



Arguing From Evidence in Middle School Science: 24 Activities for Productive Talk and Deeper Learning

*Jonathan F. (Francis) Osborne, Brian M. Donovan, J. (Joseph) Bryan Henderson, Anna C. MacPherson,
Andrew Wild*

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Teaching your students to think like scientists starts here!

Use this straightforward, easy-to-follow guide to give your students the scientific practice of critical thinking today's science standards require. Ready-to-implement strategies and activities help you effortlessly engage students in arguments about competing data sets, opposing scientific ideas, applying evidence to support specific claims, and more. Use these 24 activities drawn from the physical sciences, life sciences, and earth and space sciences to:

- Engage students in 8 NGSS science and engineering practices
- Establish rich, productive classroom discourse
- Extend and employ argumentation and modeling strategies
- Clarify the difference between argumentation and explanation

Stanford University professor, Jonathan Osborne, co-author of The National Resource Council's A Framework for K-12 Science Education—the basis for the Next Generation Science Standards—brings together a prominent author team that includes Brian M. Donovan (Biological Sciences Curriculum Study), J. Bryan Henderson (Arizona State University, Tempe), Anna C. MacPherson (American Museum of Natural History) and Andrew Wild (Stanford University Student) in this new, accessible book to help you teach your middle school students to think and argue like scientists!

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