

## GUIDE TO ANSWERING THE QUESTIONS IN THE CALCULATOR

Publication 971

February 2005

The following guide is designed to help you collect data before inserting it into the calculator. You can print this guide and write your answer to each question.

The school eco-footprint calculator has a built-in help function to ensure that the correct information is input. By holding your mouse over the question, a yellow dialogue box will appear and tell you the type of information required.

This guide comprises the following areas:

### School Buildings

- Food
- Travel
- Excursions
- Goods
- Recycling and Waste.

### SCHOOL BUILDINGS

This section of the calculator determines the amount of land (for energy, pasture, cropland, forestland, consumed land and biodiversity) that is required to sustain the physical buildings, land and operations of the school. Staff working in the 'facilities' area of your school may be able to provide answers to a lot of these questions.

#### **Question 1: What is the total ground area of your school, including yards and built areas?**

If your school block is either square or rectangular, simply measure the length and width in meters metres and multiply them to determine the total ground area. If the block is irregular in shape, it can be broken down into smaller rectangles to approximate the area. The 'calculate' button to the right of Question 1 can be used to help in this approximation.

**Answer:** ( ) m<sup>2</sup>

#### **Question 2: What is the total floor area of school buildings?**

Add up the floor areas of all built structures on all levels. If there is a three-level rectangular building, measure its length and width and multiply them together and then multiply the result by 3. The 'calculate' button to the right of Question 2 can help to answer to this question.

**Answer:** ( ) m<sup>2</sup>

#### **Question 3: What is the expected life of the building in years?**

Firstly determine how old the main school building is, then add to this figure the predicted remaining

# Class Handout – School Ecological Footprint Calculator

life expectancy of the building (the average life expectancy is usually about 50 years).

**Answer:** ( ) years

## **Question 4: How many students are there in your school?**

Ask your general enrolment office for the number of students currently enrolled at your school. Limit the number to those who are on the campus that you are surveying.

**Answer:** ( ) students

## **Question 5: How much electricity does your school use?**

Ask the facilities manager or finance department for electricity bills or consumption data for the last year to determine the total amount of electricity used by the school. Answers can be entered in kilowatt-hours per year or in dollars per year, depending upon which answer is easier to obtain. Alternatively, the ‘estimate electricity’ button located to the right of Question 5 can be used. This will generate a pop-up screen in which you can enter data such as the number of computers at the school and the type of lighting to generate an estimate of electricity consumption.

**Answer:** ( ) kilowatt-hours per year or ( ) dollars per year

## **Question 6: How much gas does your school use?**

Ask the facilities manager or finance department for gas bills or consumption data for the last year to determine the total amount of gas used by the school. Answers can be entered in megajoules per year or in dollars per year, depending upon which

answer is easier to obtain. Alternatively, the ‘estimate gas’ button located to the right of Question 6 can be used. This will generate a pop-up screen in which you can enter data about the type of heating and cooling used at the school.

**Answer:** ( ) megajoules per year or ( ) dollars per year

## **Question 7: How much water does your school use?**

Ask the facilities manager or finance department for water bills or consumption data for the last year to determine the total amount of water used by the school. Answers can be entered in megalitres per year or in dollars, depending upon which answer is easier to obtain. Alternatively, the ‘estimate water’ button located to the right of Question 7 can be used. This will generate a pop-up screen in which you can enter data about the area of land requiring water, and so on.

**Answer:** ( ) megalitres per year or ( ) dollars per year

## **Question 8: Does your school purchase green power? Enter percentage of power from this source.**

Electricity bills will tell you if the school subscribes to green power and to what percentage.

**Answer:** ( ) %

## **FOOD**

This section of the calculator determines the amount of land that is required to sustain the production of the lunches eaten by students at school.

# Class Handout – School Ecological Footprint Calculator

## Question 9: How many students have meat in their lunches?

Survey your class on one given day. Work out the percentage of students who have meat in their lunches and then multiply this percentage by the answer to Question 4 to roughly determine the total number of students at the school who are eating meat for lunch on this particular day.

**Answer:** ( ) students

## Question 10: How many students do not have meat in their lunch?

As above. Note: the answers to Questions 9 and 10 should add up to that of question 4.

**Answer:** ( ) students

## TRAVEL

This section of the calculator determines the amount of land that is required to sustain the transport taken by students when getting to school.

How do students get to school?

### Question 11: Private car (just your family)

### Question 12: Private car (car pooling)

### Question 13: Public transport

### Question 14: Bicycle

### Question 15: Walk

Survey your class. Work out the percentage of students using each method of transport to get to school. Multiply each percentage by the answer to Question 4 to get the total number of students across the entire school who come to school via the above methods.

If students use two forms of transport to get to school, such as bicycle and train, then enter in the main form of travel for the journey.

**Answer 11:** ( ) %

**Answer 12:** ( ) %

**Answer 13:** ( ) %

**Answer 14:** ( ) %

**Answer 15:** ( ) %

## EXCURSIONS

This section of the calculator determines the amount of land that is required to sustain the transport for school excursions.

How many excursions this year will be by the following methods of transport and what is a rough average for the length of each trip (kilometres)?

### Question 16: Bus

### Question 17: Train

### Question 18: Car

### Question 19: Aeroplanes – Domestic

### Question 20: Aeroplanes – International

This is a difficult question and some approximations may be required.

Count excursions that occur on the same day to the same location as one trip, regardless of whether one class or five classes attend. If a number of sites are attended on the same day, still count it as one trip and add the distances between sites to make up the total trip distance.

# Class Handout – School Ecological Footprint Calculator

The finance section of your school should keep a record of the expenditure on transport for school excursions for the year. Try and get a list of the trips made by the entire school and the type of transport used. Add up the distance of these trips (use maps for rough approximates if data is not available) and divide by the number of trips to get the average length of trip for each method of transport.

**Answer 16:** ( ) trips – ( ) average km per trip

**Answer 17:** ( ) trips – ( ) average km per trip

**Answer 18:** ( ) trips – ( ) average km per trip

**Answer 19:** ( ) trips – ( ) average km per trip

**Answer 20:** ( ) trips – ( ) average km per trip

## GOODS

This section of the calculator determines the amount of land that is required to sustain the goods used at your school.

### **Question 21: Copy paper used per year – total A4 sheets.**

Purchasing data for copy paper should be available from the finance department of the school. This data may be available as the number of boxes of paper, so you may need to work out how many reams of paper are in each box and how many sheets of paper are in each ream. It should be noted that one A3 sheet of copy paper is equal to two A4 sheets.

If purchasing data is not available, it is possible to estimate copy paper usage by using the ‘estimate copy paper usage’ button to the right of Question 21. This button requires you to estimate the number of photocopied sheets handed out to each student per week.

There is no need for a class survey, just calculate the number of sheets handed out to you in the past week at school. Make some assumptions as to whether this represents a normal week or not.

**Answer:** ( ) sheets of A4 copy paper per year

The ‘recycled content’ green button at the top of this section asks you whether your school purchases paper with recycled content. You can compare the results for the use of recycled paper as opposed to virgin paper.

To use this button you need to input the percentage of paper with recycled content that your schools uses and what percentage of the paper is recycled stock versus plantation timber (usually mentioned on the packaging).

### **Question 22: Are toner cartridges recycled?**

Ask whoever is responsible for changing over printer and photocopier cartridges whether they are recycled or not. Enter the result as a percentage recycled of the total number of cartridges used.

**Answer:** ( ) %

### **Question 23: What is the number of printed books required per student per year?**

Enter the number of printed books that you have purchased this year: the number of novels, textbooks and so on.

# Class Handout – School Ecological Footprint Calculator

If books have been purchased second-hand, you can specify this by clicking on the ‘second-hand book’ button to the right of question 23 and specifying a percentage of the books purchased that are second-hand.

**Answer:** ( ) books and ( ) % second-hand

## **Question 24: What is the type and amount of paper used for note taking?**

You need to answer to this question by clicking on the ‘type and amount of note paper’ button located to the right of Question 24.

This question requires you to enter information about the paper students use for note taking. You need to enter the amount used per week (in pages); the type of paper in terms of its weight per square meter (photocopy paper is about 80 grams per square meter (gsm) whilst phone book paper is about 70); what the recycled content of the paper is (it would say on a note book if it was made from recycled paper); and whether the paper is scrap paper or not (i.e., something has been printed on one side and you've decided to use the other side for note taking). If you use more than one sort of paper, you can enter information for up to three different types.

**Answer:** ( ) pages per week; ( ) gsm paper thickness; ( ) % recycled content; ( ) scrap paper (yes or no)

## **Question 25: How many computers are there in the school?**

Count the number of computers in the school (computer room, library, teachers offices etc.)

**Answer:** ( ) computers

## **RECYCLING AND WASTE**

This section of the calculator determines the amount of land that is saved by the recycling of wastes.

### **Question 26: What percentage of paper is recycled?**

This question includes copy paper and publications received by the school. Conduct a classroom audit of general waste and paper recycling bins. Compare the amount of paper in the general waste bins with that in the recycled paper bins. Ignore paper that has been contaminated with foodstuffs. Determine the percentage of paper that is recycled.

**Answer:** ( ) %

### **Question 27: What percentage of cans and bottles are recycled?**

Conduct a classroom audit of general waste and can and bottle recycling bins. Compare the amount of cans and bottles in the general waste bins with those in the recycled bins. Determine the percentage of cans and bottles that are recycled.

**Answer:** ( ) %

### **Question 28: What percentage of IT equipment is recycled?**

Ask your IT department if any old computers are recycled or resold or if they are all sent to landfill. Estimate what percentage of IT equipment is recycled or resold.

**Answer:** ( ) %

