1. Record Nr. UNINA9910674351503321

Titolo	Contemporary issues in science and technology education / / edited by Ben Akpan, Bulent Cavas, and Teresa Kennedy
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2023] ©2023
ISBN	3-031-24259-9
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (307 pages)
Collana	Contemporary Trends and Issues in Science Education, , 1878-0784 ; ; 56
Disciplina	507.1
Soggetti	Technical education Science - Study and teaching Ensenyament científic Ensenyament tècnic Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction – a reflection on contemporary issues in science and technology Education; Ben Akpan -- Section I, Philosophical foundations and curriculum development -- Nature of science and nature of technology; Steven S. Sexton -- Theory of evolution; Ben Akpan -- STEM education as a meta-discipline; Teresa Kennedy -- Curriculum development in science and technology education at international level; Declan Kennedy -- Assessment and evaluation in science and technology education; Bulent Çava, Pina Çava and Sengul Anagun -- Mathematics in the service of science and technology education; Ajeevsing Bholoa & Ajay Ramful -- Language in science and technology education; Metin Sardaq, Gokhan Kaya & Gultekin Cakmakci -- The real and virtual science laboratories; Shakeel Atchia & Anwar Rumjaun -- Section II, Sustainable development, technology and society -- Sustainable development goals and science and technology education; Teresa Kennedy -- In the beginning: Interpreting everyday science; Sue Dale Tunnicliffe -- Indigenous knowledge and science and technology education; Robby Zidny, Jesper Sjostrom and Ingo Eilks --

Public understanding of science and technology; Janchai Yingprayoon -- Section III, The learning sciences and 21st century skills -- Educational psychology; Keith Taber -- Science and technology teaching strategies; Cesar Mora -- Pedagogical content knowledge in science and technology education; Louise Lehane -- Stimulating students' mechanistic reasoning in science and technology education through emerging technologies; Vickren Narrainsawmy and Fawzia Bibi Nerod -- Problem-solving in science and technology education; Bulent Çava -- Creativity and innovation in science and technology education; Mehmet Aydeniz -- Collaboration and communication in science and technology education; Michael Odell.

Sommario/riassunto

This edited volume discusses major issues in present-day science and technology education (STE). It is divided into three thematic sections: philosophical foundations and curriculum development; sustainable development, technology and society; and the learning sciences and 21st century skills. Section I examines the history and future of STE curriculum development, along with specific issues within this dynamic area. Section II explores sustainable development in three important aspects: economic development, social development, and environmental protection. Section III covers the 21st century skills that are of overarching importance to the success of learners in school and the world of work. Anchoring each chapter is an assemblage of veteran science and technology education specialists selected from across the world. The book's target is a worldwide audience of undergraduate / post-graduate students and their teachers, as well as researchers. This book's exploration of the ever-increasing advances in STE and its narrative writing style will be of interest to a broad range of readers.