

COURSE TITLE: The UNIVERSE STORY

NO OF CREDITS: 3 QUARTER CREDITS
[Semester Cr Equivalent: 2.00]

WA CLOCK HRS: 30
OREGON PDUs: 30
CEUs: 3.0

INSTRUCTOR: ANN AMBERG
360/221-2037
annamberg@whidbey.com

“All professions, all work, all activity in the human world finds its’ essential meaning in the context of a people’s cosmic story.” –Thomas Berry

COMPLETION DATE: 6 months from your registration date

LEARNING ENVIRONMENT: This course requires assignment responses to be posted in a password-secured ONLINE website hosted by The Heritage Institute.

COURSE DESCRIPTION:

From stardust to us: how can the emerging story of the Universe give a sense of meaning to our role as planetary citizens? Orienting ourselves in a whole context can engender a sense of wonder, belonging, and interconnectedness. The new scientific story of life’s emergence, in all its beauty and complexity, helps to ground us in purpose and a recognition of our magnificent 13.9 billion year heritage.

Inspired by teachers, writers and scientists including Thomas Berry, PhD., Brian Swimme, PhD., Elisabet Sahtouris, PhD., Stephan Harding, PhD., Connie Barlow, Drew Dellinger, Jennifer Morgan and others, help your K-12 students to think beyond the confines of our “consumer cosmology”, offering new perspectives that empower them to make conscious life choices. Learn how the story of the universe integrates the sciences with the humanities while encouraging student’s natural desire to understand the world around them and their place in it.

Utilizing video, experiential activities, poetry, internet and multimedia resources, you will explore cosmic storytelling and ancient wisdom, the birth of galaxies, Gaia theory, life processes such as photosynthesis, and life’s evolving story. The Universe Story is an integrating theme combining holistic and creative learning relevant to social studies, health, science/ecology and art.

Required textbooks for credit level participants will be an additional cost of \$10 for *The Hidden Heart of the Cosmos* (6-12 grade teachers) or \$10-\$14 for one of the Jennifer Morgan texts (K-5 grade teachers).

LEARNING OUTCOMES:

Upon completion of this course, participants will:

1. Experience how an embodied understanding and familiarity of the emerging story of the Universe can engender a sense of belonging, purpose and interconnectedness.
2. Gain perspective on how we are personally and collectively growing into an expanded orientation and a shared planetary identity.
3. Become familiar with essential concepts expressed in the required text including new cosmology, emergence, evolutionary story, wonder and awe, awakening universe, and complexity/diversity.
4. Acquire knowledge needed to use the Universe Story to integrate the sciences and the humanities.
5. Gain an appreciation for an emerging integral understanding of science, health and spirituality.
6. Discover a variety of multi-media resources and fun, cooperative learning activities supporting student learning about the Universe Story and the evolution of life on Earth.
7. Learn how to deepen critical thinking and use imagination to cultivate meaning and bring creative expression into your teaching about our cosmological and planetary role.
8. Connect your learning about the New Story to a greater awareness of related issues such as species extinction, climate change, and global community/social justice.
9. Design and implement an interdisciplinary study unit with your students which offers a holistic and embodied experience of our cosmic and planetary orientation. (Applicable to those registered for credit)

COURSE REQUIREMENTS:

Participants will complete assignments and post responses online to specific questions outlined for each assignment. Completion of all specified assignments is required for issuance of hours or credit. The Heritage Institute does not award partial credit.

HOURS EARNED:

Completing the basic assignments (*Section A. Information Acquisition*) for this course automatically earns participant's their choice of 30 Washington State Clock Hours, 30 Oregon PDUs or 3 CEUs (Continuing Education Units), which translates to 30 hours. The Heritage Institute is an approved provider of Washington State Clock Hours, Oregon PDUs, and CEUs by IACET (International Association of Continuing Education and Training, an official national and international certifier of CEUs).

UNIVERSITY QUARTER CREDIT INFORMATION

• UNIVERSITY QUARTER CREDIT OPTION 400 & 500 LEVEL

Teachers may opt to register for 3 (three) Antioch University, Seattle, 400 or 500 level quarter credits, instead of hours, and will be required to:

1. Complete all assignments for clock hours/CEUs (*Section A: Information Acquisition*)
2. Complete the extra reading/viewing, writing and classroom application assignments specified in the syllabus for the 400 or 500 level credit option (*Section B: Learning Application*)
3. Complete an Integration Paper by answering 5 prompts (*Section C: Integration Paper*)

• REQUIREMENTS FOR UNIVERSITY QUARTER CREDIT

Antioch University Seattle requires 75% or better for credit at the 400 level (Upper Division) and 85% or better to issue credit at the 500 level (Post-Baccalaureate). These criteria refer both to the amount of work submitted as well as the quality of work as determined by each instructor

- | | |
|------------------------------------------------------------|-----|
| 1. Completion of Information Acquisition assignments | 30% |
| 2. Completion of Learning Application assignments | 40% |
| 3. Completion of Self-Reflection & Integration assignments | 30% |

• CREDIT/NO CREDIT (No Letter Grades or Numeric Equivalents on Transcripts)

Antioch University Seattle Continuing Education Quarter credit is offered on a Credit/No Credit basis; neither letter grades nor numeric equivalents will show on a transcript. At the 400 level credit granted is equal to a "C" or better, and at the 500 level credit granted is equal to a "B" or better. This information is stated on the back of the transcript.

COURSE MATERIAL and/or TECHNICAL REQUIREMENTS:

You will need high-speed (DSL) Internet access in order to easily view online resources. Some of the reading materials may be provided in the online course environment as PDF documents, a format readable by computers with Adobe Acrobat Reader. You may download a free copy of Acrobat Reader from our website, if it is not already on your computer.

REQUIRED VIDEO:

Rogin, Neil. (2007). *The Awakening Universe*.

Free 12 minute MP4 is available in the online course environment. View online or download to your desktop.

<http://blip.tv/file/1842654>

Optional: Full video version available for \$25 at <http://www.awakeninguniverse.com/index.html>

REQUIRED READING:

Text required for 400/500 Credit Option:

Grade K-5: Morgan, Jennifer. (2002). Select **one** from the three part series:

Born With a Bang or From Lava to Life or Mammals Who Morph.

Nevada City, CA: Dawn Publications. Available at Amazon.com for \$10-\$14 (paperback new) plus shipping.

May be borrowed from the library or purchased from Amazon.com or <http://www.universestories.com/>

Grade 6-12: Swimme, Brian. (2002). *The Hidden Heart of the Cosmos: Humanity & the New Story.*

New York: Orbis Books. ISBN-10: 1570752818. Available at Amazon.com for \$9.60 (new) plus shipping.

May be borrowed from the library or purchased from Amazon.com or <http://www.brianswimme.org/>

GETTING STARTED:

- Once you have registered for the course, you will be sent an email that contains the website address, password and course key that you need to access your online course, along with instructions on how to log into the online system.
- The assignments listed in this syllabus are also listed at the bottom of each online course document. Access each assignment and enter your responses online. We suggest that you write your responses in a WORD document and then do a copy/paste function into the Responses box.
- When you have completed all assignments for the course, CLICK the 'ALL ASSIGNMENTS COMPLETED' option. The instructor will be notified that you have completed all assignments.
- The instructor will review your work and enter his/her responses online. You will be notified by email when the instructor has marked the course completed, and you will be instructed to log in and view the instructor comments. At that time, you can also SAVE a complete copy of the course assignments and responses.

NOTES TO ALL PARTICIPANTS:

- Unlike a live workshop, you are not required to be present (i.e. online) at specific days or times, participants will work at their own pace.
- All responses will be posted online. Large documents or files may be attached as part of your response by using the "Share A File" option.
- You may work collaboratively and submit similar responses on all assignments except the Integration Paper, which must be individually authored.

ASSIGNMENTS for CLOCK HRS/PDUs, CEUs, 400 or 500 LEVEL UNIVERSITY QUARTER CREDIT

A. INFORMATION ACQUISITION

Assignment #1: The Human as Cosmological Being

Cultural historian Thomas Berry writes, "We are all, each and every one of us, derivatives of an enveloping Universe."

1. View the 12 minute video online: "The Awakening Universe" by Neal Rogin.

NOTE: If you are not able to view the video online, or you are not able to view the video after downloading it to your desktop, please call the instructor at 360-341-3020 and we will mail you a CD version.

2. In the online response box, reflect on these questions:

- a) What is your intuitive and feeling response as you watch this video?
- b) Do you see yourself as a cosmological being? A planetary being? If so, do you feel it in your body? If not, do you feel you have the capacity to 'grow into' a larger human identity?
- c) How are we all related?
- d) What is meant by an "emergent universe"?
- e) Compare the organization and function of a galaxy to that of a living cell.
- f) What do you feel is the value of cultivating a sense of wonder and awe in your students?

Assignment #2: Who Am I? A New Story of the Universe

1. View or listen to the 5-part video from Global Mindshift "The New Story Series."

http://www.global-mindshift.org/memes/swimmeseries/step1-1.asp?bandwidth=high_video

2. In the online response box, respond to these questions (you may alternatively post a single 2-3 pg. Word document with your responses):

The New Story

- a) Why is a shared scientific story important for our sense of cultural and planetary identity?
- b) Dr. Swimme states, "Our way forward is to begin to live in a way that is coherent with our actual knowledge of the universe." What new values and processes might emerge in the way we educate as a result of living in integrity with the new story?

Where Am I?

- c) What is the primary structure in the universe? How long would it take to travel across the Milky Way galaxy?
- d) Where is our solar system located in the Virgo Supercluster?

Who Am I? Birth to Earth

- e) In what way are we fundamentally made of light?
- f) Describe the scientific process of the death of a star and its role in the birth of life.
- g) Describe your response to this story spiritually.

Who Am I? Earth to Life

- h) What is meant by the earth as a “self-organizing dynamic?” What is the role of complexity in this process?
- i) What is the value of the semi-permeable membrane in the creation of cells?
- j) How did we as humans “come out of” the earth?
- k) Describe how sexuality and photosynthesis have deepened qualities of relationship in the development of complex life. (For example, the plant’s relationship with the sun, and our relationship with the plant).

Who Am I? Life to Human

- l) Reflect on what Brian Swimme calls “our capacity to be astounded.” How is it that we as humans are “unformed?” What is the role of genetic evolution in creating a human that expresses an inherent freedom and curiosity?
- m) Do we have a responsibility as educators to nurture these qualities & capacities of wonder, awe, and curiosity in our children? In ourselves? What perceptions or cultural values do we carry as adults that may have deterred us from dwelling in a place of freedom and wonder?
- n) According to Dr. Swimme, what is the role of language for the human species?

Assignment #3: The Universe Story in Poetry

Drew Dellinger is a spoken word poet, professor, and activist.

1. View the three short videos below featuring Drew’s spoken word stories.

“Hieroglyphic Stairway”

<http://www.youtube.com/watch?v=XW63UUthwSg&feature=related>

“Poetry of Gratefulness ‘08”

“The future belongs to the most compelling story”

<http://www.youtube.com/watch?v=1KKkSBwi3do&feature=related>

“Hymn to the Sacred Body of the Universe”

<http://www.youtube.com/watch?v=jPj1Ac1Zrv4&feature=related>

2. Choose one activity below to apply to your class:

(Activity worksheets for Items a, b, and c are provided in the online course environment)

- a) Grade 2-8: Outdoor activity “Breathing with the Trees”
- b) Grade 6-12: Ancestors from the Future Meditation
- c) Grade K-12: Webs of Resilience
- d) An earth-connection activity of your own design that applies also to kinesthetic and visual learners.

3. In the online response box, summarize how your students responded to your activity. Was this activity helpful in cultivating a sense of kinship, care, interconnectedness, compassion, or responsibility towards humanity and the earth?

Assignment #4: Story into Practice

1. Click on the links below to read the following two short articles.

Becoming Wonder by K. Lauren de Boer

http://www.earthlight.org/2005/essay54_deboer_becomingwonder.html

Weaving A World with Light by Caroline Webb

http://www.earthlight.org/2004/essay50_webb.html

2. Choose **one (1)** of the following assignment options. Post your work in the online response box.
- Write a one page essay describing how you might cultivate wonder, gratitude and a richer communion with the earth and the universe in your personal everyday activities. How might you bring this deepened perspective into your teaching?

OR

- Design a simple daily ritual, for example, “Eating the Sun Together” that you can share with your students to help nurture a celebration of embodied earth, sun, and heart energies. For grades 6-12, weave this ritual into a science lesson on plant biology and the process of photosynthesis. Post your lesson/ritual design as a one-two page outline.

Assignment #5: Deep Space & Deep Time

“We journey into deep time when we journey into space. As we study planetary evolution, we better understand the environmental evolution of Earth and the central role life plays in shaping our home planet.” —Foundation for Global Community

“We are the way we are because of the curvature of spacetime.” —Brian Swimme

Opening our minds to a new story of the universe requires us to consider an expanded sense of time and space. From the microcosmic to the macrocosmic, each particle, organism or cosmic body is a living, self-organizing system dwelling within larger systems, each oriented at the center of its own creative story. We live in an omniscient universe.

- View the short online video: “Secret Worlds: The Universe Within” by Molecular Expressions.
<http://micro.magnet.fsu.edu/primer/java/scienceopticsu/powersof10/>

In the sequence of the cosmic story, if our 13.9 billion year unfolding is represented by a 24 hour day, then human beings appeared within minutes before midnight.

13.9 billion years ago--	the Universe begins as an energy event
10-13.9 billion years ago--	galaxies and supernovas
4.5 billion years ago--	Sun is born from a supernova explosion
4.45 billion years ago--	Planets and earth’s atmosphere, oceans and land masses are formed
4 billion years ago --	first prokaryotic cell
3.9 billion years ago---	photosynthesis
2.0 billion years ago--	first eukaryotic cell
510 million years ago--	vertebrate animals
395 million years ago--	insects
370 million years ago--	trees
235 million years ago--	flowers
216 million years ago--	mammals
36 million years ago--	monkeys
24 million years ago--	prairies are formed
5 million years ago--	chimpanzee; hominids
2.6 million years ago--	first humans
200,000 years ago--	archaic Homo sapiens
72,000 years ago--	polar bears
32,000 years ago--	musical instruments
12,000 years ago--	dogs tamed
10,600 years ago--	agricultural settlements in Middle East

- View “A Walk Through Time” an interactive timeline of life’s 5 billion-year evolution.
http://www.conexions.org/wordpress/?page_id=15
- Review the diagram from *Mammals Who Morph*: “Creating Humans: 13.9 billion years of evolution.” (Diagram is available in the online course environment)
- In the online response box, comment on the idea that in our present moment in time, we are the Universe becoming conscious of itself. What does that statement mean for you?

5. Choose **one (1)** of the following assignment options:

- a) Design a simple Universe story timeline as a visual display for your classroom, or view the “A Walk Through Time” interactive online timeline (link above) together in class. Choose one event or era in the timeline of the Universe story, such as the birth of planets, or the emergence of trees, and work with your students to discover as much as you can about that event. In small groups, invite your students to express that particular story through art, poetry, drama or music. This activity can alternatively be uploaded as a PowerPoint slide presentation, or in a written or graphic form.
If you are not currently teaching in the classroom, do the research on your own or collaboratively with others. Summarize your findings online.

OR

- b) Download and print the following document from the online course environment:
Cosmic Walk by Larry and Jean Edwards.

This is a simple spiral Universe Story ritual that can be experienced individually or in a large or small group. Paper flowers or nature objects can be substituted for lit candles. Lay out the spiral and complete the journey, and post your reflections and insights in the online response box.

Assignment #6: From Cenozoic to Ecozoic

According to evolutionary biologists, we are experiencing the 6th great mass species extinction in the history of life on earth.

1. Watch the short online video from Species Alliance: “The Call of Life.”

<http://www.youtube.com/watch?v=XbOXUza9ZeE>

2. Visit the website “The Current Mass Extinction Crisis” founded by Dr. David Ulansey.

<http://www.well.com/user/davidu/extinction.html>

Research several news reports detailing this unprecedented extinction event. Visit several links summarizing how human impacts and habitat loss affects thousands of individual marine, mammal and plant species.

Visit the Species Alliance website: <http://speciesalliance.org/index.php>

Dr. Ulansey: “If present trends continue one half of all species of life on earth will be extinct in less than 100 years, as a result of habitat destruction, pollution, invasive species, and climate change.”

- Almost ¼ of all mammals face extinction within 30 years
- Half of all primate species face extinction
- 1/5 of all bird species are now threatened with extinction
- 20% of all native plant species in the United States and Canada are now listed as threatened
- Only 10% of big ocean fish remain
- 25 billion tons of topsoil is being lost each year

Thomas Berry describes a transition from the Cenozoic period of the last 65 million years to what he calls the coming “Ecozoic” age. The Cenozoic era saw the emergence of a grand diversity of life: deciduous trees, flowering plants, birds, mammals, and humans. Ecozoic means “House of Life”.

3. Go to the Center for Ecozoic Studies website: <http://www.ecozoicstudies.org/>

Read the article *Creating A Sense of Place* by Fred Lanphear at

http://www.ecozoicstudies.org/index.php?option=com_content&view=article&id=91:creating-a-sense-of-place&catid=19:vol4-no4&Itemid=0

4. In the online response box, respond to these questions:

- a) How are biological diversity and healthy natural ecologies relevant to the health of the human species?
b) What might our responsibilities as planetary humans be in shaping the Ecozoic era to come?
c) What can we do with our children to cultivate a more harmonious relationship with our “House of Life?”

5. Design a simple, reverential ritual with your students to hold and witness animals, birds and plants threatened with extinction. Include saying goodbye to those that have become extinct around the world.

Optional Activity: Click on the following link and download the activity “Council of All Beings” as a guide for your ritual. <http://rainforestinfo.org.au/deep-eco/web/Web6/all%20ages.htm>

6. In the online response box, describe your experience and that of your students as participants in the process. Alternatively you may record in audio or video your activity and upload the media here.

Assignment #7: Other Ways of Knowing

“The earth that directed itself instinctively in its former phases seems now to be entering a phase of conscious decision through its human expression.” —Thomas Berry

NOTE: View each video or article below and answer the questions or complete the activities. You may post your responses in the online response box or upload all your responses incorporated into a 1-2 page essay or illustrated poem if you wish.

1. Watch the video “Animate Earth” with Vandana Shiva, Stephan Harding, Brian Goodwin, Margaret Wheatley and others. <http://www.youtube.com/watch?v=SoByrc6Rfpk>

2. Choose **one (1)** of the following assignment options depending on the grade level you teach:

Grades K-5 teachers:

Share the following activity with your students: Sensing the Round Earth
(*Activity Worksheet available in the online course environment*)

Post your insights from the experience in the online response box.

OR

Grades 6-12 teachers:

In the video, Sir John Whitmore comments that we in Western industrial culture have developed the technological or quantitative side of ourselves to the detriment of more qualitative aspects. He says “We have the technology, but we don’t have the wisdom to use the technology responsibly.”

In a dialogue with your students, discuss several concrete examples in our modern world illustrating this idea. Post the feedback in the online response box.

Assignment #8: Thinking Like a Planet

1. Watch the video, “After Darwin Part I” with evolutionary biologist Dr. Elisabet Sahtouris, Ph.D.
http://www.youtube.com/watch?v=j_imml2m1tq

Thomas Berry and Brian Swimme have written that the three integral components of life are differentiation (diversity/complexity), communion (mutually enhancing relationships), and autopoiesis.

According to Dr. Sahtouris, “autopoiesis” refers to a living entity as one that continually creates itself, that evolves and transforms. We are gradually seeing the value of working collaboratively and cooperatively, instead of competitively and in isolation. Spiritually, we could say that we are building our capacity to act from a place of trust and understanding rather than from a place of fear and ignorance.

2. In the online response box, reflect on some of the challenges we face today in forming a global community based on mutually enhancing relationships.

3. Read the essay by Dr. Jane Goodall, *We Are Not Alone* excerpted from Laszlo, E. (2006). *Science and the Re-enchantment of the Cosmos*. Rochester, VT: Inner Traditions.
(*Article is available in the online course environment*)

4. In the online response box, respond to these questions:

- a) How does human consciousness and our power of choice/free will enable us to address the human and ecological crises we face today?
- b) In facing these crucial issues, what is the role of creativity—or, how do we express ourselves as the creativity of the universe in conscious form?

5. View the video, “Blessed Unrest” with Paul Hawken. <http://www.youtube.com/watch?v=NzMPUKAXM7U>

6. In the online response box, list several organizations in your area active in environmental and social justice. Do they offer curriculum or programs for educators? Do they offer potential opportunities for service-learning projects?

This completes the assignments required for Washington Clock Hours, Oregon PDUs, or CEUs.

Continue to the next section for additional assignments required for University Quarter Credit

ADDITIONAL ASSIGNMENTS REQUIRED for 400 or 500 LEVEL UNIVERSITY QUARTER CREDIT

B. LEARNING APPLICATION

Assignment # 9: Hidden Heart of the Cosmos (Required for 400 and 500 Level)

For Grades K-5 teachers:

1. Select and read **one** book from Jennifer Morgan's three-part series *Born With a Bang*, *From Lava to Life*, or *Mammals Who Morph*.
2. In the online response box, write a 2-3 page paper in which you summarize the significant events in the story. Indicate the stories, ideas, or ecological principles that could be helpful to you in your teaching. You may use the "Share A File" option to upload your paper to the online response system.

OR

For Grades 6-12 teachers:

1. Read the required text, *The Hidden Heart of the Cosmos* by Dr. Brian Swimme.
2. In the online response box, write a 2-3 page paper in which you summarize the significant concepts in the book. Indicate the stories, ideas, factual information, or ways of knowing that could be helpful to you in your teaching. You may use the "Share A File" option to upload your paper to the online response system.

Assignment # 10:

For 400 Level – Complete Part A only

For 500 Level – Complete Part A and Part B

Integrate the learning from this online course into your professional situation.

Part A: (400 & 500 Level)

For Grades K-5 teachers:

1. Read **one (1)** of these Jennifer Morgan books with your class: *Born With a Bang: The Universe Tells Our Cosmic Story*; *From Lava to Life: The Universe Tells Our Earth Story*; or *Mammals Who Morph: The Universe Tells Our Evolution Story*.
2. Following the story sequence, design and implement a collaborative role-playing activity that takes participants on a holistic journey through the story of the early universe, the emergence of life on earth, or the proliferation of life in the Cenozoic period. Incorporate the four ways of knowing in your activity design: feeling, thinking, intuiting, and sensing. Use art, drama, storytelling, poetry, or song. Take a field trip into nature. Encourage students to use their imagination to dream into how they can BE who they want to grow into being, and how they might take steps to manifest who they are becoming. Be sure to ask your students what they learned from this journey.
3. Upload your activity design in whatever format is appropriate.

4. When you've completed the activity with your class, provide feedback by responding to the following questions:

- a) What learning modes did your students utilize to take their cosmic journey?
- b) Did this exercise broaden you and your students' knowledge about the early formative processes of the universe?
- c) Did your experience with this process deepen your perception of your self as an embodied expression of the universe, as intimately connected with the birth of life?
- d) Provide comments on some of the student feedback you received. What held meaning and value?

OR

For Grades 6-12 teachers:

1. Ask your students to read the required text, *The Hidden Heart of the Cosmos* by Dr. Brian Swimme. through page 54. (*This portion of the book is available in the online course environment*)

2. Design a lesson plan for your students that provides an overview of the significant cosmic events in the 13.9 billion year scientific story of the universe. Additionally, ask them to differentiate between a "consumer cosmology" lifestyle, and a lifestyle "based upon the conviction that we live within a sacred universe." Integrate quantitative and qualitative learning modes in your plan. Challenge your students to turn off the television and video games for 3 days, and instead go outside and find a place where they can watch the sunrise and sunset for each of the three days. Ask them to keep a journal of their insights and perceptions. You may want to include in your lesson other brief experiential exercises from the text.

3. Using the HOL lesson plan template provided, organize your curriculum for presentation.

4. Present the lesson to a small group (3-5) or to your class.

5. In the online response box, post your lesson plan and feedback from your students' experience with the process. Include a description of how your curriculum can be assessed or evaluated.

Part B: (500 Level only)

For Grades K-5 teachers:

1. Using the Bibliography provided and your own research, survey additional print and online universe story curriculum resources and activities applicable to K-5.

Helpful resources:

<http://www.thegreatstory.org/>

<http://www.universestories.com/>

Our Planet, Our Home: K-12 Ecological & Gaia activity and guidebook

<http://www.earthties.org/opoh/OPOH-infoOrder.html>

2. Create a 2-3 page activity guide with annotated descriptions of each resource or activity for yourself and other educators and parents to utilize in their classrooms or home schools. Post online.

OR

For Grades 6-12 teachers:

1. Click on the link below and read the article *The Evolutionary Context of an Emerging Planetary Civilization* by Mary Evelyn Tucker and Brian Swimme.

<http://www.kosmosjournal.org/kjo/backissue/f2005/evolut-context~print.shtml>

2. View or listen to the 5-part video from Global Mindshift "The Current Moment Series."

<http://www.global-mindshift.org/memes/swimmeseries/step2-1.asp>

3. In the online response box, post a 2-page essay describing in your own words particular evolutionary capacities that you observe are emerging in you and in small groups of people. What holistic ways of knowing and new, real-world skills can support you to live and to educate in alignment with a planetary identity and with the emergent story of the universe?

ADDITIONAL ASSIGNMENTS REQUIRED for 400 or 500 LEVEL UNIVERSITY QUARTER CREDIT (cont'd)

C. INTEGRATION PAPER

**Assignment #11: Integration Paper
(Required for 400 and 500 Level Credit)**

Complete the requirements for university quarter credit by submitting a final Integration paper (2-3 pages). A heading is required; please use the following format.

Your Name:	Date:
Course Name:	Course Number:
# of Credits:	Level: (400 or 500)
Advisor Name:	

Respond to each of the 5 questions below. (First list the question and then write your answer)

1. What did you learn vs. what you expected to learn from this course?
2. What aspects of the course were most helpful and why?
3. What further knowledge and skills in this general area do you feel you need?
4. How, when and where will you use what you have learned?
5. How and with what other school or community members might you share what you learned?

INSTRUCTOR COMMENTS ON YOUR WORK:

Be sure to mark the "All Assignments Completed" section in the online course environment as this will notify the instructor that you have completed the course.

Upon receiving notification of your completion of all course assignments, your instructor will provide written comments online.

QUALIFICATIONS FOR TEACHING THIS COURSE:

Ann Amberg was the Director of Special Programs at The Heritage Institute from 2007-2009. She has degrees in Environmental Studies/Integral Ecology and Contemporary Spirituality, has created arts/ecology curriculum and designed and facilitated Universe Story courses in England and the U.S. Ann is a facilitator for the Be the Change Symposium, Joanna Macy's The Work That Reconnects, and has studied the work of Dr. Brian Swimme since 1991. She is the instructor for the World We Want self-design online study through The Heritage Institute.

UNIVERSE STORY: From Stardust to Us BIBLIOGRAPHY

Web-based Resources

Audio excerpts from Thomas Berry's *The Great Work*
<http://www.thegreatstory.org/tb-audio.html>

Our Planet, Our Home: K-12 Ecological & Gaia activity and guidebook
<http://www.earthties.org/opoh/OPOH-infoOrder.html>

"Coming Home to North America" "The Lucky Little Seaweed", Stardust curriculum for kids, and other Co-Creative activities K-12 by Connie Barlow
<http://www.thegreatstory.org/NA-ritual-choices.html>
<http://www.thegreatstory.org/>

National Optical Astronomy Observatory
Solar System Comparison Activity: The Thousand-Yard Model or Earth as a Peppercorn
<http://www.noao.edu/education/peppercorn/pcmain.html>

The Universe at Your Fingertips. Also available in Spanish.
<http://www.astrosociety.org/cgi-local/SoftCart.exe/online-store/scstore/p-BO122.html?L+scstore+qxhr9033ff4c6a4c+1226960116>

A Walk Through Time
http://www.conexions.org/wordpress/?page_id=15

Species Alliance: mass extinction crisis
<http://speciesalliance.org/index.php>

The New Story: Global Mindshift
http://www.global-mindshift.org/memes/swimmereseries/step1-1.asp?bandwidth=high_video

Center for the Story of the Universe
<http://www.brianswimme.org/>

Thinkbutton: Rice, D. (1997). *Lifetimes*. Nevada City, CA: Dawn Publications. Ages 4-8.
http://www.thinkbutton.com/educational_books/lifetimes_written_david_rice_iillustrated_michael_s_maydak.htm

Encyclopedia of Earth. Including: Earth Portal, Earth Forum, Earth News.
<http://www.eoearth.org/>

Orion Society Education and Curriculum
<http://www.orionmagazine.org/index.php/education/>

Earthlight publishing: exploring and celebrating eco-spirituality
<http://www.earthlight.org/>

Video: Secret Worlds: The Universe Within
Molecular Expressions
<http://micro.magnet.fsu.edu/primer/java/scienceopticsu/powersof10/>

Drew Dellinger, spoken word poet, professor, social justice activist
<http://www.drewdellinger.org/>

Evolutionary biologist Elisabet Sahtouris
http://www.youtube.com/watch?v=j_imml2m1tq

The Earth Charter
<http://www.earthcharter.org/>

It's All Connected: Wombat
<http://www.globalcommunity.org/flash/wombat.shtml>

NASA: Earth Observatory. Earth science data, global Maps, climate change, weather patterns.
<http://earthobservatory.nasa.gov/>

World Wide Telescope
<http://www.WorldWideTelescope.org>

Hayden Planetarium: Digital Universe Atlas
<http://www.haydenplanetarium.org/universe/>

Written Materials

An Amazing Journey! The Universe and Me. Readings and Discussion Guide on the Universe Story, 2004, Global Education Associates Upper Midwest. Contact John Hynes, St. Paul, MN, jandjhynes@tcg.net or Carrie Dorfman at earthsong1998@yahoo.com.

Barlow, C. (2002). *Goodbye eternal frontier*. Wild Earth, Summer 2002.
An in-depth review of the evolution, biodiversity and ecological story of the North American bioregions in the Cenozoic age and a glimpse of the animals that populated our familiar biomes.

Berkes, M. (2008). *Going around the sun: some planetary fun*. Nevada City, CA: Dawn Publications.
An essential planetary teaching tool; children aged 4-9 learn important ideas including how we are oriented in the universe, relationships between planets in our solar system, gravity, seasons, and more.

Berry, T. (1999). *The great work: our way into the future*. New York: Random House, Inc.
Cultural historian and "geologist" Thomas Berry draws on new cosmology, spirituality and the transformative story of Western culture to offer a life-affirming ecological vision that can carry us from the end of the Cenozoic into the Ecozoic Age.

Berry, T. & Swimme, B. (1992). *The Universe Story*. San Francisco: HarperCollins.
The Universe Story offers a foundation for telling the complete history of our universe and unites science and the humanities in a dramatic exploration of the unfolding of the universe and humanity's evolving place in the cosmos.

Berry, T. (1988). *The dream of the earth*. San Francisco: Sierra Club Books.
In *The Dream of the Earth* Berry emphasizes that "the universe is a communion of subjects rather than a collection of objects" and suggests a new way of understanding our role as a species in taking responsibility for the well-being of the planet.

Children's "Cosmic Curriculum" *Happy Birthday Universe* by Kim Farmer (931) 243-4170
4400 Sycamore Hollow, Celina, TN 38551
A comprehensive Universe Story activity and curriculum guide for K-12 teachers.

Elgin, D. (2009). *Living universe*. San Francisco, CA.: Berrett-Koehler
Elgin brings together evidence from cosmology, physics and biology to show the universe is not dead but uniquely alive, transforming our understanding of our evolutionary path and suggesting how we might live in communion with the living universe.

Harding, S. (2006). *Animate earth*. Totnes, Devon, U.K.: Green Books.
Stephan Harding explores climate change, earth systems and how Gaian science can help us to develop a sense of connectedness with the more-than-human world. Climate change scientist James Lovelock writes: "This is a wonderful and beautiful book, a teacher's treasure."

McKinney, B. (2000). *Pass the energy, please!* Nevada City, CA: Dawn Publications.

A children's rhyming story in detailed living color describes how all of nature's creatures are connected in an interdependent food chain. K-6 science curriculum.

Morgan, J. (2002). *Born with a bang*. Nevada City, CA: Dawn Publications.

<http://www.universestories.com/>

A tale of surprise and creativity, written as an "autobiography" of the universe, Book I of the trilogy begins with the Big Bang and ends with the formation of the Earth. Beautifully illustrated, it outlines the science behind the story. Extensive science and resource guide, for grades K-8.

Morgan, J. (2003). *From Lava to Life: The Universe tells Our Earth Story*, Book 2. Nevada City, CA: Dawn Publications.

Book II of the trilogy, *From Lava to Life* tells the 4 billion year story of the living Earth: highlighting significant moments such as how the Earth triumphs over crisis to create bacteria, jellyfish, flowers, and dinosaurs.

Morgan, J. (2004). *Mammals Who Morph: The universe tells our evolution story*, Book 3. Nevada City, CA: Dawn Publications.

Book III of the trilogy, the universe narrates the fantastic, science-based evolution of mammals and the flowering of animal biodiversity on the planet, eventuating in the emergence of the human.

Sahtouris, E., Liebes, S. & Swimme, B. (1998). *A walk through time*. John Wiley & Sons.

An experiential activity, and curriculum, *A Walk Through Time* spans five billion years of evolution and includes the timeline of key stages in the scientific story of life.

Sahtouris, E. (2000). *Earth dance: Living systems in evolution*. iUniverse.

Outlining major evolutionary events and including ecological ethics and worldviews, Sahtouris' book helps secondary students gain an understanding of how our participation in the living systems of the earth help form the earth's self-organizing and self-renewing principles.

Webb, C. (2004). *Weaving a world with light*. Earthlight 14(1).

A scientific and animate view of the process of photosynthesis, the relationship of plants to the Sun and how we might offer our gratitude to the universe for its life-creating and sustaining energy.