (2004) Living Planet Report 2004. <http://www.panda.org/downloads/general/lpr2004.pdf>