

REPORTS.NCSE.COM ISSN 2159-9270

REVIEW

The Cartoon Introduction to Climate Change

by Yoram Bauman and Grady Klein Washington DC: Island Press, 2014. 216 pages

reviewed by Tegan Morton

The Cartoon Introduction to Climate Change is an introductory text, which combines concise but accurate writing with clever cartoon illustrations. The text is based on the most recent Intergovernmental Panel on Climate Change report, and thus reflects our current scientific understanding. The book presents the most well-substantiated and foundational findings regarding climate change, including its causes and evidence, as well as relevant scientific concepts that enrich the main ideas, such as the concept of feedback cycles. The aim of the book is clearly to provide the theoretical minimum for understanding the climate system, long-term and recent changes to the climate system, and human activities and impacts. The text integrates the scientific concepts required for understanding the climate system side-by-side with information about the effects of human activities on this climate system and vice versa, the effects of climate change on humans as well as natural systems. The basic scientific concepts are not presented all at once but rather integrated as needed to tell the story of how we came to understand the climate system.

In three clearly defined sections, the authors provide a contextual perspective for understanding why climate change is happening, how it is different from previous climate change events, and the tensions it creates for our economic and cultural interests. The first section is "Observations," which includes information on the basics of the climate system and the scientific understanding of the drivers of change in climate. "Predictions," the second section, outlines the effects of climate change and provides an understanding of the uncertain nature of predictions as well as the utility of models. The final section, "Actions," considers several areas of development for adaptation and mitigation of climate change. It is in this third section that the text fully integrates the science with the economics. For educators, this section is rich in subjects to pique students' interest for further investigation, such as carbon taxes, "techno-fixes," and alternative energy sources.

As required for a text so concise, the authors provide a critical explanation of the nature of science with specific reference to the accumulation of scientific evidence to build a consensus, which is at the core of achieving greater climate science acceptance. However, Yoram Bauman's expertise as an economist provides important context for how humanity's "business as usual" approach, as well as the "Tragedy of the Commons" parable, creates unique problems for and challenges to effective climate change action. The text further uses this perspective to outline the current predicted trends of population size and economic development, with and without considerations of climate change, to effectively contrast the two possible futures based on current conditions.

RNCSE 35.4, 9.1 July-August 2015

Morton review of Bauman and Klein

Written by the world's only "stand-up economist," the text brings levity to the material with puns and other jokes, and does well in avoiding an alarmist tone. Rather, the authors create a hopeful ending that manages to leave the reader feeling informed about the large scale of the interrelated problems of climate change, but also inspired towards change. This in particular makes the text a particularly attractive choice for educators working with middle school students, for it provides a factual perspective on the likely issues of the near future, while also avoiding portrayals of the problem as past the point of any hope of change.

This text is suitable for middle school students for its balance of rigor in content and theory, but it is highly readable, partly because it is so concise, but also because of the complementary visual representations of the theories provided by the cartoons. Ultimately, the book is a story, rather than just a textbook. Each piece of the text follows logically from the previous section, and even though the many disciplines of climate science can seem disparate, the linear, cohesive story integrates these pieces with appropriate emphasis on climate scientists and integration of data such as the Keeling curve.

The Cartoon Introduction to Climate Change is suitable for teachers to use as a well-written and comprehensive introduction to an understanding of the climate system and climate change. If used in conjunction with classroom activities and instruction, the text can provide the backbone for an enriching unit that can be tailored to a desired level and depth of coverage. The cartoon medium may be distracting or off-putting to older audiences who desire a more straightforward or technical approach. But most readers will find that the text is enjoyable and well-written, making it a good read for anyone interested in the basics of climate change science but not wanting to tackle a more traditional textbook.

ABOUT THE AUTHOR

Tegan Morton teaches middle and high school science at The Hewitt School in New York City.

AUTHOR'S ADDRESS

Tegan Morton c/o The Hewitt School 45 East 75th St. New York NY 10021 tmorton@hewittschool.org



COPYright 2015 by Tegan Morton; licensed under a Creative Commons Attribution-Non-Commercial-NoDerivs 3.0 Unported License. http://creativecommons.org/licenses/by-nc-nd/3.0/

RNCSE 35.4, 9.2 July-August 2015