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. Observing, comparing, and organizing are fundamental to the more advanced thinking processes of relating, experimenting, and inferring.

The five books in this set of the I Wonder Why series focus on the biological sciences. Biology is the study of living things. It is such a large field of study that scientists have divided it into two parts: botany (the study of plants) and zoology (the study of animals). Each of those parts is divided into several subfields: plant systems, the properties of living organisms; another book uses cumulative properties that involve the reader in the discovery of the properties of living organisms. Another book uses cumulative rhythmic sentences to engage the reader in a form of literary growth that corresponds with the biological growth in the story. The combination of different literary ways to present information brings the content to the reader through several instructional avenues.

In addition, the content in these books supports the criteria set forth by the Common Core State Standards. Unlike didactic presentations of knowledge, the content is woven into each book so that its presence is subtle but powerful.

The science activities in the Parent/Teacher Handbook in each book enable learners to carry out 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 rereading of the book and talking about connections with the activity can be a deepening experience that stabilizes the learning as a long-term memory.

The concepts of growth, life cycles, and food chains (The Tree by Diane’s House); inferences derived by observing patterns in plant structures (Our Very Own Tree); factors needed for a healthy living environment (Tommy’s Turtle); protective coloration and camouflage characteristics of animals (Look- ing for Animals); and comparisons of observable similarities and differences among animals (Animals Two by Two).

Each book uses a different approach to take the reader through simple scientific information. A couple of books are expository, providing factual information. A few are narratives that involve the reader in the discovery of the properties of living organisms. Another book uses cumulative rhythmic sentences to engage the reader in a form of literary growth that corresponds with the biological growth in the story. The combination of different literary ways to present information brings the content to the reader through several instructional avenues.

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This is the tree, straight and strong,
that grew from the sapling, tall and thin,
that rose from the seedling, supple and slim,
that sprouted from a seed
that fell to the ground
and grew in the soil
near Diane’s house.
These are the leaves, jagged and green,
that covered the tree, straight and strong,
that grew from the sapling, tall and thin,
that rose from the seedling, supple and slim,
that sprouted from a seed
that fell to the ground
and grew in the soil
near Diane’s house.
This book about life cycles and the food chain begs to be read out loud. Written in the rhythm of “The House That Jack Built,” *The Tree by Diane’s House* tells the story of a budding tree and a growing girl. As the tree grows from seed to sycamore, its leaves become meals for caterpillars, which become food for birds. Diane witnesses what happens when living things depend on one another—until they can’t do so anymore. This bittersweet tale provides a thought-provoking ending for young readers about the circle of life in the natural world.

*The Tree by Diane’s House* 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 animals, plants, and other phenomena related to biology. 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.