DESCRIPTION

This book introduces climate change fundamentals and essential concepts that reveal the extent of the damage, the impacts felt around the globe, and the innovation and leadership it will take to bring an end to the status quo. Emphasizing peer-reviewed literature, this text details the impact of climate change on land and sea, the water cycle, human communities, the weather, and humanity's collective future. Coverage of greenhouse gases, oceanic and atmospheric processes, Pleistocene and Holocene paleoclimate, sea levels, and other fundamental topics provide a deep understanding of key mechanisms, while discussion of extreme weather, economic impacts, and resource scarcity reveals how climate change is already impacting people's lives—and will continue to do so at an increasing rate for the foreseeable future.

RELATED RESOURCES

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NEW TO EDITION

• Exploration of Earth’s climate system fundamentals and the latest impact data

• Abundant footnoted reference to peer-reviewed research, reports, and other authoritative sources

• Coverage of climate change denialism and a dissection of the most common arguments

• Examination of climate modeling, the CMIP project, IPCC-AR5 projections and findings, and other phenomena that introduce spatial and temporal variability

• Discussion on economic and social impacts, with new findings from IPCC-AR5 and the Fourth National Climate Assessment

FEATURES

• Features the most up-to-date data surrounding the current and future effects of climate change

• Explores the newest technology for climate modeling, impact mitigation, resource conservation, and more

• Includes chapter exercises, learning objectives, videos, and cited references to enhance learning

• Creative thinking problems facilitate insightful class discussion

• “Spotlight on Climate Change” feature highlights special topics including the 2015 Paris Agreement, community resilience, cutting-edge research groups, and more

• Easy-to-read, jargon-free language puts the focus on the content, not the writing

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