



Tremendous Science! E-Unit Grades K-2

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Introduction: Whether you regularly use the outdoors as a classroom or tend to hesitate to take your class outside, this unit is an invitation: an invitation to increase the quantity and quality of your K–2 learners’ contact with nature and trees. *Tremendous Science!* students will experience, observe, explore, and collect tree data to develop understandings about how trees grow, the roles trees play in ecosystems, and the ways in which trees and humans interact. The introduction section was created to help teachers integrate this unit into their existing curricula. It contains the following chapter heads:

- Unit Approach
- Academic Rigor
- Flexible Teaching Levels
- Instructional Models
- Learning Progressions
- Lesson Planning Timeline and Tips
- Organization & Navigation
- Collaborative Discussion Strategies

Teacher Background: Adult background information will help teachers prepare and present the unit activities to young learners. It begins with dispelling a handful of common misconceptions often upheld by K-2 learners, and it is organized around 15 Frequently Asked Questions.

Teaching Levels: This unit is designed to be flexible and to scaffold learning across K–2 grade levels and student competencies. For this reason, it is organized around three levels, which approximately correspond to kindergarten (Level A), first grade (Level B), and second grade (Level C). The Team Teaching Progressions section provides three options for cross-collaboration in academic planning among K–2 teachers using this unit.

Level A (Kindergarten)

- Overview & Engage Activity: Picture a Tree
- Explore, Explain, Elaborate:
 1. The Closer You Look,
 2. To Be a Tree, and
 3. Adopt a Tree

Level B (Grade 1)

- Overview & Engage Activity: Growing Up Green
- Explore, Explain, Elaborate:
 1. Adopt a Tree,
 2. Signs of Fall,
 3. Every Tree for Itself, and
 4. Bursting Buds

Level C (Grade 2)

- Overview & Engage Activity: Tree Sort
- Explore, Explain, Elaborate:
 1. Adopt a Tree,
 2. Get in Touch with Trees,
 3. Trees as Habitats,
 4. School Yard Safari, and
 5. Habitat Pen Pals

In addition to the above ability-appropriate lessons, this unit also provides level-specific evaluation opportunities, enrichment ideas, and printable tools. Evaluation opportunities includes both formative and summative assessments, enrichment includes extending student learning to literature and home connections, and the tools section includes printable and downloadable handouts for both teachers and students.

Appendix – The following appendices are included as a part of this e-unit.

- Standards Connections
- Learning Centers
- GreenSchools
- Materials
- PLT Conceptual Framework
- Acknowledgements
- Technical Support