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Titolo	Modelling Learners and Learning in Science Education : Developing Representations of Concepts, Conceptual Structure and Conceptual Change to Inform Teaching and Research // by Keith S. Taber
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Modelling learners and learning in science education -- Modelling mental processes in the science learner -- Modelling the science learner's knowledge -- Development and learning -- Conclusion.
Sommario/riassunto	This book sets out the necessary processes and challenges involved in modelling student thinking, understanding and learning. The chapters look at the centrality of models for knowledge claims in science education and explore the modelling of mental processes, knowledge, cognitive development and conceptual learning. The conclusion outlines significant implications for science teachers and those researching in this field. This highly useful work provides models of aspects of scientific thinking and learning, drawing upon different fields and analyses the processes by which we can arrive at claims about the minds of others. In everyday life we commonly take it for granted that finding out what another knows or thinks is a relatively trivial or straightforward process. We come to take the 'mental register' (the way we talk and think about the 'contents' of minds) for granted

and so teachers and researchers may readily underestimate the challenges involved in their work. The author highlights the logical impossibility of ever knowing for sure what someone else knows, understands or thinks, and makes the case that researchers in science education need to be much more explicit about the extent to which research into learners' ideas in science is necessarily a process of developing models. Through this book we learn that research reports should acknowledge the role of modelling and avoid making claims that are much less tentative than is justified as this can lead to misleading and sometimes contrary findings in the literature.
