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Nota di contenuto	Treating professional development programs as a science / Robert E. Yager -- Introduction / Brenda S. Wojnowski and Susan B. Koba -- chapter 1. Less and more emphases and supporting research for professional development / Susan B. Koba and Brenda S. Wojnowski -- chapter 2. Environmental economics program / Matthew A. Johnson and Charles G. Tansey -- chapter 3. Professional development and authentic science education : monitoring local populations of reptiles and amphibians / Catherine E. Matthews and Terry M. Tomasek -- chapter 4. MyOnlineFair : STEM 21st-century educational transformation / Carmela R. Minaya and Nathan D. Robinson -- chapter 5. "Doing science" in middle grades : instructional coaching and modeling of a learning cycle approach to promote scientific practices / Pradeep M. Dass, Lori Wilbanks, John Goforth, Luanne Graham and Jill Francis -- chapter 6. A professional development model for high school science teachers focusing on guided inquiry labs / Anil C. Banerjee -- chapter 7. Reorienting professional development for improving inquiry-based science teaching in elementary classrooms / Rose M. Pringle, Michelle L. Klosterman, and Lynda Fender Hayes -- chapter 8. The road to scientific literacy : how target inquiry is

improving instruction and student achievement in high school chemistry / Ellen J. Yeziarski and Deborah G. Herrington -- chapter 9. Rethinking the continuing education of science teachers: an example of transformative, curriculum-based professional development / Joseph A. Taylor, Janet Carlson, and Kim Bess -- chapter 10. Ramps and pathways early physical science program : preparing educators as science mentors / Shelly Counsell, Jill Uhlenberg, and Betty Zan -- chapter 11. Michigan teacher excellence program (MiTEP) : using lesson study for professional development / Carol A. Engelmann, Kdmon Hungwe, and Mark F. Klawiter -- chapter 12. Building professional learning communities / Brenda G. Weiser -- chapter 13. Quality elementary science teaching : a professional development QUEST / Deborah Hanuscin, Delinda van Garderen, Deepika Menon, Jeni Davis, Eun Lee, and S. Rena Smith -- chapter 14. Professional development based on conceptual change : the Wyoming TRIAD process / Joseph I. Stepan, Barbara Woodworth Saigo, and Joan Gaston -- chapter 15. Community of excellence in mathematics and science : the school as the locus of change to impact teaching and learning / Susan B. Koba and Carol Taylor Mitchell -- chapter 16. Reader's guide : suggestions for use of this book in professional learning communities and other collaborative settings / Brenda S. Wojnowski and Susan B. Koba -- Endword / Robert E. Yager.

Sommario/riassunto

This book provides an overview of current research on quality professional development and how it aligns with the National Science Education Standards. It includes fourteen professional development programs that provide real-life models of how to train current or future teachers to carry out the constructivist, inquiry-based approach recommended by the Standards.
