



Seeing the Science in Children's Thinking: Case Studies of Student Inquiry in Physical Science

By David Hammer, Emily van Zee

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Observing and listening to children while they inquire into the physical sciences is difficult. There's lots to see and hear, but unless you know what to look and listen for, you might only see a noisy blur of activity. *Seeing the Science in Children's Thinking* is a field guide to the science classroom with authentic examples presented in written and video form. It's a great way for staff developers to train teachers' eyes and ears to pick up the analysis and ideas of students as they occur in the wild of classroom conversations.

David Hammer and Emily Van Zee explain the scientific process, describe how research suggests students conceptualize inquiry, and offer ways to encourage scientific investigation in the elementary and middle grades. Then they offer six in-depth case studies of class discussion from grades 1 through 8, each keyed to clips of minimally edited in-the-classroom footage on the companion DVD-ROM. The case studies include not only a thorough description by each teacher, but also detailed facilitator's notes for running effective staff-development workshops using the footage. The clips present up to thirty minutes of authentic, uninterrupted class discussions with optional subtitles. Additionally, full transcripts of the video clips are available as printable files on the DVD-ROM.

Evidence of children's scientific thinking is all around the classroom, but it takes a skilled teacher to locate it. With *Seeing the Science in Children's Thinking* your teachers can sharpen their senses, discover a wealth of information about how their students approach science, and create instruction that's individualized and responsive.

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Editorial Review

About the Author

David Hammer is Professor of Physics and Curriculum & Instruction at the University of Maryland at College Park. He conducts research on physics learning and teaching from elementary school through college.

Emily Van Zee is Associate Professor of Science Education at Oregon State University. She collaborates with teachers in developing case studies of science learning in progress.

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