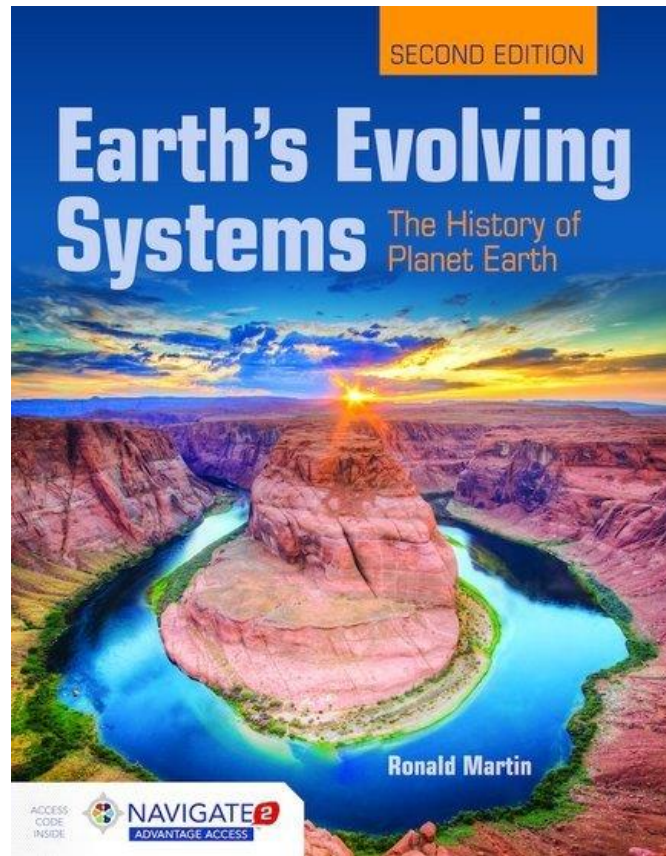




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Earth's Evolving Systems: The History of Planet Earth, Second Edition
Includes Navigate 2 Advantage Access



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SEE WHAT'S NEW TO THE SECOND EDITION!

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This Transition Guide outlines many of the changes and new content in the *Second Edition*. Use this guide for an easy transition to the new edition.

Earth's Evolving Systems: The History of Planet Earth, Second Edition is an introductory text designed for popular courses in undergraduate Earth history. Written from a “systems perspective,” it provides coverage of the lithosphere, hydrosphere, atmosphere, and biosphere, and discusses how those systems interacted over the course of geologic time. The origins of the planet and life and its evolution are presented within the context of the major eras, including Proterozoic, Paleozoic, Mesozoic, Paleogene, and Neogene. No other resource captures the dynamism of our planet's fascinating history.

KEY UPDATES:

- All chapters have been carefully and thoroughly revised and updated with the latest scientific and education research.
- A completely redesigned interior layout will draw in the reader and help to engage students in the high-quality pedagogical features.
- The fully revised art package, including over 330 new or revised images, makes difficult concepts more approachable and figures more engaging.
- The “Major Concepts and Questions Addressed In This Chapter” feature has been extensively revised and now incorporates helpful icons in the text so students can map back to the key concepts and guide their study.
- A stronger emphasis is placed on the dynamics of Earth’s systems without neglecting the history--the results--of their dynamic interactions.
- The interactions of plate tectonics with other Earth systems such as the rock cycle, the atmosphere and oceans, is more strongly emphasized.
- The first 6 chapters have been fully reorganized in response to reviewer feedback. (See Chapter Outline below for more information.)
 - Plate Tectonics has been moved up to Chapter 2.
 - Chapter 3 (previously Chapter 2) on Earth Systems: Processes and Interactions immediately follows new Chapter 2 and emphasizes the interactions of plate tectonics with other Earth systems. New sections on these interactions and the tectonic cycle are added to this chapter.
 - Some material covered in earlier chapters are now discussed in later chapters at appropriate points to more strongly emphasize them in the context of the relevant chapter, e.g., oxygen isotopes have been shifted from the previous Chapter 2 on Processes and Interactions to Chapter 15 on the Neogene.
- The final chapter was removed and key content was incorporated elsewhere in the text.

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CHAPTER OUTLINE

Table of Contents comparison to transition from the *First* to the *Second Edition*

First Edition	Second Edition
Part I: Earth Systems: Their Nature and Their Study	Part I: Earth Systems: Their Nature and Their Study
Chapter 1: Introduction: How Do We Study the Earth's Systems?	Chapter 1: Introduction: Investigating Earth's Systems
Chapter 2: Earth Systems: Processes and Interactions	Chapter 2: Plate Tectonics
Chapter 3: Sedimentary Rocks, Sedimentary Environments, and Fossils	Chapter 3: Earth Systems: Processes and Interactions
Chapter 4: Evolution and Extinction	Chapter 4: Sedimentary Rocks, Sedimentary Environments, and Fossils
Chapter 5: Time and Stratigraphy	Chapter 5: Evolution and Extinction
Chapter 6: Plate Tectonics	Chapter 6: Geologic Time and Stratigraphy
Part II: The Origin and Early Evolution of Earth's Systems	Part II: The Precambrian: Origin and Early Evolution of Earth's Systems
Chapter 7: An Extraordinary Beginning: Hadean and Archean	Chapter 7: An Extraordinary Beginning: Hadean and Archean
Chapter 8: Origins of Life	Chapter 8: Origins of Life
Chapter 9: The Proterozoic: Life Becomes a Geologic Force	Chapter 9: The Proterozoic: Life Becomes a Geologic Force
Chapter 10: Life's Big Bang: The Origins of Multicellular Animals	Chapter 10: Life's "Big Bang": The Origins and Early Diversification of Multicellular Animals
Part III: The Phanerozoic: Toward the Modern World	Part III: The Phanerozoic: Toward the Modern World
Chapter 11: The Early-to-Middle Paleozoic World	Chapter 11: The Early-to-Middle Paleozoic World
Chapter 12: The Middle-to-Late Paleozoic World	Chapter 12: Late Paleozoic World
Chapter 13: The Mesozoic Era	Chapter 13: Mesozoic Era
Chapter 14: The Paleogene	Chapter 14: The Cenozoic Era: The Paleogene Period
Chapter 15: The Neogene: The Iceman Cometh	Chapter 15: The Cenozoic Era: The Neogene Period
Part IV: Humans and the Environment	Part IV: Humans and the Environment
Chapter 16: Rapid Climate Change During the Holocene	Chapter 16: Rapid Climate Change During the Holocene
Chapter 17: Humans and the Earth's Systems: Past, Present, and Future	Chapter 17: The Anthropocene: Humans as an Environmental Force
Chapter 18: Days of Future Past: Science, Society, and the Nature of Nature	

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IMPORTANT CHAPTER UPDATES

In addition to the Key Updates made to all chapters, the author has provided more detailed notes on significant changes in certain chapters.

Chapter 1: Introduction: Investigating Earth's Systems

- ✓ Content on the geologic cycle of carbon moved to a later chapter
- ✓ Removed the logic portions of the section on historical science
- ✓ Incorporation of portions of Chapter 18 from the previous edition
- ✓ Added information on Vladimir Vernadsky

Chapter 2: Plate Tectonics

- ✓ Previously Chapter 6 of the first edition

Chapter 3: Earth Systems: Processes and Interactions

- ✓ Previously Chapter 2 of the first edition
- ✓ Section on The Solid Earth System removed
- ✓ Box on Oxygen Isotopes, Ice Volume, and Temperature moved to Chapter 15
- ✓ Box on Hydrothermal Vents moved to Chapter 8
- ✓ Eliminated Box on Stable Isotopes and Biogeochemical Cycle of Carbon. Key contents incorporated at relevant points in later chapters
- ✓ NEW section 3.6: "How Does the Tectonic Cycle Affect Other Earth Systems?" about the effects of the tectonic cycle on ocean circulation and the hydrologic cycle

Chapter 4: Sedimentary Rocks, Sedimentary Environments, and Fossils

- ✓ Previously Chapter 3 of the first edition
- ✓ Section on Terrestrial Environments removed and incorporated into later chapters

Chapter 5: Evolution and Extinction

- ✓ Previously Chapter 4 of the first edition
- ✓ Discussion of iterative evolution moved to Chapter 14

Chapter 6: Geologic Time and Stratigraphy

- ✓ Previously Chapter 5 of the first edition

Chapter 8: Origins of Life

- ✓ Box on Hydrothermal Vents added from previous Chapter 2
- ✓ Strengthened introductory material

Chapter 10: Life's "Big Bang": The Origins and Early Diversification of Multicellular Animals

- ✓ Augmented discussion of the origins of various important fossil phyla

Chapter 14: The Cenozoic Era: The Paleogene Period

- ✓ Content on iterative evolution previously in Chapter 14 added to section dealing with marine organisms

Chapter 15: The Cenozoic Era: The Neogene Period

- ✓ Thorough update to the section on human origins with input from professional paleoanthropologists

TEACHING TOOLS - SUPPORT FOR INSTRUCTORS

The Publisher will provide a variety of Teaching Tools to assist instructors with preparing for and teaching their courses. These resources are available via digital download and multiple other formats.

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