“Within this [universe] story a structure of knowledge can be established, with its human significance, from the physics of the universe and its chemistry through geology and biology to economics and commerce and so to all those studies whereby we fulfill our role in the Earth process. There is no way of guiding the course of human affairs through the perilous course of the future except by discovering our role in this larger evolutionary process.”

Thomas Berry, "The New Story" in *The Dream of the Earth*
San Francisco: Sierra Club Books, 1988

“If the dynamics of the universe from the beginning shaped the course of the heavens, lighted the sun, and formed the Earth, if this same dynamism brought forth the continents and seas and atmosphere, if it awakened life in the primordial cell and then brought into being the unnumbered variety of living beings, and finally brought us into being and guided us safely through the turbulent centuries, there is reason to believe that this same guiding process is precisely what has awakened in us our present understanding of ourselves and our relation to this stupendous process. Sensitized to such guidance from the very structure and functioning of the universe, we can have confidence in the future that awaits the human venture.”

Thomas Berry, “The New Story” in *The Dream of the Earth*
San Francisco: Sierra Club Books, 1988

For biographies, curricular material, a pdf of this pamphlet, and further information: [JourneyoftheUniverse.org/Ed-Series](http://JourneyoftheUniverse.org/Ed-Series)
SECTION 1: THE EMERGENCE OF UNIVERSE, EARTH, LIFE, AND HUMANS

DISC 1

Introduction
Mary Evelyn Tucker, Co-Director, Forum on Religion and Ecology
School of Forestry and Environmental Studies, Yale University

The interviews in Programs 1-10 are designed to be used in conjunction with the Journey of the Universe film and book. Scenes from the film are woven into the programs, which also align with the chapters in the book. For biographies, curricular materials, a PDF of this pamphlet, and further information see: JourneyoftheUniverse.org/Ed-Series

1. Beginning of the Universe
Joel Primack, Distinguished Professor of Physics, University of California, Santa Cruz describes the emergence of the universe, the universe’s expansion, and the formation of the first elements, stars, and galaxies. This conversation also includes explanations of cold dark matter and dark energy.

2. Galaxies Forming
Todd Duncan, Science Integration Institute, Portland, and Joel Primack, Distinguished Professor of Physics, University of California, Santa Cruz explore the formation of galaxies from the hot, energetic state of the early universe. These interviews cover topics ranging from the shapes of galaxies to the formation of the Milky Way.

3. The Emanating Brilliance of Stars
Joel Primack, Distinguished Professor of Physics, University of California, Santa Cruz and Todd Duncan, Science Integration Institute, Portland describe the emergence and death of stars. They trace the elements found in all life on Earth, including those found in our bodies, back to supernova explosions.

4. Birth of the Solar System
Craig Kochel, Geology Department, Bucknell University describes the evolution of our solar system and its planets. Included in this conversation are the origins of the Moon, the creative dynamism of plate tectonics, and the impact of geology on Earth’s biology.
DISC 2

5. Life’s Emergence
Ursula Goodenough, Biology Department, Washington University and Terry Deacon, Anthropology Department, University of California, Berkeley explore the complexities of the emergence of the first cells and the intricate patterning found in DNA and multicellular organisms.

6. Learning, Living, and Dying
The evolution of the brain is a story of adaptation, consciousness, and responsiveness that begins with single celled organisms and continues through the vertebrates. Here, Terry Deacon, Anthropology Department, University of California, Berkeley compares the adaptive brains of humans, chimpanzees, and our many evolutionary ancestors.

7. The Passion of Animals
Scott Sampson, Utah Museum of Natural History, University of Utah tells the compelling story of Earth’s fossil record. Touching on topics ranging from the ancient ecosystems of dinosaurs to the co-evolution of the human with other species, this interview highlights the importance of understanding mass extinctions.

8. The Origin of the Human
Drawing upon the history of early humans and highlighting contemporary indigenous lifeways, John Grim, School of Forestry and Environmental Studies, Yale University and Melissa Nelson, American Indian Studies, San Francisco State University explain the sustaining power of ritual and celebratory acts that locate humans within the rhythms of Earth’s transformative systems.

9. Becoming a Planetary Presence
Cynthia Brown, Professor Emerita, Dominican University of California describes the “big history” approach to understanding the role of the human in relation to the historical unfolding of the cosmos and Earth. She highlights key threshold moments of evolutionary change.
SECTION 2: EMERGING EARTH COMMUNITY

DISC 3

10. Transition
Mary Evelyn Tucker, Co-Director, Forum on Religion and Ecology, School of Forestry and Environmental Studies, Yale University introduces a collection of creative thinkers who are drawing upon the story of the universe to re-envision and create mutually enhancing human-Earth relations.

11. Breakthrough Communities
Carl Anthony, Founder, Breakthrough Communities, Oakland, California tells how the universe story expanded his own understanding of race and environmental justice. With a focus on urban and metropolitan areas, he explains the practical implications of a functional cosmology for sustainable community development.

12. Eco-Cities
By emphasizing an organic and evolutionary whole-city perspective, Richard Register, Ecocity Builders, Berkeley draws attention to the imaginative ways in which cities are being rethought and rebuilt around the planet for a flourishing, sustainable future.

13. Ecological Economics
Richard Norgaard, Energy and Resources Program, University of California, Berkeley surveys the history of human economies and the myths and premises of current economic practices. In place of our ecologically destructive practices, he endorses an ecological economics that emphasizes care, co-evolution, and protection of the environment.

14. Permaculture
Penny Livingston, Regenerative Design Institute, Bolinas, California leads viewers through the history and significance of permaculture. She discusses permaculture as an agricultural practice that increases biodiversity and helps us to understand our place in the story of the universe.

15. Indigenous Ways of Knowing
David Begay, Adjunct Professor, Department of Physics and Astronomy, Northern Arizona University and Nancy Maryboy, President and Founder of Indigenous Education Institute, Santa Fe, New Mexico invite us to understand Navajo ways of knowing. They describe a worldview that is place-based, emphasizes kinship and connection, and intimately orients the human within an interrelated and unified cosmos.
16. Sustainable Energy
Paula Gonzalez, SC, EarthConnection, Cincinnati narrates the efforts of Catholic sisters to harness solar power and other natural systems as a means of protecting the Earth community and participating in the story of the universe.

17. Healing and Revisioning
Belvie Rooks, Co-Founder, Growing a Global Heart, Elk, California describes how teaching the story of the universe has empowered African American youth to contextualize slavery, envision healing and reconciliation, and imagine a better future through a broader sense of self and of place.

18. Arts and Justice
Whether through poetry and activism, the study of science, or participating in a Crow Sundance, Drew Dellinger, Founder, Planetize the Movement, Berkeley and Marya Grathwohl, OSF, Writer and Founder, Earth Hope, Wyoming express shared visions of creative transformation that are inspired by the journey of the universe.

19. Myths, Metaphors, and Identities
Nancy Abrams, Attorney and Co-Author, The New Universe and the Human Future and Sachiko Kawaura, Department of Psychology and Human Relations, Nanzan University, Nagoya, Japan highlight the role of myth, metaphor, and art in broadening and deepening our understanding of human identity within a cosmological context.

20. Teaching Journey of the Universe
Tom Collins, Religion and Philosophy Department, The Lawrenceville School, Princeton, New Jersey and Bindu Mohanty, Teacher, Auroville, India describe how learning the universe story has allowed high school and college students to experience an expanded sense of self and to transform despair into a sense of hope and empowerment.

Conclusion and Credits
Mary Evelyn Tucker, Co-Director, Forum on Religion and Ecology
School of Forestry and Environmental Studies, Yale University
THE EARTH CHARTER

The Earth Charter is a global ethics completed in 2000 that provides a framework for integrating ecology, justice, and peace within a cosmological context. As the preamble observes, "Humanity is part of a vast evolving universe" which is what Journey of the Universe illustrates. The Charter can be used in conjunction with the Journey film, book, and educational series.

Preamble

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented
rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

**The Challenges Ahead**

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

**Universal Responsibility**

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

To read the full charter, see:
[http://www.earthcharterinaction.org/content/pages/Read-the-Charter.html](http://www.earthcharterinaction.org/content/pages/Read-the-Charter.html)