

# **A Letter to Parents**

Like you, the authors of this book are parents. We—Michael and Jane—are worried about what our children are learning.

- ◆ Jane was sitting with her husband and seven-year-old son David at a pizza place near her home. David looked at the plastic cup that held his Dad's soft drink.

"Do you know what you could do that would really help, Mom?" he said.

"No," Jane replied. "What?"

"You could stop using Styrofoam."

She looked into his blue eyes and saw his bright, hopeful look. He was sure that his mother would agree that plastic is bad. Together, they would help the Earth by getting rid of it. Jane's heart sank. She knew that using plastic does not harm the Earth any more than using paper or glass. But how could she explain that to a seven-year-old? And what else had David learned that was mistaken? And how could she dare undermine his trust in his teachers, who were, after all, her friends? She didn't know what to say.

“Maybe plastic isn’t all that bad,” she mumbled.

- ◆ Several years ago, Michael was driving his son Andy and a friend to a movie. As Michael listened to the boys talking, he noticed that they weren’t discussing last Sunday’s Denver Broncos game or the latest Sylvester Stallone film. They were figuring out the exact date on which the world would run out of oil. When Michael asked them about it, the boys explained that their science textbook said that proven reserves of oil could only last seventy years. Michael knew that “proven reserves” simply means the amount of a resource that can be taken out economically. They have little to do with the actual amount of oil in the Earth. But his son didn’t know. Michael began to realize why Andy was forming a gloomy view of the future.

We are far from alone.

- ◆ One early spring night, as Jane’s friend Linda put her son to bed, she glimpsed the full moon shining on the snow outside the window.  
“Let’s look at the moon,” she said to five-year-old Henry.  
She turned off the light and they gazed at the brilliant circle of light emerging from shifting wisps of cloud. But Henry pointed to the clouds.  
“Look at the pollution!” he said.
- ◆ Merrilee, the mother of four boys, was looking forward to her second-grader’s Christmas program. The children had been given an assignment to write on “What I would give to the world,” and Merrilee expected a message of peace and joy. Instead, one by one, the children discussed “the need for a new Earth because we had destroyed ours through pollution, disappearing rain forests, and the elimination of the ozone layer.”<sup>1</sup>

- ◆ Another mother tells how sad her six-year-old daughter seemed one night as she settled into her new bed. When asked why by her mother, the girl replied: “They killed trees to make my bed.”<sup>2</sup>

***Plastic is bad. Pollution is everywhere. Trees are being killed.***

If you have children between kindergarten and the twelfth grade, chances are good that they have learned all this and more. The Earth is badly polluted, the rainforest is about to disappear, global warming will flood the earth—to name a few of the imminent calamities.

And who do they learn is responsible for this careening toward ecological disaster? We are. Parents, the current generation, have brought the Earth to the edge of doom.

***The good news is that these claims are not true.***

The goal of this book is twofold: to alert you to what your children are learning, and to offer you a more balanced view of the many environmental issues they encounter. With the help of many people, we have gathered the facts about environmental issues. We believe we have the background to help you correct the misinformation your children have been taught. Our research has been aided by people familiar with each environmental issue we write about. Before we can help, though, you need to understand how severe the problem is.

**Apocalypse Tomorrow**

“Our Earth is getting hotter every minute and the only way we can stop it is to stop burning styrofoam,” wrote Catherine, an elementary school student. “I’m also too young to die, might I add, so *stop burning the Earth!*”<sup>3</sup> Catherine was worried about dying because her elementary-school textbooks taught her that global warming and a thinning ozone layer threaten her life. Never mind that the greenhouse effect and the so-called “hole” in the ozone layer have little to

do with each other, or that burning Styrofoam has little to do with either one. Catherine's information may be scientifically weak but it's emotionally potent. Although environmental education differs from school to school and from region to region, our children are learning that the world is in danger and it is their job to save it.

Consider the following.

- ◆ *The Canadian Junior Green Guide*, a children's book, outlines an experiment in which kids try to get seeds to sprout. Some of the seeds are in pure vinegar and some in water. The results "tell you about the effect of acid (and acid rain) on plants,"<sup>4</sup> the book says. Yet the largest scientific study of acid rain ever conducted (at a cost of more than \$500 million) couldn't find convincing evidence that acid rain is destroying forests.
- ◆ Global warming will cause ocean temperatures to rise, says one text. That could cause an ice mass in Antarctica to "slip off its rock and float into open water," which could "push the sea level up several metres and cause coastal flooding such as we've never even dreamed."<sup>5</sup> But most scientists believe that if the world gets warmer, the sea level might increase by between six and 40 *inches*, and over a sufficiently long time period for us to adapt to the change.<sup>6</sup>
- ◆ *Rainforest*, a story book for small children, tells how a man on a bulldozer destroys the rainforest and its animal life. Justice is done when the rains come and wash the bulldozer over a cliff, killing the man. (A drawing shows the man falling to his death.) "The Machine was washed away!" the book concludes. "But the creatures of the rain forest were safe."<sup>7</sup>
- ◆ An environmental supplement to the *Weekly Reader* states that CFCs (chlorofluorocarbons) "break down and go directly to the

ozone layer and destroy it.” These CFCs “are found in the plastic foam from which cups, plates, and some fast food containers are made.”<sup>8</sup> But by 1992, when this issue appeared, plastic foam products had been CFC-free for two years.<sup>9</sup>

In some cases, the textbooks have rewritten history to make their point. For example:

- ◆ “Did you know?” asks the text *Science Probe 9*. “Over 2000 years ago, the golden age of Greek civilization ended not because of conquest or war but because of damage to the country’s most precious resource—soil. Trees were cut from every hillside to build cities and ships, as well as for fuel. Without trees to prevent erosion and enrich the soil, the land was not able to support farming. The famine that followed killed many people.”<sup>10</sup> Classical scholars whom we consulted were at a loss as to what the source of this information was. One classicist, upon hearing this, responded: “What famine?”

These are just some of the many examples found during a review of more than 160 textbooks and 130 environmental books for children available throughout Canada and the United States. Numerous examples of curriculum materials from environmental and business groups were also reviewed. Unbiased materials are a rare exception, as most materials either present only one side of an issue, select worst-case examples, or omit important information.

### **Armageddon in the Press**

Finding these lessons in our children’s school-books shouldn’t surprise us, since they merely echo the sort of messages conveyed by the mass media.

- ◆ “The world’s leaders meet in Rio next week for the first Earth Summit,” reported *Newsweek* magazine in its coverage of the event. “Their mission: to save the ship from its passengers. Their efforts will be judged not by us, but by our children.” It goes on to stress the importance of the issue “because no matter what your cause . . . it won’t matter if the environment collapses, taking the world’s economy with it.”<sup>11</sup>
- ◆ “Let there be no illusions,” wrote *Time* magazine in its “Planet of the Year” special issue. “Taking effective action to halt the massive injury to the earth’s environment will require a mobilization of political will, international cooperation and sacrifice unknown except in wartime.” Sprinkled through the issue were statements such as: “Nearly every habitat is at risk,” “Greenhouse gases could create a climatic calamity,” and “Swarms of people are running out of food and space.”<sup>12</sup>
- ◆ Actress Meryl Streep appeared on the Phil Donahue Show to warn mothers about a substance called *Alar*, a growth regulator used on apples. CBS’s “60 Minutes” presented the charges, too. Both were part of a public relations campaign conducted in 1989 for the Natural Resources Defense Council (NRDC). The group claimed that one out of every five thousand preschoolers exposed to *Alar* residues was likely to get cancer. Parents were terrified. Schools stopped selling apples in their vending machines. (NRDC’s claims were never substantiated.)<sup>13</sup>
- ◆ Captain Planet, a cartoon on the Turner cable network, begins a typical episode with this narration: “Our world is in peril. Gaia, the spirit of the Earth, can no longer stand the terrible destruction plaguing our planet.” One of the shows features “Hoggish Greedly” and “Dr. Blight,” who are trying to destroy the rainforest and make it into a golf course.<sup>14</sup>

## Reinforcing the Message

Some scientists and other prominent citizens reinforce the messages conveyed by the media. In fact, they often speak through the media. While scientists must be objective and careful when they publish articles in scientific journals, they can speak dramatically for popular consumption.

- ◆ Philip Austin, an atmospheric scientist at the University of British Columbia in Vancouver, told *Maclean's* readers: "If you look at current CO<sub>2</sub> levels compared with historical levels in the planet's history, it's clear we're headed right off the chart."<sup>15</sup> As we will explore in chapter 13, the carbon dioxide "problem" is still a matter of debate within the scientific community.
- ◆ Stephen Schneider, a scientist at Stanford University and the National Center for Atmospheric Research in Boulder, Colorado, told *Good Housekeeping* readers that "world global warming would mean that food and water supplies would be threatened (temporarily, at least), that certain diseases might go haywire, that numerous species of animals or plants—even whole ecosystems—would be endangered, and that both the temperature and the level of the oceans would rise, leading to more likelihood of severe storms and flooding of the coastlines."<sup>16</sup> Each of these statements is questioned by equally reputable scientists.
- ◆ James E. Hansen, who directs the Goddard Institute for Space Studies, told *Newsweek* that even the deep snow blanketing the East in the winter of 1996 was caused by global warming. "As you get more global warming, you should see an increase in the extremes of the hydrologic cycle—droughts and floods and heavy precipitation," he explained.<sup>17</sup>

Since so much scientific research is funded by government grants, scientists often can improve their access to funds if they can convince politicians that their work may “save the planet.”

On the other hand, scientists who down play crises may find themselves in hot water because they are threatening the budgets of their colleagues.

- ◆ Melvyn Shapiro, the chief of research at a laboratory of the National Oceanic and Atmospheric Administration, told *Insight* magazine that much of the reason for alarm about ozone depletion was budgetary. “If there were no dollars attached to this game, you’d see it played on intellect and integrity,” he said. “When you say the ozone threat is a scam, you’re not only attacking people’s scientific integrity, you’re going after their pocketbook as well. It’s money, purely money.” But shortly after the article appeared, Shapiro stopped accepting calls from the press and word circulated that his superiors had told him to quit talking.<sup>18</sup>

But perhaps the most accomplished promoters of crisis are environmental groups. Many environmental groups were born out of genuine alarm about air and water pollution or other issues, but advocacy has transformed them into multi-million-dollar businesses housed in skyscrapers and managed by well-paid executives who spend much of their time as lobbyists. If these organizations are to continue to exist in their comfortable style and maintain their political power, they need to maintain the income received from donations. As a result, their fund-raising letters are calculated to grip the reader’s attention.

- ◆ “It is entirely possible that we may be the last generation of humans to know this wondrous earth as it was meant to be,” warns the Sierra Club Legal Defense Fund.<sup>19</sup>



- ◆ “In the time it takes you to read this letter, nine hundred acres of rainforest will have been destroyed forever,” says the Rainforest Action Network.<sup>20</sup>
- ◆ “Without firing a shot, we may kill one-fifth of all species of life on this planet in the next 20 years,” proclaims the World Wildlife Fund.<sup>21</sup>

However, these fears are overstated. The environment is *not* significantly worse than it used to be. As this book will show, by most measures the environment in North America has *improved* substantially.

- ◆ Air quality has improved dramatically in the last few decades. For example, according to Environment Canada the level of carbon monoxide in the air declined by 73 percent between 1974 and 1994, and the level of sulfur dioxide declined 62 percent between 1975 and 1994. These declines occurred in spite of substantial economic growth.<sup>22</sup>
- ◆ Water quality has also improved across the country. In 1994, Alberta and Saskatchewan met their water-quality goals over 90 percent of the time; British Columbia and New Brunswick met their goals over 85 percent of the time; Manitoba met its goals over 70 percent of the time.<sup>23</sup>
- ◆ Concentrations of the pesticide dichloro-diphenyl-dichloro-ethylene (commonly called DDE) fell almost 85 percent in both Lake Ontario and Lake Superior from peak levels in 1975.<sup>24</sup>
- ◆ Forests in Canada are increasing as growth exceeds harvest.<sup>25</sup>
- ◆ The amount of land set aside for parks, wilderness, and wildlife is increasing in Canada.<sup>26</sup>

- ♦ Many wildlife populations are greater than they were 80 or 100 years ago.<sup>27</sup>

So, just as the texts are often irresponsible in predicting the future, they are often negligent in describing the past and present.

### **Saving the Planet without Scaring Kids**

How can you give your children a more balanced view of environmental problems? One way is gently to supply the information that is missing in their classrooms. This book will give you the facts and insight into the scientific controversies that are not covered in the textbooks.

Simply learning that reputable scientists often disagree with the claims of imminent catastrophe will keep your children from blindly fearing the future. Such information will also help your children see that environmental science is a discipline that reflects scientific uncertainty and is open to continual discovery. Your children can learn about environmental issues and develop their critical thinking skills at the same time. As scientists do, they can collect the facts and see whether the theories that have been advanced actually fit the facts.

With this greater objectivity, students can also begin to think critically about the causes of environmental problems, and develop their understanding of human nature. They won't be so quick to accept the simplistic claims of catastrophic global destruction. Your children will probably stop pestering you to take up the cause of the day, or at least they will be willing to consider that their crusade may not be for everyone.

Each chapter concludes with a few questions and answers that will help you summarize the information for your children. Each also has activities that you and your children may like to read and per-

haps try out. The activities offer concrete evidence that supports the information in the chapter. However, the activities are merely suggestions that can make a richer experience out of a trip to the lumberyard, say, or the supermarket. We recognize that you are a busy parent, with many goals other than teaching your children environmental science.

Unlike the authors of some environmental books for kids, we don't expect you or your children to picket a fast-food restaurant or write a protest letter to your local politician. We think your children should have a chance to learn about the environment rather than be mobilized into trendy campaigns. This book can help them.

## Notes

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- 21 Letter from Russell E. Train, Chairman of the Board, World Wildlife Fund & The Conservation Foundation, 1250 Twenty-fourth St. NW, Washington, DC 20037 (1991 or 1992).

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