

I Wonder Why

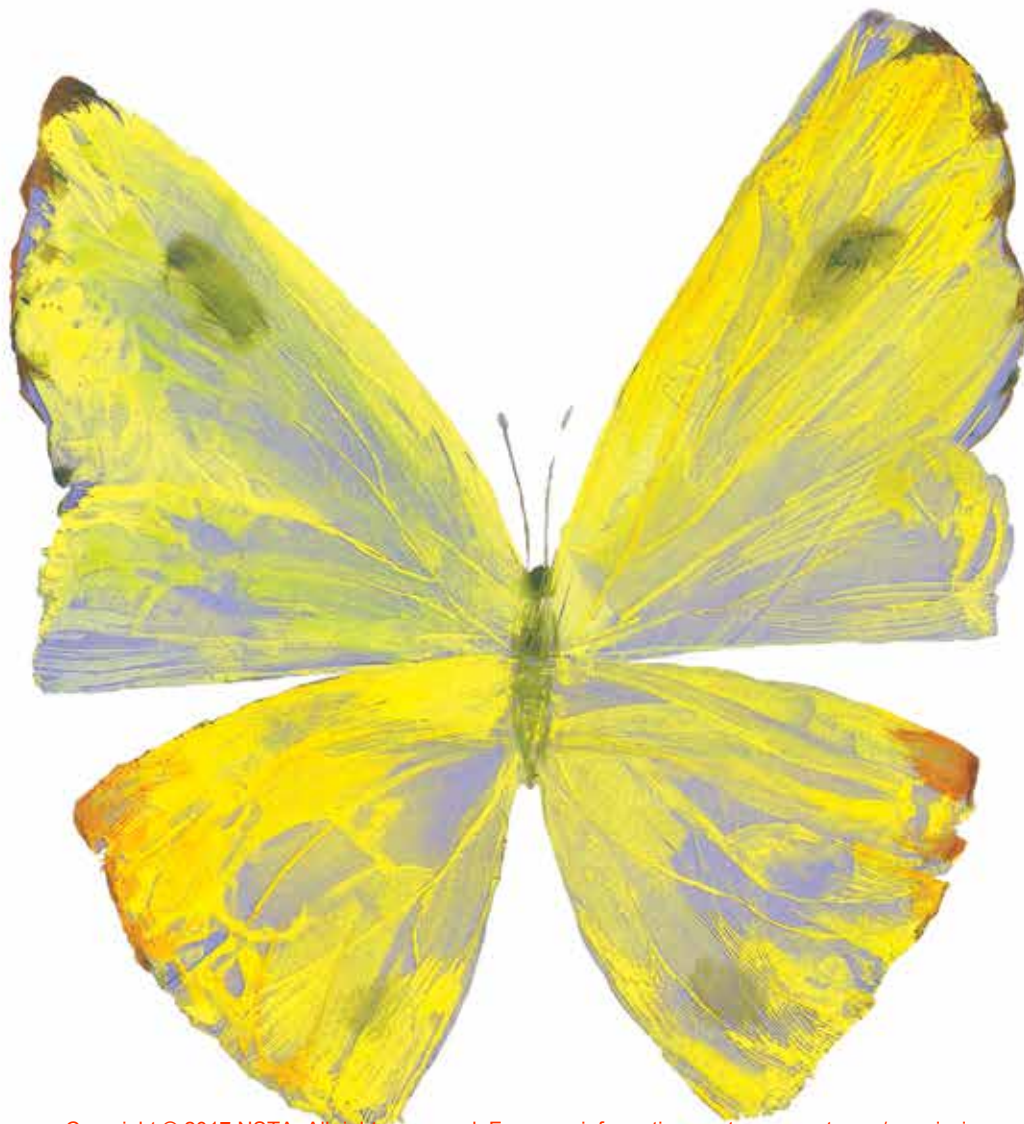
Quiet as a Butterfly

By **Lawrence F. Lowery**


NSTA Kids
National Science Teachers Association

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By Lawrence F. Lowery

Illustrated by Ati Forberg



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Introduction

The *I Wonder Why* series is a set of science books created specifically for young learners who are in their first years of school. The content for each book was chosen to be appropriate for youngsters who are beginning to construct knowledge of the world around them. These youngsters ask questions. They want to know about things. They are more curious than they will be when they are a decade older. Research shows that science is students' favorite subject when they enter school for the first time.

Science is both *what* we know and *how* we come to know it. What we know is the content knowledge that accumulates over time as scientists continue to explore the universe in which we live. How we come to know science is the set of thinking and reasoning processes we use to get answers to the questions and inquiries in which we are engaged.

Scientists learn by observing, comparing, and organizing the objects and ideas they are investigating. Children learn the same way. The thinking processes are among several inquiry behaviors that enable us to find out about our world and how it works. Our five senses—sight, hearing, touch, smell, and taste—provide our brains with information about our world. The senses enable us to distinguish one object or event from another. They help us successfully navigate our world, interpret our environment, and understand what's happening around us. They warn us of dangers and provide us with pleasant memories.

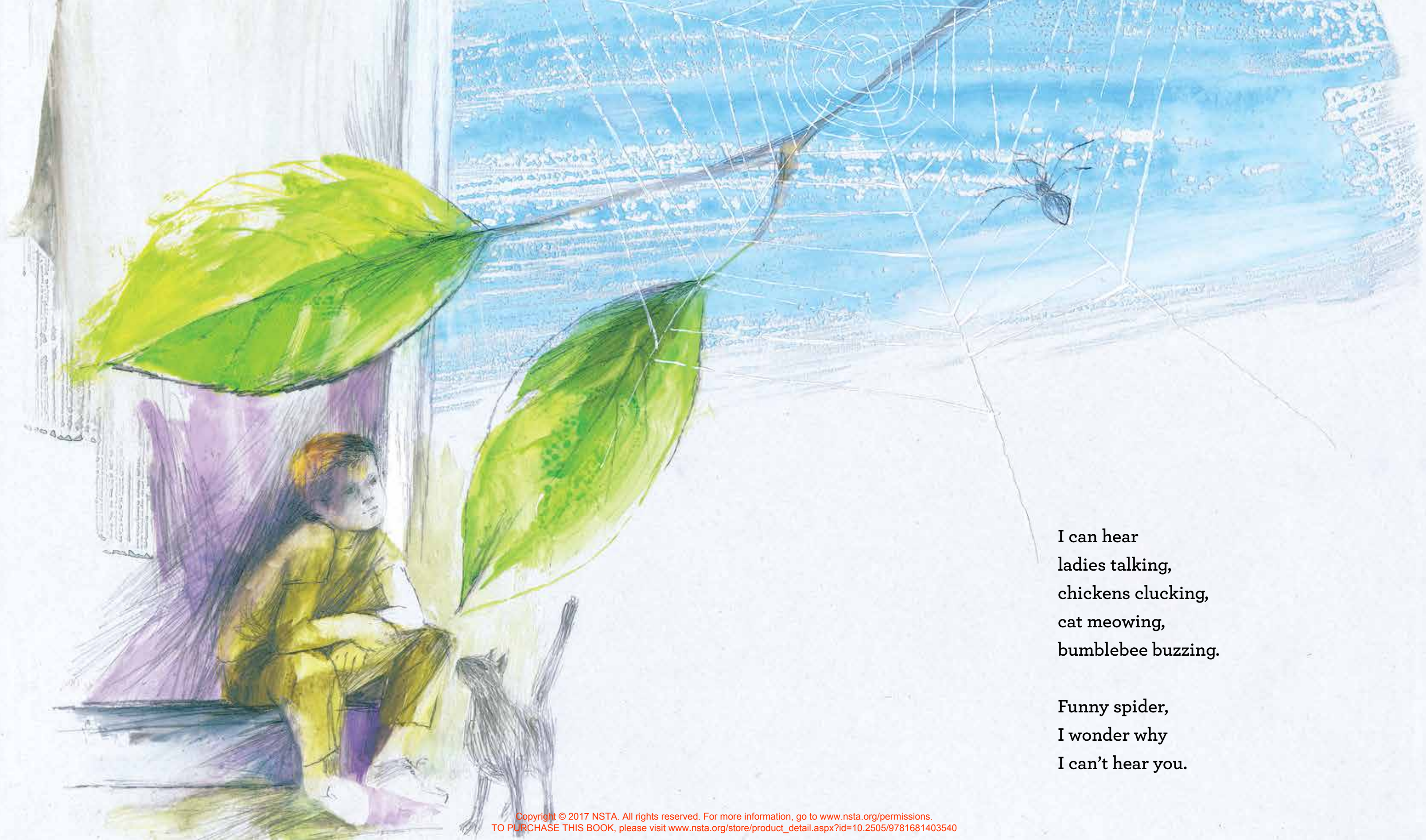
Each of our senses has its own neural operating system. Each sense organ—the eye, the ear, the skin, the nose, and the tongue—takes in environmental information through specialized cells with sensory receptors. That information is transformed into electrical signals that can be read by the brain. These signals are processed in their own respective areas of the brain, which then integrates this sensory information and

puts the pieces together. The brain uses the information your senses provide to form useful representations that tell you how to best interact with your environment.

These books about our senses do not try to explain how senses work, but rather present information to sharpen the reader's awareness of his or her senses and help develop the skills that aid in gathering information and extending perceptions. *Quiet as a Butterfly* emphasizes that we hear and learn with our ears. *Fragrant as a Flower* explores smells. We smell with our noses, and smells can conjure memories of events and often involve emotions. *Look and See* introduces the richness of sight. Seeing with our eyes is a powerful sense for learning about the world around us. How and how well we know about something depend on the skill and thoroughness with which we use our senses.

Books in this series use different approaches to take the reader through simple, real-world information. One book is expository, providing factual information. A couple are narratives that take the reader on journeys of the senses. Different literary ways of presenting information bring the content to the reader through a variety of instructional avenues. The illustrations add detail and sometimes humor.

Unlike didactic presentations of knowledge, the content is woven into each book through the reader's point of view. The content is subtle but powerful and memorable, not memorizable. The science activities in the Parent/Teacher Handbook at the back of each book enable learners to conduct their own investigations related to the content. The materials needed for these activities are easily obtained, and the activities have been tested with youngsters to be sure they are age appropriate. After the reader completes a science activity, rereading or referring to the book and talking about connections with the activity can be a deepening experience that stabilizes the learning as a long-term memory.



I can hear
ladies talking,
chickens clucking,
cat meowing,
bumblebee buzzing.

Funny spider,
I wonder why
I can't hear you.



I can hear horns beeping,
whistles blowing,
sirens screaming,
engines roaring.

Puffy cloud,
I wonder why
I can't hear you.



Quiet as a Butterfly

“One day I listened. I listened to all the sounds I heard. I listened and I wondered.”

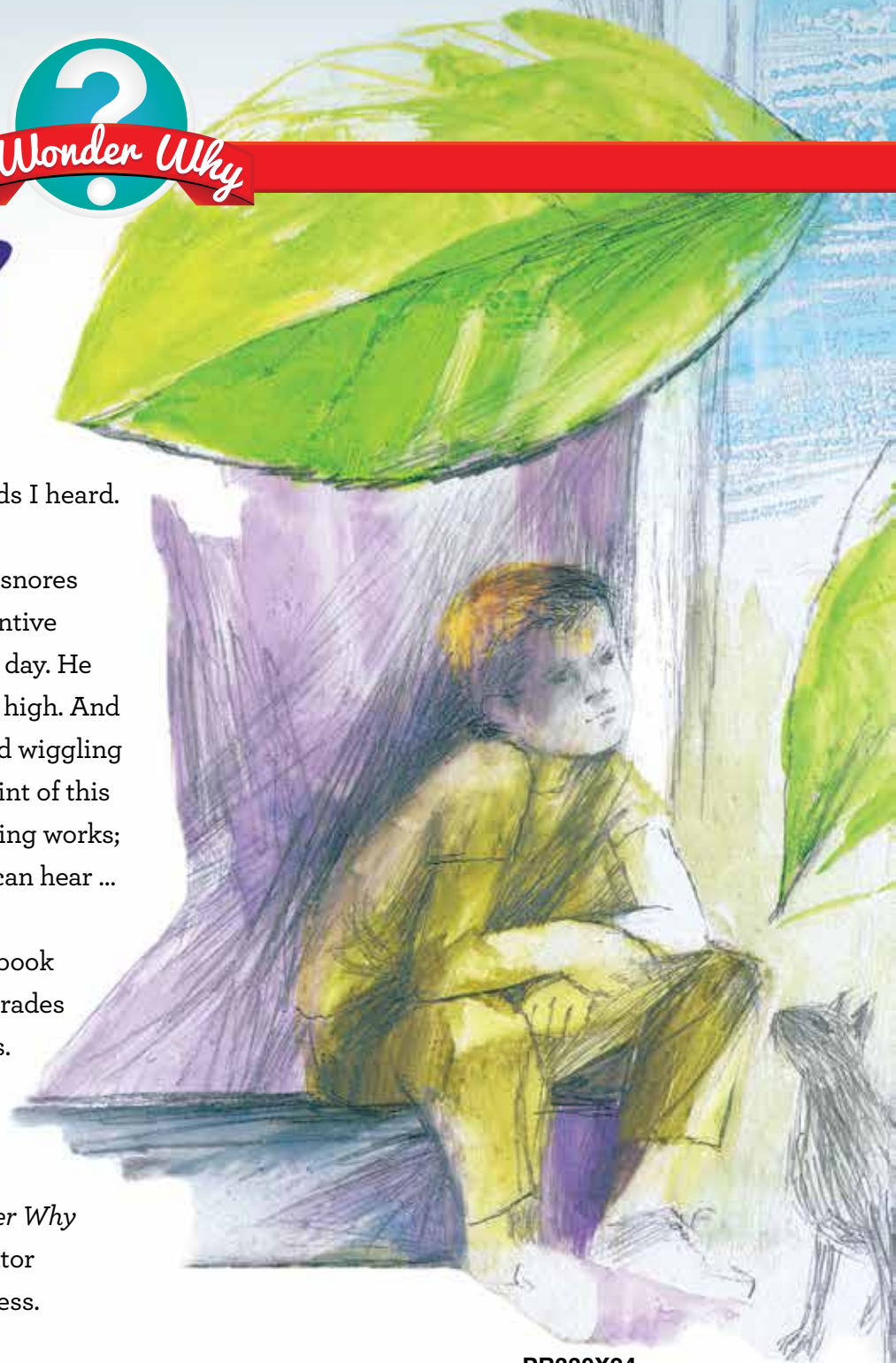
From a clock's ticks in the morning to a father's snores at night, sounds are everywhere. That's what an attentive boy discovers as he listens his way through a school day. He perceives that sounds can be loud or soft and low or high. And sometimes, he notices that things like butterflies and wiggling worms are so quiet, he can't hear them at all. The point of this gentle book is not to explain how your sense of hearing works; rather, it aims to sharpen your awareness of all you can hear ... and all you can learn when you listen.

Quiet as a Butterfly is part of the *I Wonder Why* book series, written to ignite the curiosity of children in grades K-3 while encouraging them to become avid readers. These books explore the marvels of the senses of hearing, sight, smell and related phenomena. Included in each volume is a Parent/Teacher Handbook with coordinating activities. The *I Wonder Why* series is written by an award-winning science educator and published by NSTA Kids, a division of NSTA Press.

Grades K-3

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