



# Trash Talk

## WHAT WE THROW AWAY

By Amy Tilmont and Jeff Garside with Mark Stewart

### Series Objectives

The **SECOND NATURE** series equips students with the tools needed to understand the complex relationships between human activity and the natural world. Each book explores a big-picture topic by assembling smaller, more intimate snapshots—all taken through the “lens” of environmental science. The words and pictures in this book have been carefully crafted to engage young minds, and to serve as a launching pad for further learning.

### In This Book

*Trash Talk* evaluates what people “throw away” from every scientific angle. The goal is to promote integrated thinking on the part of students, and to underscore the idea that the waste they produce right now—and where it goes—is something they will be dealing with as adults. From a teaching perspective, *Trash Talk* offers an opportunity to initiate classroom discussion on the environmental impact of garbage. For most young people, this is the most personal connection they have to the natural world. It is an important first step in fostering a sense of environmental stewardship. **Ask your students** the right questions and the rest should take care of itself.

### Classroom Plan

#### Chapter One: *What’s the Problem?*

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Young people are aware that our planet has a pollution problem. Much of it, however, is remote, impersonal and, as such, easy to ignore. It is also easy for students to ignore the garbage they create on their own. Once it goes in a trash container or is dropped on the ground, it “disappears” for them. This chapter explores what happens to garbage after it leaves their hands and homes, and how it never really disappears. Trash may be out of sight, but it should never be out of mind.

**Ask your students** to estimate the amount of garbage they produce in a day. Start with a list of everything they throw away, and begin adding up the weight. Don’t forget to include food and food containers, packaging for new items they receive, and old items they throw away. The average person produces 4.4 pounds (1.99 kilograms) a day. Are your students above or below that average?

**Note:** Use the World View spread—and the side bar on page 7—to initiate a discussion about recycling. *Ask your students* what they think the best and worst aspects of recycling are. Kids are bombarded by information on this topic, but they don't always form a complete or accurate picture. Since recycling is the garbage "solution" in which they can most actively participate, the better their understanding, the more enthusiastic their participation is likely to be.

## Chapter Two: How We Got Here

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When historians and archaeologists study cultures from the past, they learn a tremendous amount from examining their garbage. What people throw away says a lot about who they were and how they lived. This chapter explores how humans applied science and technology to deal with their waste products as populations grew and the world became "dirtier." It also shows what happens when people don't deal effectively with their garbage.

*Ask your students* to imagine what their neighborhood would be like if everyone was responsible for dealing with their own trash. Would people make the extra effort to dispose of their waste responsibly? Or would they just toss it out in the street and allow it to pile up? This discussion should underscore the vital importance of an efficient sanitation department to public health and safety, not to mention the overall quality of life. An interesting question to pose is: Would you rather go a month without garbage removal or a month without a police department?

## Chapter Three: If We Do Nothing

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The aim of this chapter is to help students peer into a future where the world's garbage crisis remains unaddressed or unsolved. Young minds are not equipped to calculate the magnitude of most environmental issues. Adult minds aren't, either (which is a major reason why these problems exist). With garbage, kids at least have a sense of scale. They can comprehend what a ton of trash might look like (and smell like). The photos in this chapter should spur their imaginations.

*Ask your students* to sketch out the marine food chain from plankton to large predator species, and then "add" humans on both ends. On the front end, humans consume food in plastic containers, some of which find their way into the earth's oceans. On the other end, humans purchase fish, which end up on their dinner table. This will provide a vivid and personal example of how "what goes around, comes around."

## Chapter Four: *Bright Ideas*

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What will it take to lessen the impact of trash on the natural world? It turns out that harnessing nature may provide some great solutions. Better still, those solutions may also address our most urgent energy needs. Some of the world’s smartest people are working on ways to turn waste into fuel and energy. This chapter looks at advances in biomass and biofuel programs—and in general shows how science plus common sense can solve some of our biggest problems. Using the photo on page 31, **ask your students** about other ways to develop land that used to be a landfill.

**Ask your students** to collect and bring to class a bag of clean trash—non-perishable, non-paper items their families throw away during the course of a week. Or better yet, collect these items yourself.

To support the concept that trash can be used productively and creatively, create an art project where students use what has been collected to make a sculpture of a favorite pet or place, or maybe even a self-portrait.

## Chapter Five: *Trailblazers*

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This chapter offers short profiles on people who are making a difference in the world. They come from all walks of life, and have different types of expertise. Talk about Tom Szaky and **ask your students** to think of things in their kitchens and living rooms that could be made from hard-to-recycle items.

## Chapter Six: *Field tested*

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This chapter looks at the kinder, gentler side of landfills—a topic covered earlier in the book. The purpose of the story is to show how people concerned with the environment go out and get things done—often in the unlikeliest of places. **Ask your students** to think of something they throw away every day that might make a good animal habitat. If any of them own a pet, there is probably a store-bought item that they could replace with a discarded item.

## Chapter Seven: *Career Opportunities*

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This chapter looks at the many jobs connected to the world’s trash situation, and elevates these occupations above the catch-all “garbage man” label. There is a high likelihood that the new “heroes” in the 21<sup>st</sup> century will be people who choose careers related to this field. **Ask your students** how the jobs they envision themselves doing as adults might be involved with—or have an impact on—trash. As a teacher, you may have to play a little “six degrees of separation” to help kids make these connections. Have fun doing it!

## Chapter Eight: *Expert Opinions*

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Children don't often deal with standalone quotes in the books they read. Here they have some context—the words in this spread relate back to ideas covered earlier in the book. For you as an educator to understand what has made an impression, **ask your students** to find a fun or interesting quote that includes words like “garbage” or “trash” or “throw away”...and make up your own *Trash Talk* page.

## Chapter Nine: *What Can I Do?*

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This chapter offers ideas on how students can become personally involved in alleviating some of the immediate problems posed by the things we throw away. You can even build a class project around some of these ideas. For example, you might **ask your students** to find something in their homes that they feel has excessive packaging. This could be a retail item or something ordered through the mail. Teach them how to compose an email asking the manufacturer to rethink its packaging for the sake of the environment—using a fact or two they have found in this book.