1. Record Nr. UNINA9910760295603321 Autore Bartholomew Scott R Titolo Standards-Based Technology and Engineering Education: 63rd Yearbook of the Council on Technology and Engineering Teacher Education / / edited by Scott R. Bartholomew, Marie Hoepfl, P. John Williams Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 9789819957040 9819957044 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (319 pages) Contemporary Issues in Technology Education, , 2510-0335 Collana Altri autori (Persone) HoepflMarie WilliamsP. John 620.0071 Disciplina Soggetti Technical education Science - Study and teaching Teachers - Training of Education Children **Engineering and Technology Education** Science Education Teaching and Teacher Education Childhood Education Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Introduction -- 2. Lessons learned from implementation of standards in other content areas -- 3. PreK Engineering Education: What is core for standards-based planning and teaching at the beginning of the STEM pipeline? -- 4. The Development and Implementation of Standards-Based Technology and Engineering Curricula in Secondary Education -- 5. A Case Study of Excellence in Pre-Service Technology and Engineering Education Teacher Preparation -- 6. Professional development for in-service teachers: What does it

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8. Assessment of standards-based curricula and programs -- 9. Communicating about STEL to external audiences -- 10. Areas of research for STEL practitioners.

This book brings together authors from around the world to discuss the Standards for Technological and Engineering Literacy: The Role of Technology and Engineering in STEM Education (STEL) released in July 2020 by the International Technology and Engineering Educators Association (ITEEA). The various chapters examine and elaborate on how educators must understand the structure of the standards used and their alignment with educational programs at specific levels and contexts, both in the context of the USA, and internationally. It also showcases case studies analyzing the use of standards in their various contexts from a number of countries which have either adapted STEL, or which have national Standards in Technology Education. The STEL represents a major update to the content standards that has guided the field of technology education (and, later, technology and engineering education) in the USA since 2000. In contrast to previous standards, STEL presents a substantial reduction in the number of standards and associated benchmarks, and the benchmarks have been operationalized to identify the key knowledge, skills, and dispositions associated with each standard. It also emphasizes a focus on core standards that should allow for deeper levels of understanding and engagement on the part of students, who in comprehensive educational programs will continue to revisit these core standards in increasingly sophisticated ways as they progress from Pre-K through Grade 12.