



Journey of the Universe Teacher's Guide for Secondary Schools

Introduction

This is a teacher's guide based on the [Journey of the Universe book](#), [film](#), and [Conversations](#) intended for use in secondary schools. The following activities and discussion questions are adapted from the 11-part [curriculum](#) prepared by Matthew Riley and further developed by Sam King (s.king@yale.edu). They are specifically designed to help adolescents practice interdisciplinary thinking, creativity, and meaning-making in ways that can be adapted to a variety of in-person, hybrid, or remote learning environments.

Teaching Goals

The *Journey of the Universe* curriculum is designed with four broad goals in mind. After reading the book, watching the film and Conversations, and using the *Journey of the Universe* curriculum, students should be able to:

1. Understand and express a basic understanding of the unfolding of the universe, Earth, and humans by drawing upon the science, humanities, and social sciences.
2. Experience a sense of embeddedness and orientation within the evolutionary development of the universe. Students should feel, as the film suggests, that "We belong here. We have always belonged here."
3. Integrate the ideas found in the film, book, and Conversations with other areas of knowledge and their own life experiences.
4. Develop a sense of meaningful empowerment and participation in the epic of evolution. Students should feel equipped to participate in this immense journey in a way that is mutually enhancing for both humans and the Earth.

Chapter 1: Beginning of the Universe

Themes: Creativity and Story

Activities

1. Begin a cosmic autobiography from the point of view of the universe with a chapter about your experience in the Great Flaring Forth. If you're compelled, add an artistic illustration that complements your narrative.
2. Pick a story that has been influential in your life or for the life of a community in which you participate. In a journal, write down some reflections on how this story has affected your values and the way you see the world.
3. Take an image, scene, or paragraph from the *Journey of the Universe* film, book, or *Conversations* that you feel conveys an important idea in regards to the first moments of the observable universe. Using an appropriate medium (i.e. prose, poetry, dance, painting, music, the spoken word, etc.), reformulate and express this idea in your own way. After doing so, write down some reflections on how that helped you to better understand the Great Flaring Forth.
4. The *Journey* book says that, "In a very literal sense, our lives are possible because of this in-and-out rhythm of the universe" (7). In a comfortable posture, perform a meditation practice that emulates this process: When you exhale, imagine yourself participating in the expansion of the universe; when you inhale, imagine yourself pulled back together by the force of gravity. Continue this practice for several minutes, then slowly return to your normal state of consciousness. Take some time to write down reflections on your experience with the practice.

Discussion Questions

1. The *Journey of the Universe* book says that cultures organize themselves around stories about what they hold to be valuable, beautiful, and essential. Identify some of the values that are embedded in this "universe story." Imagine a future time when this or similar universe stories are told throughout the planet. Would their telling have any effect on the form and functioning of society?
2. In the *Conversations*, cosmologist Joel Primack tells us that "almost everything in the universe is invisible." What does he mean by this?
3. What part of this story evokes awe or wonder in you?
4. The *Journey of the Universe* book uses the image of a seed to describe the development of the early universe. What other images occur to you? Does the choice of an image or metaphor to describe a process in the universe affect the way we think and feel about the process?
5. What aspects of your existence were actually present at the Flaring Forth? What does this imply about who you are and your relation to the cosmos?

Chapter 2: The Formation of Galaxies

Themes: Attraction and Allurement

Activities

1. Write another chapter in your cosmic autobiography about the formation of galaxies. If you're compelled, add an artistic illustration that complements your narrative.
2. The Journey book says that, "We know now that the galaxies emerged from the primordial vibrations in the birth of the universe. These vibrations in matter certainly had a special power of creativity. Perhaps we can regard them as a kind of music, a 'music of the spheres'" (19). Find a song that might resonate with the processes of galaxy formation and listen to it a few times. Then, write down some reflections on how the rhythms of the song might parallel these processes: What part of the song might sound like a vast cumulous cloud? What might sound like a series of waves passing through the cloud? What might sound like the bursting of the initial cloud into smaller galaxy clusters?
3. Use an artistic medium (i.e. dance, drawing, painting, pottery, sculpture, etc.) to make a model of the Milky Way galaxy.
4. Create a short play about the Milky Way that includes the uniqueness of its structure and the roles of density waves, stars, and black holes.
5. Write a short story about life in a black hole that includes the roles of space, time, and light.

Discussion Questions

1. What caused the clouds of gas and atoms formed during the initial flaring forth to coalesce? How do these forces and events continue to shape new galaxies and stars today?
2. Each culture has its own understanding of the origins of the universe. Choose one or two traditional, cultural explanations for the universe and compare and contrast the cultural explanation to the scientific story.
3. How does the formation and destruction of hundreds of billions of galaxies relate to your lives today? How does one orient oneself in relationship to this vast and ongoing process?
4. What is the shape of the Milky Way galaxy? How does its shape affect its level of creativity? How does this make you think differently about your own creativity in connection to the Milky Way?
5. What different shapes and configurations do galaxies come in? Do different shapes of galaxies impact the level of creativity possible in those galaxies? Why or why not?
6. Does the discovery that we live in an evolving and constantly expanding universe change the way that you think about life on Earth? How does it change your thinking? What questions does it raise for you?

Chapter 3: The Emanating Brilliance of Stars

Themes: Resonance, Awe, and Wonder

Activities

1. Write another chapter in your cosmic autobiography about the birth and destruction of stars. If you're compelled, add any artistic illustrations that complement your narrative.
2. Create a short play about the dramatic birth and destruction of stars.
3. If it is safe to do so, go outside on a clear night without a phone. Gaze up at the stars for at least ten minutes. When you return back inside, spend some time journaling about your experience using poetry or prose.
4. In a comfortable seated posture, close your eyes and imagine yourself as a star. As you breathe in, imagine yourself pulled inward by the force of gravitational attraction. As you breathe out, imagine that you are expanding through the power of nuclear fusion. Continue this practice for several minutes, recognizing that holding the balance between this creative tension is necessary for a star's survival. Slowly, return to your normal state of consciousness. When you're ready, spend some time journaling about your experience with the practice.

Discussion Questions

1. In the *Journey of the Universe* book, Brian Thomas Swimme and Mary Evelyn Tucker state that it is significant that “stars are self-organizing processes” (27). What do they mean by this and why is it a significant discovery?
2. As Carl Sagan has famously said, “we are all made of starstuff,” or, as Brian Thomas Swimme and Mary Evelyn Tucker put it in the *Journey of the Universe* book, “the stars are our ancestors” (29). What do they mean by this? Does learning this change the way you think and feel in relationship to the larger universe?
3. In the *Journey of the Universe* book and film, the authors describe the universe as being in state of constant creative tension. How does the life of stars exemplify this observation? Does thinking about creative and destructive forces as existing in tension and as being a seedbed of creativity change your perceptions of how the universe works?
4. In the *Conversations*, cosmologist Joel Primack talks about the formation of planets around stars. How do we observe these planets? What tools are necessary to observe the formation of stars and planets?

Chapter 4: Our Solar System

Themes: Interrelationship and Gratitude

Activities

1. Write another chapter in your cosmic autobiography about the emergence of our solar system. If you're compelled, add any artistic illustrations that complement your narrative.
2. Use an artistic medium (i.e. dance, drawing, painting, pottery, sculpture, etc.) to create a model of our solar system.
3. Create a short play about the relationship between the Earth and the Moon. Make sure to showcase how the Moon was formed (carefully!), how it affected the Earth, and how their relationship has evolved over time.
4. Practice an exercise in mindful eating. First, prepare a meal to enjoy outside—ideally in a quiet and comfortable place. Before you eat, take a few moments to bring your attention to the breath. Then, focus your attention on the experience of gratitude for the sun, which has provided the energy necessary for all the food on your plate. When you're ready, begin to eat slowly while holding to this sense of gratitude. When you're done, spend some time journaling about the experience: How did the exercise make you feel differently about the foods you eat, the ways you eat them, and your relationship with the sun?

Discussion Questions

1. For tens of thousands of years, cultures around the world have been contemplating the meaning of the movement of the sun, stars, and planets. This knowledge was often used to ground the human in seasonal and cosmic cycles and within the context of the heavenly bodies. How are we still doing this today? When are times when we are not doing this? How does *Journey of the Universe*, when considered within the context of the development of our own solar system, help to give the human a sense of meaning and purpose? How does it help us to change what it means to “participate” in the larger story of the universe?
2. In the *Journey of the Universe* film, there is a scene where Brian Thomas Swimme cuts into a hardboiled egg to show that the interior of the Earth looks like. What did you find to be useful, surprising, or inspiring about this image? How did it lead you to think differently about the Earth?
3. The *Journey of the Universe* book describes the Earth as a planet that is finding its way “to remain in the creative zone between the chaos of roiling gas and the rigidity of solid rock” (39). How is the Earth still in a “creative zone?” If so, how does the Earth’s current creativity link back to, reflect, or continue the early creative processes involved in the formation of the Earth? What role, if any, does this human play in this creative process?
4. The *Journey of the Universe* book describes several major milestones in scientific discovery that expanded our knowledge of the solar system. How are we still building on the knowledge of Kepler, Copernicus, and Wegener and how is this shaping our perception of the larger story of

the universe? How does the film or book change your perception or understanding of these scientific discoveries?

Chapter 5: Life's Emergence

Themes: Awareness and Discernment

Activities

1. Write another chapter in your cosmic autobiography about the emergence of life. If you're compelled, add any artistic illustrations that complement your narrative.
2. The *Journey of the Universe* book describes the evolution and creation of life on Earth as being "nested" in the larger processes that preceded and accompanied it (49). Use an artistic medium to portray how the earliest forms of life are nested within the larger sequence of transformations in the story of the universe. Then, spend some time journaling about your illustration: How does this image inform your perspectives on the place of life in the universe?
3. If possible, choose a tree near your school or your home. For the rest of the term, visit this tree at least once week. Spend time observing the tree and reflecting on it through drawing, journaling, painting, photography, or other artistic mediums. As you do, focus on the way this tree connects to the story of the universe as you've learned it so far. At the end of the term, give a presentation about the tree to your class, including any reflections or artwork you are compelled to share.
4. Use an artistic medium (i.e. dance, drawing, painting, pottery, sculpture, etc.) to portray the life of a cell, with a particular emphasis on the role of "discernment" (50).
5. Go outside and find a leaf, taking the time to feel its texture and observe its intricate patterns. When you're done, spend some time journaling about the experience: How does your study of cellular dynamics and photosynthesis make you feel differently about this leaf? How might you describe its place in the larger story of the universe?

Discussion Questions

1. How does thinking about unicellular organisms as possessing discernment change the way in which you perceive the world? What practical implications, if any, does this have for your daily life, for thinking about your place in the larger story of the universe, or for the way in which you speak and think?
2. "To commune," write Swimme and Tucker in the *Journey of the Universe* book, "may be one of the deepest tendencies in the universe" (51). What questions does this statement awaken within you? Explain how you interpret this statement in terms of your own life and experience.
3. In the *Journey of the Universe Conversations*, biologist Ursula Goodenough talks about bacteria as a "self." Do you find that this concept enriches your preconceptions and ideas about what it means to be a "self?" How does your conception of "self" rely on how you conceive of "awareness?"
4. The *Journey of the Universe* book talks about the way in which the Earth has adapted itself in such a way so that life can flourish. Why is the power to adapt so important, not just for living organisms, but for more complex structures such as planets? How does the concept of

adaptation change and become more complex when considered in the context of community, rather than as an individual act?

Chapter 6: Living and Dying

Themes: Life and Death, Sight and Insight

Activities

1. Write another chapter in your cosmic autobiography about life and death in the course of evolution. If you're compelled, add any artistic illustrations that complement your narrative.
2. Go outside and find a deceased organism, whether an insect, animal, leaf, or stick. Then, spend some time journaling about this organism: How does it contribute to the continuation of life for the Earth community? What might this say about the role of this organism in the larger story of the universe?
3. Practice an exercise in mindful eating. First, prepare a meal to enjoy outside—ideally in a quiet and comfortable place. Before you eat, spend a few moments bringing your attention to the breath. Then, simply observe the food on your plate, recognizing that it is comprised of deceased organisms that will soon become part of your living being. If you're compelled, say “thank you.” When you're ready, begin to eat slowly, paying close attention to the sensation of food on your palate and the feeling of nutrients descending down into your stomach. Bring your attention to your teeth and your jaw muscles, which have evolved over the course of millennia to help you process this food. When you're done, spend some time journaling about the experience: How did it make you feel differently about the food you eat and the way you eat it?
4. Pick a night where you don't look at technology or turn on any lights after dark. Go to bed early if you can. Then, the next morning, wake up just before sunrise and go outside (you may have to set your alarm well in advance!) to watch the sun lift over the horizon. Experience what it's like to see light once again. Then, spend some time journaling about the experience: How did it make you feel differently about your relationships to light? How might you be affected by the use of artificial light after dark?
5. Spend some time journaling about a loved one who has passed away—whether human or non-human. How have you and your community honored their passing? How have these practices helped you cope with grief and loss? How does their life contribute to the flourishing of you and your loved ones who are alive today?

Discussion Questions

1. In the *Journey of the Universe* book, Brian Thomas Swimme and Mary Evelyn Tucker state that “[w]e have such difficulty absorbing the magnitude of the vast amount of adaptive information that life employs because our human life span amounts to a tiny fraction of cosmic time, approximately a millionth of 1 percent” (61). Does thinking about human existence within a broad time scale change the way you think about the role and place of the human in the evolution of the universe? How does thinking about the coevolution of the human with other species within this broad time scale change the way that you understand what it means to be human?

2. “With conscious self-awareness,” state Swimme and Tucker, “we have developed a new kind of sight – insight into deep evolutionary time” (63). What do they mean by this? How is seeing into deep evolutionary time a new kind of sight and what does it show us?

3. In the Conversations, neuroanthropologist Terry Deacon and Mary Evelyn Tucker speak of sentience, consciousness, collective sentience and the ability to be “reflexive.” Imagine that you had to explain these terms to a family member or a close friend. How would you describe the way that you understand these terms to them? How are these terms different from one another?

Chapter 7: The Passion of Animals

Themes: Passion and Compassion

Activities

1. Write another chapter in your cosmic autobiography about passion in the course of evolution. If you're compelled, add any artistic illustrations that complement your narrative.

1. The Journey book says that “All animals live in the great drama of their passions” (73). Yet Sigmund Freud’s “reality principle” famously states that humans are forced to control their animal instincts—what he called the “id”—in order to function in a civilized society. Spend some time journaling in response to the questions: What is the proper place of passion (e.g. the urge for food, water, sex, sleep, etc.) in a good life? Do you think your society is too restrictive or too lax in managing humans’ pursuit of pleasure?

2. The Journey film suggests that compassion can be understood as an expansion of a mutation that happened long ago in the oceans, where mother fish evolved to scare away predators from their babies. Spend some time journaling in response to the question: How does a biological understanding of compassion make you feel differently about its place in our lives?

3. Using the evolutionary story you have learned thus far, draw, paint, or sculpt a series of images that broadly portrays the processes of reproduction that have occurred from the first cellular organisms to your human family today. When you're done, spend some time journaling about your artwork: How does this lineage make you think or feel differently about your ancestry?

4. Spend a few hours fully engaged in one of your artistic or athletic passions—this could be drawing, painting, exercising, or playing a favorite sport. Pay attention to how it feels to be deeply connected to your body without distractions. When you're done, spend some time journaling about the experience: How would you describe your state of consciousness? How do you feel differently than you do when you're not passionate about something you're doing?

Discussion Questions

1. What kinds of creative and dynamic tensions do you see present in the process of reproduction and evolution? What comparisons and analogies can you make connecting reproduction in mammals to other non-biological evolutionary processes such as the formation of elements in stars or the emergence of galaxies?

2. Recall a particular image or quote from the *Journey of the Universe* film or *Conversations* that brings the passion of animals to life for you. What is it about this particular image or quote that captures your imagination? What insights, questions, or feelings does that particular scene or quote invoke?

3. In the *Conversations*, paleontologist Scott Sampson talks about the coevolution of flowers and dinosaurs. How does thinking about passion, reproduction, and caring for offspring as a process that is coevolutionary or cooperative change the way that you understand it?

4. How can you apply what you have learned here in other parts of your personal life? How will a particular lesson or concept in this portion of the *Journey of the Universe* project change the way that you think or act?

Chapter 8: The Origin of the Human

Themes: Imagination, Play, and Symbology

Activities

1. Write another chapter in your cosmic autobiography about the origin of humans. If you're compelled, add any artistic illustrations that complement your narrative.
2. Draw a small circle representing your identity as a person. Then, draw a series of larger concentric circles around the circle representing broader layers of your identity. Using insights from *Journey* and from your personal experience, label the circles with different identifiers. When you're done, spend some time journaling about the image you've drawn: How did this exercise make you feel differently about your identity?
3. Imagine that you are a quadrupedal (4-legged) animal such as a pre-human primate or a bear. If you're physically able, place your hands on the ground and try to walk on all fours in a straight line across a long room or a field—this is also called a [bear crawl](#). Focus on how it feels to invert your regular sense of mobility. When you're done, spend some time journaling about the experience: How challenging was it to walk as a quadrupedal animal? How did your mode of perception change? How does this make you feel differently about being a bipedal (2-legged) animal?
4. Draw, paint, or sculpt images of some of the symbols that have been influential in your life—these could be cultural, political, religious, or personal in nature. When you're done, spend some time journaling about the images: What do these symbols mean to you? How might they be interpreted differently by someone from a different background? What does this exercise tell you about the power of symbolic consciousness?

Discussion Questions

1. In the *Journey of the Universe* book, Swimme and Tucker state that “[b]ecause of our symbol-making skills, we became, overnight, a planetary species” (91). In what ways can one understand the human species to be “planetary?” How does the act of symbol-making allow the human species to be planetary in a way that other species are not?
2. During his interview with Mary Evelyn Tucker in the *Conversations*, historian of religions John Grim talks about the power of meditative practices and rituals to put humans into right relationship with their surroundings. How do meditative practices and rituals still function in this way in your life? How do you use rituals and meditative practices to understand your relationship with your surroundings? Has that changed as you learn more about the story of the universe?
3. What is the link between culture and the survival of the human species? How has the creation of literature, art, plays, scriptures, and music allowed the human species to thrive and grow?

Chapter 9: Becoming a Planetary Presence

Themes: Civilization, Differentiation, and Progress

Activities

1. Write another chapter in your cosmic autobiography about the expansion of human civilizations. If you're compelled, add any artistic illustrations that complement your narrative.
1. If you speak a non-native language, or are learning one, find someone in your class or in your community who shares that language ability and is also fluent in your native language. First, take turns telling each other something about your lives in your native language—whether it's a story, a hobby, or a short description of your background. Then, take turns telling each other something about yourselves in a different language. Then, return to reflect on the experience with each other in your native language. Did the dynamic change when you expressed yourselves in different languages? How might language affect your ability to express yourself and relate to the world?
2. Pick a day where you commit to spending a lot of time outside and not using a phone, computer, or other device. When you're done, spend some time journaling about the experience: What was it like to unplug for a day? How did it make you think or feel differently about living in a technological world?
3. Make a timeline of universe history that includes seminal events such as the emergence of the Great Flaring Forth, the Milky Way galaxy, the Earth, the first cellular organisms, the first human beings, and the Industrial Revolution. When you're done, spend some time journaling about your timeline: How does visualizing the scale of cosmic history make you think or feel differently about living in an industrial world? What are some of the gifts of living in this period, and what are some of the challenges?

Discussion Questions

1. In the *Journey of the Universe* book, Swimme and Tucker write that “[e]very place we went, we became that place” (93). How are humans shaped by the place that they live in? Think of at least one instance where you “became” a place. How does that place continue to shape you, even today?
2. During her interview with Mary Evelyn Tucker in the *Conversations*, Indigenous scholar Melissa Nelson describes the stories of indigenous peoples and the ways in which they remind us that we are part of a larger cosmos. Based on her interview, and on the *Journey of the Universe* book, how would you describe the ways in which we have lost that sense of belonging? What other ways have we lost our sense of place and belonging that were not described in the films or book?
3. For the first time in history, we are aware of the ways in which our decisions and actions are profoundly shaping our environment. Create an illustration, a song, a poem, a ritual, or another appropriate artistic representation that depicts or enacts the journey of humans across the globe and through time as we have become a planetary presence. Share this creation with a partner and discuss the differences and similarities of your interpretations of humanity's growing presence.

4. In the Conversations, educator-historian Cynthia Brown uses “Big History” to describe the formation of the universe in terms of “thresholds.” Although change can be a moment of great destruction, how might it also be a period of discovery, joy, and celebration? What might the future look like for humans and for other forms of life on Earth if we were to reorient ourselves with the universe in a way that is mutually enhancing for all? Imagine that you had to describe this future to a family member or a close friend. How would you describe this future for them and what would the journey be like in order for us to arrive there?

Chapter 10: Rethinking Matter and Time

Themes: Modernity and Technology

Activities:

1. Write another chapter in your cosmic autobiography about the emergence of modern science. If you're compelled, add any artistic illustrations that complement your narrative.
2. Take an image, scene, or paragraph from the *Journey of the Universe* film, book, or *Conversations* that you feel conveys an important idea in regards to matter and time. Using an appropriate medium (i.e. prose, poetry, dance, painting, music, the spoken word, etc.), reformulate and express this idea in your own way. After doing so, write down some reflections on how that helped you to better understand matter and time.
3. Draw or paint an image that reflects the understanding of matter articulated by Isaac Newton or Rene Descartes. Then, produce another image that reflects the understanding articulated by Ilya Prigogine. When you're done, spend some time journaling: In what ways do these images reflect different conceptions of matter? What implications do these visions have for our relationship to the natural world?
4. Pick a day where you don't have any time-sensitive commitments, and spend the day without looking at a watch or any type of clock. When you're done, spend some time journaling: How did your state of consciousness change without looking at the time? How did the experience make you think or feel differently about human constructions of mechanical time?

Discussion Questions

1. As you rethink matter and time, reflect upon what it means to you to live in cosmological time. How is thinking like this different than your previous understanding of time? What implications does it have for your understanding of yourself and your sense of your relation to the world around you?
2. It might be said that the average person lives his or her life in a way that is consistent with the assumptions of deterministic realism. How might reformulating our notions of matter and time cause us to make decisions differently or to value things like rocks and trees in new and unfamiliar ways? What might some of the advantages be of thinking in such a way? What are the disadvantages?

Chapter 11: Emerging Earth Community

Themes: Inclusivity, Interdependence, and Flourishing

Activities

1. Write another chapter in your cosmic autobiography about the emerging Earth community. If you're compelled, add any artistic illustrations that complement your narrative.
2. Think of a practical way in which you might apply insights from *Journey of the Universe* in the life of your community. Spend some time planning a creative project to implement, with special attention to how it connects to the larger universe story. Then, put your project into action! When you're done, give a presentation to your class that describes your experience with the project.
3. Spend some time journaling about the ways in which *Journey of the Universe* has impacted you. How does the experience make you feel differently about your identity? Does it change the way you see your relationship with other humans, the Earth community, and the universe? What are ways in which you might bring a cosmic state of awareness into your everyday life?
4. Create a play that broadly portrays the series of transformations that have occurred from the Great Flaring Forth to our contemporary world.
5. Take an image from the *Journey of the Universe* film, book, or Conversations that has resonated with you. Using an appropriate medium (i.e. prose, poetry, dance, painting, music, the spoken word, etc.), reformulate and express this symbol in your own way. After doing so, write down some reflections on how that helped you to better understand this image in the context of the universe story.
6. Perform a meditation practice that focuses on integrating your identity with the larger universe. First, adopt a comfortable seated posture and bring your attention to the breath. Then, visualize your whole body resting gently on the surface of the Earth. Slowly, imagine yourself joined by your family, then your friends, then other human beings, then animals, then plants, then eventually, the entire Earth community. Then, imagine your identity expand out to include the entire solar system, then the Milky Way galaxy, then the entire universe. Rest in that feeling of belonging in an expanding universe. Slowly, visualize that you are returning back through these cosmic layers until you experience your physical body resting on the Earth again. Then, open your eyes. When you're ready, spend some time journaling about the experience: How did it feel to connect with a larger sense of identity in the Earth and in the universe? How did experiencing this process through meditation feel differently than learning about this process intellectually? How might you might bring a cosmic state of awareness to your everyday life?

Discussion Questions

1. What does Brian Thomas Swimme mean when he says that “Wonder will guide us” during the *Journey of the Universe* film? How has a sense of wonder already guided you and how will it help you to shape your future habits and actions?
2. The *Journey of the Universe* book and film series can be described as a recovery project that is aimed at rediscovering a sense of belonging that we have lost in our modern, industrialized

society. For example, Swimme states that “We belong here. We have always belonged here” and Indigenous scholars Nancy Maryboy and David Begay both describe Navajo ceremonies and ways of knowing as being cosmologically orienting. Do you feel as if you have lost your own sense of belonging and participation? How has your own culture, tradition, or history both contributed to this sense of loss and also helped you to better understand your own place and role within the story of the universe? How can you use this knowledge to empower yourself and others?

3. In the *Journey of the Universe* book, Mary Evelyn Tucker and Brian Swimme write that “we are actually the universe reflecting on itself” and that “this changes everything” (2). What does it mean to be the universe reflecting on itself? And, what is the significance of this realization? Why would that they say that it “changes everything?”

4. After watching the Conversations, which of the clips associated with the concept of Emerging Earth Community resonated most strongly with you? What lessons did you take from it and how might you share those lessons with others?

5. It can be easy to become overwhelmed by the immensity of the task before us or to find ourselves lost in grief over the destruction that we as a species have caused. What practical steps can we, as planetary citizens gifted with the power of symbolic consciousness, take to transform ourselves into a species that contributes to the flourishing of the entire universe? In the Conversations, the interviewees spoke of a variety of efforts already taking place: urban theorist Richard Register spoke of the development of eco-cities, economist Richard Norgaard described his vision for ecological economics, and ecological designer Penny Livingston elaborated on the importance and power of permaculture as a way to grow food and to enhance biodiversity. What other examples can you think of that demonstrate how people are already attempting to find a role within the cosmos that contributes to the flourishing of all? How can you teach others about these efforts?

6. The book describes the ongoing story of the universe as a story that we tell; but it also describes it as a story that is telling us (114). What do the authors mean by this? Imagine that you had to explain this concept to a child: How could you convey this idea effectively to them?

7. Understanding the place of the human in the larger story of the universe is something that many have incorporated into their religious lives. In the Conversations, Sister Paula González talks about her own involvement with solar power and what she calls her “earth ministry,” and Sister Marya Grathwohl describes how prayer and ritual helped her to change her understanding of separation. How might you be able to incorporate *Journey of the Universe* into your own faith or religious practice? What would incorporating the story of the universe into your religion look like for you and how would it change your understanding of your own self?

8. Several of the interviewees in the Conversations speak about the relationship between race and the story of the universe. Regional planner and activist Carl Anthony, for example, talks about the uprooting of African peoples through the institution of slavery and how some have found new meaning and a new set of ethics by thinking about sustainable urban communities. Belvie Rooks, in her interview, tells of her own attempts to help her students put racism and slavery into the framework of the universe story and she asks them to imagine what healing would look like within this context. Why is it important to consider race when thinking about the story of the universe? How can you incorporate it into your own story and your understanding of your own place in the universe?