

# CHAPTER 2 • PART I

## Learning to Walk: EVERYBODY HAS A FOOTPRINT ACTIVITY

### WHAT YOU NEED:

- graph paper
- magazines
- pens/crayons/pencils
- tape measure(s)
- Tree of Life Posters



1. Trace an outline of your foot on graph paper. Estimate and then measure the area of the footprint. Count the squares or use a more mathematical approach. This area represents a quantitative observation. Now cut out the outline of your footprint. On the back of the graph paper, draw or paste a collage of things that you think make up your Ecological Footprint.

How would you measure the effect that each of the things in your collage has on the environment?

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Two scholars from British Columbia have created a way to measure our impact on the earth. They call this measurement an **ECOLOGICAL FOOTPRINT**. This footprint is the amount of land needed to make the things we use (food, clothing, shelter, water, products, etc.), and to absorb the waste we produce, in our everyday lives. They have calculated that the average Canadian Ecological Footprint equals 7.5 hectares.

2. Measure 7.5 hectares (one hectare equals 100m x 100m) by walking around its perimeter. This is the average amount of productive land needed to support each Canadian in our current lifestyle. Now measure off 2.2 hectares. This is the average amount of productive land currently used to support everyone on earth. Now measure off 1.8 hectares. This is the land available to support each person on the earth. Note the difference in size between the three footprints.

a) What do you think productive land is?

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b) What do you think this says about our lifestyle?

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# Questions:



*Go to the Tree of Life posters.*



1. How much productive land is available on the earth?

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2. What is the current human population?

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3. How much land is available per person on the earth?

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4. How much land is currently used per person on the earth?

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5. How much land does the average Canadian use to support his/her life-style?

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6. If everybody lived like the average Canadian, how many more Earths would we need to live the way we do?

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## Everybody Has a Footprint

"Piper, Piper, where are you?"

Kieran and Heather dropped their pens and paper and ran in the direction of the scream.

"Oh no, this is all my fault," said Kieran. "I shouldn't have sent her off on her own. Hurry, Heather! PIPER! PIPER! Heather, did you see where she went?"

"Follow her trail. Look, it goes over towards those bushes. See, Arial is sitting on that tree. Piper must be nearby. Come on, Kieran!"

Kieran and Heather followed the trail through the flattened grass and flowers until it disappeared into the bushes and shrubs. Then they heard Piper's voice whispering, "Shhh. Be quiet, you guys. Don't scare it!" Puzzled, Heather glanced at Kieran--then she lifted the lower branches of the willow tree and saw Piper, sitting in the clearing, only a few metres away from a very large, honey-coloured eastern cougar.

"What the—Piper, get away from that cat! C-c-c-careful. Just back away, slowly. It's dangerous!" urged Heather, trying not to let her panic show in her voice.

"It's okay, Heather. Look, it's a friend of Arial's. And look what it has between its front paws: a piece of yellow parchment. Doesn't it look familiar? Remember, Solana said that she had three companions for us? Well, I think this is companion number two with our second clue."

"Solana must think we really need help, sending us a companion this size!" wheezed Kieran. "I wonder what its name is."

The cougar gently pushed the parchment away, and Piper picked it up. She handed it to Kieran.

"Let's wait to read it until we get back to the tree. We've been working on our list, and this might help us to finish it." Kieran and Heather helped

Piper stand up. The grasses and the flowers in the hidden clearing had been flattened by Piper's fall. A tiny warbler's nest had also been upset in all the commotion. " Boy, for a little kid, you sure can make a big mess! I guess you weren't exactly walking very gently on the Earth just now were you?" asked Kieran.

"I guess I just wasn't thinking very clearly. When Arial flew over this way, all I could think of was coming here fast to find the paper. I didn't look where I was going. I guess I should have been careful," said Piper.

"It seems as though we make a bigger trail when we hurry. Look at the path we made through the grass in the meadow when we came to rescue you!" Kieran shook his head in dismay. "Those tiny flowers are crushed from our feet. Let's be more careful and quiet going back. Maybe we'll see more on the way, too! Hey, Piper, see if the big cat will follow us back to Solana."

"Let's get going! I want to see your list and to read the second clue," said Piper. "We learned a lesson: Think first, then act!"

Heather, Piper and Kieran, followed by the sleek cougar, picked their way back more carefully. Arial circled overhead and settled on her favourite branch of the maple, with a cry of greeting. The cougar growled and instantly

leapt up to a low branch, where it stretched out, dangling its tail lazily over the edge of the limb.

"Well, my brave champions! You have found your second companion. Let me introduce you to Terian. He too, has gifts to share with you. Terian is clever. His ears are very sensitive, and he listens carefully to everything around him. Terian walks quietly in the forest, and each step is made with great care."

"Solana, I wish I had walked as softly as Terian. You should have seen the trail we left behind us! We must be more careful," said Piper. "We were trying to step in the same trail we made before on our way back. I was thinking a lot about footprints. I think maybe we leave another kind of footprint behind us. I don't mean our actual footprints, but the marks or impressions our lifestyle leaves on the earth--a sort of ecological footprint. A kind of a "marker" of the way we live. Maybe the houses we live in, the clothes we wear, the food we eat and how we get rid of our garbage leaves a kind of footprint. In class last week, we talked about evaluating the way we live by estimating the amount of land that we need to live the way we do. The number was pretty large -- I think the average Canadian footprint was 7.5 hectares. Maybe we can use that with the stuff you're doing, Kieran."

"Good idea, Piper! By looking at our real footprints, maybe we can discover clues about how to look at our Ecological Footprint. It might give us an idea about what we should do next," said Heather, leaning back against a large rock near the base of the tree.

"Let's see what the second clue says. It might help us, too. Give it here, Piper," said Kieran. He reached out to take the paper, but before he could, Heather gave a cry of surprise. "Look! It's moving!" The large rock had moved.

It was not a rock, but a large leather-back turtle. Her name is Marina and she has come a long way to help you. Meet your third companion. Marina has gifts for you as you struggle onwards with your voyage."

"Well," said Piper, "let me guess. I'll bet she is old and probably very wise."

"Yes, Marina is even older than I. With her age has come great wisdom and reflection. Marina also brings you the gift of patience, if you will use it. These three companions, Arial, Terian and Marina, will provide you with the qualities you will need to complete your voyage. Use them well as you seek answers."

Heather bent over to examine Marina. "Look, there are thirteen scutes on her shell. Take a look at this, Piper and Kieran! These three plates seem to have pictures of Arial, Terian and Marina on them--see?"

"Yeah! Yeah!" replied Kieran as he leaned over for a closer look. "Wow, take a look on this side. There are more symbols over here. There's the shield . . . and look, over here. Remember the markings we saw in the schoolyard? Well, here they are again, on the turtle's shell."

"Of course! Now I know what the markings were: Arial's talons, Terian's paws and Marina's flippers. We MUST be on the right track with our footprint ideas," added Piper. "Now that we've got our companions, let's look at Terian's paper and get to work on the second clue!"



# Questions

## EcoGuardians' 3<sup>rd</sup> Chronicle

### Everybody Has a Footprint

Discuss the following questions and record your answers:

1. Who are the EcoGuardians' three companions? List reasons why each one was chosen?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

What do you think their names mean? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. What does "think first, then act" mean? \_\_\_\_\_

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3. What do you think an Ecological Footprint is? \_\_\_\_\_

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4. What are some of the markings on Marina's shell? How do you think they are important to the story? Draw one of the symbols and explain what you think it might mean.

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# The Student Footprint Survey

## Water



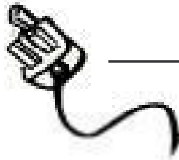
In the next 24 hour period, record how many times you flush the toilet. \_\_\_\_\_

## Transportation



How do you usually get to school? \_\_\_\_\_

## Energy



List all the home entertainment things in your house. Record how many hours you personally use each one in the next 24 hours.

<u>Device</u>	<u># of Entertainment Devices</u>	<u>Time used</u>
CD player	_____	_____
Stereo	_____	_____
Radio	_____	_____
Video Game system	_____	_____
Television	_____	_____
VCR/DVD	_____	_____
Computer	_____	_____
Other	_____	_____
<b>TOTAL:</b>	_____	_____

## Food



Record everything you eat for your next lunch. List all the items including those you threw away

\_\_\_\_\_

Using the things you have listed above, check off how many servings of each category you had for lunch (e.g., a ham and cheese sandwich = 2 grains, 1 meat, 1 dairy product):


- Meat Alternatives (beans, nuts, etc.)
- Meat
- Vegetables
- Dairy Products


- Grain Products
- Fruits
- Other

# Garbage



Many items in your lunch come in some type of package. List these:

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Now go through your lunch and fill in the chart below for any packaging item you threw away (for example, your sandwich came in a plastic wrapper), put in a recycling box, or was, or will be, reused (you might use the paper bag that your lunch was packed in again, or maybe you had used it before).

What I:	Threw Away	Recycled	Reused
Plastic			
Glass			
Metal			
Paper			
Wood			
Food			
Other			



## The Ripple Effect

Kieran took the yellowed paper. Unlike the first clue it was folded and seemed to be stuck together. It would not open. Try as he might, Kieran could not find any way to get at the message. Although made of paper, it would not rip or tear. Heather and Piper tried to help Kieran, but all three had no success in unfolding it.

"Now what?" asked Heather. "This won't work. How are we supposed to figure out the clues if we can't even read them? Here, take it back, Kieran. Keep trying. There has to be a way to open it up."

"Hey, Kieran and Heather, quick! Help me! Marina's trying to leave. She must weigh a ton! She moves pretty fast for a turtle! Get around in front of her and see if you can make her stop."

"Marina! Where are you going? Ariel, come back here. Terian, don't leave us, too!" begged Piper. Piper gave up trying to convince the companions to stay, and decided to follow them.

"Come on you guys, let's see where they're going."

"Wait a minute," insisted Kieran. "Let's bring the pieces of parchment with us, just in case the wind picks up again. I don't want to lose what we've already got."

"What in the world! Look at this! Terian and Marina's pictures have appeared on the scroll, too. Magic paper!! Heather, please help me gather all the pieces together and we'll roll them up."

Heather and Kieran gently rolled up the parchment scrolls that made up the picture of the tree, and set off with Piper to follow their furred, feathered, and scaled companions. Marina and Terian seemed to be following in Piper's path back towards the creek, finally stopping at the water's edge. Ariel settled on a small tree that overlooked the water.

The three friends slumped down in a small semicircle lost in thought. They watched the big cat dozing in the spring sunshine, the huge turtle making her way through the silent waters of the neighbourhood creek and the falcon sitting motionless on a limb, her feathers ruffled gently by the soft breeze.

The friends were thinking about their voyage and what to do next. Each of them was wondering how the clues and pieces all fit together. They were frustrated, confused and more than a little discouraged.

"I don't know. This is such a jumble to me," sighed Heather. "We've got our companions, and we've got two clues, but we can only read one. We don't seem to be getting anywhere. I don't understand. I can't figure out what we're supposed to do, and now, here we are, sitting at a creek, wasting time."

"Why do you suppose our companions brought us down here to the water? What does it mean? Why can't we open the paper? I'm confused."

"Yes," consoled Kieran, "I guess we all are. We could work on the footprint idea some more. Here, Heather, take a look in my journal."



"That makes sense, Kieran." Heather paused, then added, "And you know, some of the symbols on Marina's shell remind me of the charts and graphs in Ms. Yamada's math class. I think we're supposed to study the information we gather, and find a way to analyze it."

Arial suddenly called out and Terian opened his eyes and growled in approval. "I think we're on to something!" Piper added enthusiastically. "Do you agree, Marina?"

The turtle dipped under the water, making a swirl of ripples as she disappeared from sight.

"Marina says 'yes.' Look at the ripples she made. I used to spend every Saturday down at the lake throwing pebbles into the water with my dad. I've always loved the patterns . . .", said Piper, with a smile on her face.

"Yes! Yes! Yes! That's it! Piper, you're a genius! It's all part of the same clue. Marina is telling us that we're right. What we have to do is study the patterns and think about the ripples we make. If you make one ripple with a pebble, it causes even more." Kieran reached for a pebble and tossed it in the water to illustrate his point. Thunder crashed, and in a swirl of silver and black, Chronos appeared, looking tall and frightening. Kieran, Piper and Heather jumped up in alarm. "Boy, he sure likes to make a dramatic entrance!" Piper whispered to Heather.

"Well, well, well. So you've started to make ripples. Solana's champions have figured out the next step in their voyage. Well done! I am quite surprised, and more than a little impressed that you have succeeded so quickly. Time, however, does continue to move on. There is not much left." Chronos held up the hourglass for inspection. "But perhaps I have judged you too quickly."

Kieran turned to Heather and Piper. "I think we have been insulted, guys." He turned back to Chronos. "However, your apology is accepted."

Chronos waved his arm impatiently. "You are not finished yet, my friend. You will still require my help, so take care."

"I will try to be of assistance to you. I set the tasks, but it is humankind who has created the challenges, and they are many. You will discover them only gradually." Chronos taunted them, "Do you even know where to begin?"

"Chronos, NEVER underestimate the youth of today. We love a good challenge, and we don't give up easily. We know how to work together. We've made a good start, but we need your help with the second clue. It seems that this paper is stuck together." Heather offered the paper to Chronos.

A crash of thunder split the air. The singed paper fell to the earth, torn apart by the hand of the Keeper of Time. "Inside, young champions, you will find five tasks that you must complete, but you may not even begin the tasks until you have finished gathering and comparing many footprints, like the ripples in the water. You have begun, but the voyage is still a difficult one. Are you sure that you wish to continue?"

"Of course we do," they answered together. "We will help Solana restore her leaves. We're not afraid of a little hard work."

"Then I wish you well. Adieu for now. And don't forget, time is passing." Chronos disappeared dramatically.

"So much for 'Old Doom and Gloom.' Let's see what the clue says." Kieran picked up the battered papers and carefully started to read.



# Questions

## EcoGuardians' 4<sup>th</sup> Chronicle

### The Ripple Effect



Discuss the following questions and record your answers:

1. What is a ripple effect? How does this relate to the Ecological Footprint?

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2. What do you think is written on the second clue that the EcoGuardians couldn't read?

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3. Draw a picture of what you think Chronos might look like. Do you think he's helpful to the EcoGuardians? Why or why not?

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# DATA ORGANIZER



*Add up all of the answers that each student in the class has recorded in the Student Footprint Survey. Use these charts to help you.*

**WATER:** *How many times did your class flush the toilet in the past 24 hours?*

**Number of times the Class Flushed The Toilet**

# of Times	# of Students
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____



*Represent the class water data on a line graph. Remember to label your axes and give your graph a title.*

## Analyzing Your Graph

1. What is the range of toilet flushes for the class? \_\_\_\_\_
2. Describe the population sample. \_\_\_\_\_
3. What is the median toilet flush for the class? \_\_\_\_\_
4. What is the mode toilet flush for the class? \_\_\_\_\_
5. What is the mean toilet flush for the class? \_\_\_\_\_
6. Go to the Tree of Life posters and record the average amount of water used each time a person flushes the toilet. Calculate how much water the class used flushing the toilet.  
\_\_\_\_\_
7. If each toilet used 1 litre less per flush, how much water would the class save?  
\_\_\_\_\_
8. What could you do to your toilet to use less water? \_\_\_\_\_
9. Why should Canadians use less water when there is so much fresh water available to us?  
\_\_\_\_\_  
\_\_\_\_\_



# DATA ORGANIZER



**Transportation:** *How do you usually get to school?*

How Our Class Gets To School	# Of Students
Foot	
Bike	
Bus/transit	
Car(3+people)	
Car(2 people)	
Other	
Total:	

*Represent the class transportation data on a bar graph. Remember to label your axes and give your graph a title.*

## Analyzing Your Graph

1. What is the range of the class transportation data sample?

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2. Describe the population you sampled.

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3. What does your transportation graph show?

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4. Using the forms of transportation from your graph, complete this chart. Then, as a class discuss your answers and the pros and cons of each mode of travel. You can use the Tree of Life posters to help you.

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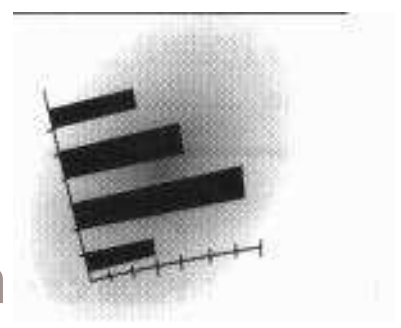


**Energy** *List the home entertainment things in your house. Record how many hours your class used them in the past 24 hours.*

## Home Entertainment Devices and Hours Used

Device	# of Entertainment Devices	Time Used
MP3/CD Player	_____	_____
Stereo	_____	_____
Radio	_____	_____
Video Game System	_____	_____
Television	_____	_____
Computer/DVD	_____	_____
Other	_____	_____
TOTAL:	_____	_____

*Represent the class total hours used for each device from the energy data on a horizontal bar chart. Remember to label your axes and give your graph a title.*



## Analyzing Your Graph

1. What device did the class as a total use the most? \_\_\_\_\_
2. What is the most common home entertainment device in your class data? \_\_\_\_\_
3. What entertainment device was used the most in terms of hours? \_\_\_\_\_
4. What is the average daily time per student spent watching television? \_\_\_\_\_
5. How does your choice of entertainment affect your Ecological Footprint?  
 \_\_\_\_\_  
 \_\_\_\_\_
6. 100 years ago, how do you think students your age entertained themselves? Do you think they had more or less fun? Why? Do you think their Ecological Footprint was larger or smaller than yours? Why? \_\_\_\_\_

**Food** *What did your class have for lunch today?*



Food Our Class Consumed	# of Servings
Meat Alternatives (peanut butter, beans, tofu)	_____
Meat	_____
Vegetables	_____
Fruits	_____
Grain Products	_____
Dairy Products	_____
Other	_____



*Represent the class food data on a pie chart. Remember to label your chart and give it a title.*

## Analyzing Your Graph

1. What kind of foods were in the "other" category?

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2. Describe what your pie chart shows.

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3. Which food groups do you think contribute to a larger Ecological Footprint? Why?

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4. What are some ways that you could reduce your Food Footprint?

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**Garbage** *List the items your class threw away, recycled or reused:*



Garbage Our Class . . .			
	Threw Away	Recycled	Reused
<b>Plastic</b>	_____	_____	_____
<b>Glass</b>	_____	_____	_____
<b>Metal</b>	_____	_____	_____
<b>Paper</b>	_____	_____	_____
<b>Wood</b>	_____	_____	_____
<b>Food</b>	_____	_____	_____
<b>Other</b>	_____	_____	_____
<b>TOTAL:</b>	_____	_____	_____

*Represent the items the class threw away using the class garbage data on a bar chart. Remember to label your axes and give your graph a title.*

## Analyzing Your Graph

1. Of the garbage your class throws away, which type had the most pieces? What percentage of the total pieces of garbage thrown away was this? What percent of the total pieces of garbage produced was this?

\_\_\_\_\_

\_\_\_\_\_

2. If you took all the garbage your class threw away and put it into a garbage can, what category would take up the most space? Why do you think so? What would weigh the most? Is it the same category?

\_\_\_\_\_

\_\_\_\_\_

3. Go to the Tree of Life posters. Describe what a typical Canadian throws away.



\_\_\_\_\_

\_\_\_\_\_

4. Look at the garbage data for your class. Examine ways that you can reduce your Garbage Footprint.

\_\_\_\_\_

\_\_\_\_\_

5. Go to the Tree of Life posters. Which country produces the most kilograms of garbage per person per day? Why do you think this is?

\_\_\_\_\_

\_\_\_\_\_

# How Big Is Your Ecological Footprint?

## Three-day Summary Activity

### A. TRANSPORTATION

How did you travel over the last three days?

- |                             |              |
|-----------------------------|--------------|
|                             | <b>Score</b> |
| I walked .....              | 0            |
| I cycled .....              | 5            |
| I took public transit.....  | 10           |
| I carpoled .....            | 15           |
| I used a private vehicle .. | 30           |

Multiply each score by the number of times you used that method of travel to move from one location to another in one day, and add together.

Day 1 total score:	1
Day 2 total score:	2
Day 3 total score:	3

### B. WATER USE

How much water did you use?

- |                            |    |
|----------------------------|----|
| Did not shower .....       | 0  |
| 1-2 minute shower .....    | 5  |
| 3-6 minute shower .....    | 10 |
| 10 minute shower .....     | 20 |
| Bathed in a full tub ..... | 20 |
| Bathed in a half-full tub  | 10 |
| Reused someone else's..    | 10 |
| bathwater .....            |    |
| Left the water running ... | 5  |
| when I brushed my teeth    |    |

Day 1 total score:	4
Day 2 total score:	5
Day 3 total score:	6

### C. CLOTHING

I am wearing the same clothes today that I wore yesterday

- |            |    |
|------------|----|
| Most ..... | 0  |
| Some ..... | 5  |
| None ..... | 10 |

I am wearing the same clothes that I wore the day before yesterday.

- |            |    |
|------------|----|
| Most ..... | 0  |
| Some ..... | 5  |
| None ..... | 10 |

I am wearing something that

- |                        |    |
|------------------------|----|
| has been mended.....   | -5 |
| I did the mending..... | -5 |

Fifty percent of my clothes are secondhand (score for one day only).

- |           |    |
|-----------|----|
| Yes ..... | 0  |
| No .....  | 20 |

My socks match each other.

- |           |    |
|-----------|----|
| No .....  | 0  |
| Yes ..... | 10 |

Day 1 total score:	7
Day 2 total score:	8
Day 3 total score:	9

Add 10 points to each of the Day 1, 2 and 3 total scores for the land area that was needed to produce the materials that make up your clothes.

### D. RECREATION

Identify the games, sports and activities you participated in during your spare time today.

How much equipment did you need to participate?

- |                      |    |
|----------------------|----|
| None or little ..... | 0  |
| Some .....           | 10 |
| Quite a bit .....    | 20 |

How much land was converted to playing fields, ice rinks, swimming pools, gym space, ski runs, etc. to meet your recreation needs?

- |                             |    |
|-----------------------------|----|
| None or little .....        | 0  |
| Some (< hectare).....       | 10 |
| Quite a bit (> hectare) ... | 20 |

I spent the following amount today on purchases (food, clothing, magazines, sports equipment, etc.)-

- |                    |                  |
|--------------------|------------------|
| Nothing spent..... | 0                |
| \$5 .....          | 5                |
| \$10 .....         | 10               |
| \$10+ .....        | 1 pt. per dollar |

Day 1 total score:	10
Day 2 total score:	11
Day 3 total score:	12

**E. FOOD**

**The food I ate was processed•**

- None .....0
- One portion .....10
- Two portions .....20
- Three portions .....30

**Food was left on my plate•**

- None .....0
- Very little .....5
- More than a little .....10

**I composted all vegetable and fruit scraps•**

- Yes .....0
- No .....10

**The food I ate is locally grown•**

- All ..... 0
- Some .....10
- None .....20

**The food I ate was over-packaged.**

- None .....0
- Some .....10
- All .....20

Day 1 total score:	13.
Day 2 total score:	14.
Day 3 total score:	15.

**F. GARBAGE**

**If I were to take everything I threw into the garbage today and put it all into the same container, I would need this to hold it all•**

- a crate.....30
- a shoebox .....20
- a cup.....5
- I produced no garbage ... 0

Day 1 total score:	13.
Day 2 total score:	15.
Day 3 total score:	14.

**G. LIVING SPACE**

Calculate in square metres the indoor space that you required to live for the three days. Include all the space in your "home", "school," etc. (1 sq. metre = 10 sq. feet). Divide the total square metres by the number of people you shared this space.

Home sq. m. =  
# people

School sq. m. =  
# of people

Other sq. m. =  
# people

**Total Square Meters:**

19.

**H. SCORE TOTALS**

**Day 1**

(add boxes 1, 4, 7, 10, 13, 16)

**Day 2**

(add boxes 2, 5, 8, 11, 14, 17)

**Day 3**

(add boxes 3, 6, 9, 12, 15, 18)

**Living Space**

(box 19)

Grand Total	26
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Convert your total from above into your personal "footprint" for the last three days by using the conversion formula below:

**Grand Total**= Your EF in  
100 hectares

My Ecological Footprint is \_\_\_\_\_hectares.

**QUALITY OF LIFE INDICATOR**

How would you rate the quality of each day ?

- EXCELLENT      **E**
- GOOD            **G**
- POOR            **P**

**Day 1** \_\_\_\_\_

**Day 2** \_\_\_\_\_

**Day 3** \_\_\_\_\_

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# Introductory Worksheet

## SEARCH AND FIND: FOOTPRINTS



*Find the answers to these questions on the Tree of Life posters.*

1. What is the size in hectares of the average Canadian Ecological Footprint?  
a) 1.8 ha      b) 7.5 ha      c) 5.1 ha      d) 2.2 ha
2. What is the size in hectares of the average world Ecological Footprint?  
a) 1.8 ha      b) 7.5 ha      c) 5.1 ha      d) 2.2 ha
3. How much land is available in hectares for each person in the world?  
a) 1.8 ha      b) 7.5 ha      c) 5.1 ha      d) 2.2 ha
4. What are the five categories that make up our Ecological Footprint?  
\_\_\_\_\_  
\_\_\_\_\_
5. If everyone on the earth lived like the average Canadian, how many earths would we need?  
\_\_\_\_\_

## Activity Worksheet

1. Refer to the chart on the poster that compares the footprint of various countries, as well as the world average. Why do you think the Canadian Footprint is so much larger than the world average?  
\_\_\_\_\_  
\_\_\_\_\_
2. What do you think quality of life means?  
\_\_\_\_\_  
\_\_\_\_\_



3. What makes you happy and your life better? Why? How many of these can you buy?

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4. Do you agree with the statement that the "best things in life are not things"? Give examples to illustrate your answer.

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5. Do you think it is necessary to reduce your Ecological Footprint? Why?

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6. How can you make your life better and use fewer things?

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## Post-Activity Worksheet

1. What is an Ecological Footprint? \_\_\_\_\_

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2. How big is Canada's Ecological Footprint? \_\_\_\_\_

3. What areas make up an Ecological Footprint? \_\_\_\_\_

4. A hectare is a) 100m b) 100m x 100m c) 10m x 10m

5. The Canadian Footprint is so much larger than the world average because

- a) there are more people in Canada than in other countries
- b) Canada is a poor country
- c) Canadians use more energy because of their climate
- d) Canadians consume more than people in other countries
- e) both c & d