Record Nr. UNINA9910919823303321 Autore Franco-Mariscal Antonio Joaquín Titolo Critical Thinking in Science Education and Teacher Training / / edited by Antonio Joaquín Franco-Mariscal Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 9783031785788 3031785789 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (323 pages) Collana Contemporary Trends and Issues in Science Education, , 1878-0784;; 64 507.1 Disciplina Science - Study and teaching Soggetti Teachers - Training of Study skills Science Education Teaching and Teacher Education Study and Learning Skills Ensenyament científic Formació del professorat Mètodes d'estudi Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1. Theoretical perspectives and approaches for the development of critical thinking -- Chapter 2. Fostering critical thinking in a socio-scientific issue on energy use -- Chapter 3. Development of Critical Thinking in a Historical Context: The Theory of Spontaneous Generation. Ana María Abril-Gallego, Marta Romero-

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School Students' Argumentation on Energy Production and Consumption -- Chapter 8. Argumentation by secondary school students in an inquiry about yogurt consumption -- Chapter 9. Enhancing Argumentation in Teacher Training through Debates within the Context of Formative Research in Uruguay.

This edited volume explores the challenge of fostering critical thinking (CT) skills in science education, presenting the ENCIC-CT model as a framework for development. Named after the Science Education and Competences (Enseñanza de las Ciencias y Competencias, ENCIC) research group at the University of Malaga, Spain, this model emphasizes cultivating CT through socio-scientific issues and daily-life problems. It includes three key domains: knowledge, skills, and dispositions, each encompassing various dimensions addressed through scientific practices like argumentation, inquiry, and modeling. Teaching strategies such as gamification, role-playing, micro-debates, augmented reality, controversy mapping, and digital storytelling are highlighted. Spanning theoretical perspectives and practical experiences from early childhood to higher education, this book consolidates findings from the Spanish R&D project, "Citizens with Critical Thinking: A Challenge for Teachers in Science Education." It is an essential resource for educators, researchers, and practitioners. offering valuable insights and practical applications for all educational levels. .