# I DO, AND I UNDERSTAND Helping Young Children Discover Science and Mathematics



## **Robert Louisell**

with special guest chapters by Stephen Hornstein and Peter Frost

I hear, and I forget. I see, and I remember. I do, and I understand.

\*Ancient Asian Proverb.

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#### Stephen Hornstein

St. Cloud State University

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## I DO, AND I UNDERSTAND

### Helping Young Children Discover Science and Mathematics

"A merit of his liberalized Piagetian approach is to help educators to take a subject's perspective about children as learners. These analyses of Dr. Louisell's yield wise advice on educational strategies, which might help to refine interventions in elementary science education." — Juan Pascual-Leone

#### (About science activities)

"If we provide hands-on situations for children—for example, exploring density by testing out which objects sink and float or learning about electricity by experimenting with batteries, bulbs, and wires—they will reflect on the science phenomena that they observe and develop their own ideas about them."



Facsimile of a Police Car Built By Children



Paintings by 1st Grade Children After Trip to Zoo

#### (About constructivism)

"When we help children to develop their *own* ideas about the world around them... we are helping them develop *their* knowledge of the world. This is far more important than trying to pass on our own knowledge a knowledge most young children will be unable to understand at this stage."

"Previous texts on the subject ... neglected ... grade levels one through three. This book ... comprehensively deals with preschool/kindergarten *and* grades 1–3 and it contains over a hundred tested early childhood activities for mathematics and science."

Robert Louisell holds a doctorate in elementary and early childhood education from University of Illinois and is Professor Emeritus at St. Cloud State University. He has seven years of teaching experience in public schools at the early childhood level. He has taught in early childhood education programs at St. Ambrose University and University of Texas, El Paso, and in the elementary education program at St. Cloud State University. He is also the co-author of *Developing a Teaching Style* (Harper-Collins, 1992, Waveland Press, 2001).





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