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Nota di contenuto	Introduction: A Futures Approach to Science Education: Centering Justice in Anchoring Phenomena -- Part I:Pollution and Health Disparities -- Unhealthy Harvest: How Polluted Fish Undermine Indigenous Health and Food Security -- Pellagra: The Epidemic That Did Not Have to Happen -- Airborne Inequity: Hurricane’s Transportation of Pollutants in Cancer Alley -- Low Country Chemical Spills: A Medical, Environmental, and Ethical Examination -- How and Why Big Tobacco Targets Vulnerable Communities -- Health Equity in a Microscopic World: Infectious Diseases and Access to Healthcare -- Part II: Climate Change and Natural Disasters -- Can Wildfires be Fought with AI Tools?: Anchoring Phenomenon for Justice Oriented Earth Science Teaching -- Why Is It So Hot Here?: Using Community Science

Data Talks to Launch Learning About the Urban Heat Island Effect -- Learning from Climate Crises: How Monsoon Disasters in North India Turns Local Ecosystems into Classrooms of Justice -- How the Eruption of Mt. Tambora Shaped Present-day Missouri: The Impact of Climate Events on Human Migration -- Navigating Sea-Level Rise: Assessing the Impact on Norfolk Virginia and Crafting Equitable Solutions for Vulnerable Communities.-The Science of Sinkholes: Uncovering Connections Between Chemistry Earth Science Human Activity and Social Justice -- Climate Justice in the Concrete Jungle: Exploring Urban Heat Islands and Equity -- Part III:Resource Management and Environmental Impact -- Why the Great Salt Lake is Becoming the Not-So Great Salt Lake: Drying Up and Causing Harm -- Who Gets to Swim in the Hudson?: Exploring Human Impact on the Hudson River Over Time and Space -- Is Access to Clean Reliable Water a Guarantee?: How Climate Change Affects Water Accessibility in Local Contexts -- Plastic Pollution: What Happens to the Plastics We Use Every Day? -- The World Needs Phosphates but Who is Going to Pay the Price? -- Part IV:Social Equity and Technology in Science -- Beyond the Binary: Sex Verification Testing of Athletes.-Why Did the Fukushima Nuclear Accident Happen and How Did it Affect People? -- Future of Food: Cultured Meat for Environmental and Social Justice -- The Dangerous Use of X-ray Fluoroscopy on African Mine Workers -- Meeting Energy Needs.

Sommario/riassunto

This textbook provides K-12 science teachers and educators innovative uses of anchoring phenomenon-based teaching approaches from a justice-oriented lens (Morales-Doyle, 2017). It discusses topics such as the use of anchoring phenomenon-based pedagogies, qualities of productive anchoring phenomena and includes examples of unit plans that use anchoring phenomena and social justice science issues to create storylines to foster students' multiple pathways to knowing and learning in the science classrooms. The book is beneficial to K-12 science teachers and science educators who are interested in facilitating students' sense-making of a real-world phenomenon and engaging in three-dimensional science instruction (NGSS Lead States, 2013). By providing examples of unit plans based on theoretical groundings of anchoring phenomenon-based instruction and justice-oriented science teaching, this book provides a great resource to students, professionals, teachers, and academics in science education. .