

# Discussions in Science

## Promoting conceptual understanding in the middle school years

Tim Sprod

*"... this book offers an opportunity for class dialogue that will expand students' minds, make them think more deeply about the nature of science and develop their ability to engage in debate about the applications of science in everyday life."*

From the Foreword by Philip Adey, Emeritus Professor of Cognition, Science and Education, King's College London.



Encourage your students to go beyond learning scientific facts and skills, to an in-depth collaborative inquiry into scientific concepts, the nature of science, the ethical implications of science and the links between science and their everyday lives. The first section of Discussions in Science explains the theoretical basis for the approach used, citing research into teaching for understanding, cognitive acceleration in science education, constructivist pedagogies and the power of classroom discussion.

The second section presents a wide range of purpose written stories to read with your class and discuss. In each story, the young protagonists discuss their experiences in science, trying to make sense of their world. They raise scientific conceptual puzzles, methodological concerns and issues relating science beyond the classroom. Notes, exercises, discussion guides and suggestions for

follow-up activities show you how to deepen your teaching of science, and to lead students into a more thorough exploration of scientific concepts, methods and implications.

A separate website <http://www.acer.edu.au/discussions-in-science> contains each of the 18 stories in the book, for printing out or viewing online, to facilitate classroom discussion.

**Dr Tim Sprod** has taught science and philosophy in secondary schools in Australia, Papua New Guinea, the Bahamas and the United Kingdom. He is Chair of the Association for Philosophy in Tasmanian Schools, past Chair of the Federation of Australasian Philosophy in Schools Associations, and past Secretary of the International Council of Philosophical Inquiry with Children.



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