**Reconciling Evolution & Religion**

**An Ecumenical Christian/Baptist Perspective**

Instructor Guide

**BACKGROUND INFORMATION**

**Learning Outcomes**

*Part 1* *–Define evolution and identify students’ views on evolution*.

1. Students will gain basic knowledge about evolution
2. Students will reflect upon issues concerning evolution and religion.

*Part 2 –* *Creating a Meaningful Dialogue on Evolution and Religion*

1. Students will have an increased knowledge of the principles of evolution.
2. Students will be able to describe and reflect on issues concerning evolution and religion.
3. Students will discuss ways in which science and religion are compatible in regard to evolution.

**Type of Course**: BIO 1120 - Principles of Biology II, lower division, biology majors and other science majors (Belmont University)

**Suggested Location in the Curriculum**: Students should have already been introduced to the nature of science and foundational knowledge in cellular biology and genetics in their Principles of Biology I course. Part 1 of this lesson aims to define evolution and identify the views of students concerning evolution and its relation to religion. Part 2 of this lesson is designed to help students place evolution and religion in a productive and meaningful dialogue.

**Estimated Time**: Part 1: 15 minute introduction on the first day of class. Part 2: 50 minutes of the last class of the evolution unit. Outside of class: students will be asked to 1) compose a definition of evolution and view a streaming video about evolution and religion before the first class meeting, 2) complete three reading assignments prior to Part 2 and 3) complete one writing assignment following Part 2.

**Advanced Preparation for Instructor**:

* Design/Borrow an introductory survey on evolution and religion
* Choose an online survey platform (e.g., PollEV or TurningPoint)
* Identify student readings
* Design a student writing assignment with appropriate assessment

**Supplies Needed**: Index cards (for anonymous questions and concerns)

**Cultural Barriers to be Considered**:

1. The *most apparent* cultural barrier is apathy (i.e., perceived irrelevance) towards evolution and religion issues as this relates to personal identity, participation in society and/or becoming a learned individual. Exposing students to the contemporary social relevance of evolution, e.g. to the advancement of medicine, may serve as an effective strategy of engagement.
2. The *most systemic* cultural barrier consists of our students’ epistemological privilege of opinion over knowledge and evidence (e.g., “science may teach that, but in my experience…”). Critical thinking activities identifying the value of opinions, evidence, and knowledge in discourse may engage this obstacle.
3. Baptist, Evangelical, Islamic and non-denominational anxiety and hostility towards evolution. Theological and scriptural engagement offers a strategy for engaging this religious hostility, which Christian universities may be well disposed to offer.
4. Illiteracy: scientific, biblical and theological. Students lack a basic understanding of the scientific, biblical and theological ways of knowing.

**Establishing Respect in the Classroom**:

1. Theological Point of Consensus: Within the Abrahamic religions of Judaism, Christianity and Islam, God is the creator and sustainer of all life on Earth.
2. Diversity of Views: Recognition that persons and communities of responsible faith and intellectual integrity differ on the relationship between evolution and religion.
3. Intellectual Humility and Charity: When discussing one’s own views and the views of others, every effort will be to understand and engage with respect and openness in the community of learners.
4. Scientific Agnosticism: Recognition that evolutionary science does not require any particular view of God or religious commitment, e.g., the sciences are methodologically agnostic.
5. Personal Journey: Recognition that the personal experiences of faculty and students plays a significant role in the potential reconciliation of religion and science.

**OUTLINE OF RECONCILIATION ACTIVITIES**:

**Pre-Class Assignment for Part 1**: The instructor will email students and ask them to compose a definition of evolution without consulting their textbook, dictionary or other references. Students will view “What About God” from the 2001 PBS Evolution Series prior to the first day of class.

**Part 1: Class Activities – First Day**

1. Definition of Evolution: Students will individually share their own definition of evolution to the members of their group and agree upon a consensus definition to report to the class.
2. Online Survey on Evolution and Religion: Students will participate in an online survey concerning their views on evolution (see a list of questions at the end of this document), to be followed by a class discussion of the results.
3. Anonymous Submission of Questions and Concerns: Students will be given index cards on which to write their questions and concerns about evolution and religion. These questions and concerns will be collected, read aloud and engaged, preserving the anonymity of individuals.
4. Models of Engagement – Conflict, Independence, Dialogue, Integration: Students will be introduced to currently accepted models of the relationship of evolution to religion. (i.e., introduce a variety of positions regarding evolution within Christianity)

**Part 2. Reconciling Evolution with Religion – Last Day of Evolution Unit**

**Pre-Class Assignment**:

Students will read “The Mammals That Conquered the Seas” *Scientific American* article from which they will be assessed with a short, in-class quiz. Students will also read “Evolution and Human Beings” in The Language of Science and Faith, pp. 197-214, in preparation for an in-class discussion on human evolution. Students will also read Genesis 1 and 2.

**Class Activities:**

Students will take a quiz over “The Mammals That Conquered the Seas” *Scientific American* article followed by a class discussion on the Evolution and Human Beings” reading from The Language of Science and Faith. Students will also participate in a discussion concerning how they interpret the creation accounts in Genesis 1 and 2 and how these relate to the models of engagement introduced on the first day of class.

**Post-Class Assignment**:

In a 300 – 500 word essay, complete the following tasks: 1) describe two specific points of interaction between evolution and religion as concerns human evolution; 2) select one model of engagement (conflict, separation, dialogue, integration); and describe how the model would play out among the two issues you identify in part 1; and 3) describe your own personal views on the prospects of reconciling evolution and religion.

**AVAILABLE RESOURCES FOR STUDENTS AND INSTRUCTORS**

Following is a list of resources that both students and instructors can consult to learn more about the intersection of evolution and religion.

Chapter 8: Evolution and Human Beings *in* Giberson, Karl W. and Francis S. Collins. 2011. **The Language of Science and Faith.** Intervarsity Press. 251 pp.

**What About God?** PBS Evolution Series. 2001.

<http://www.youtube.com/watch?v=H-3gSy7F7SQ>

**The Mammals that Conquered the Seas**. Kate Wong. 2002. *Scientific American*. 286(5): 70-79.

**From the Dust** film from Highway Media and the BioLogos Forum. ([https://www.youtube.com/watch?v=DAc3Pa97V38)](https://www.youtube.com/watch?v=DAc3Pa97V38); (<http://fromthedustmovie.org/>)

**Test of Faith** film from the Faraday Institute for Science and Religion. (<https://www.testoffaith.com/film/>)

**Barbour, Ian**. *When Science Meets Religion: Enemies, Strangers, or Partners* (Harper One: 2000).

“Evolution and Wonder: Understanding Charles Darwin,” *On Being* (Podcast: Feb. 5, 2009)<https://onbeing.org/programs/james-moore-evolution-and-wonder-understanding-charles-darwin/>

“The Evolution of the Science-Religion Debate,” *On Being* (Podcast: June, 26, 2014)<https://onbeing.org/programs/jim-bradley-michael-ruse-the-evolution-of-the-science-religion-debate/>

**Pope John Paul II**, “Message to the Pontifical Academy of Sciences: On Evolution” <https://www.ewtn.com/library/PAPALDOC/JP961022.HTM>

**Smithsonian’s Broader Social Impacts Committee** – a committee of individuals from diverse religious affiliations formed to assist in the dialogue surrounding the Smithsonian’s exhibit on human evolution. <http://humanorigins.si.edu/about/broader-social-impacts-committee>

Statements on reconciliation from various religious perspectives - <http://humanorigins.si.edu/about/broader-social-impacts-committee/members-member-resources>

Videos of thoughts on reconciliation from various religious perspectives - <http://humanorigins.si.edu/about/broader-social-impacts-committee/thoughts-science-religion-and-human-origins>

Public event on the 30-year longitudinal study of BYU students - <http://humanorigins.si.edu/about/broader-social-impacts-committee/public-event-religious-audiences-and-topic-evolution-lessons-classroom>

BioLogos – an organization founded by scientist to help bridge the gap between science and religion; they have articles, profiles, video, and curricula available - <https://biologos.org/>

American Scientific Affiliation (ASA) – was founded as an international network of Christians in the sciences - <https://network.asa3.org/>

The Center for Theology and the Natural Sciences (CTNS) – organized by the Graduate Theological Union in Berkeley, CA, this organization works at the intersection of science and theology - <http://www.ctns.org/index.html>

***Recently Published Papers on Evolution and Religion***

Applying reconciliation in the classroom: <https://evolution-outreach.biomedcentral.com/track/pdf/10.1186/s12052-015-0051-6>

Scientific Reasoning and Evolution: <https://link.springer.com/article/10.1186/s12052-018-0076-8>

Role Models and Evolution: <https://pdfs.semanticscholar.org/ea46/361f2fd9d537cb33cb4e6432622689e428ad.pdf?_ga=2.202357400.801698370.1551550971-1817671274.1551550971>

Proactive teaching strategies: <https://evolution-outreach.biomedcentral.com/articles/10.1186/s12052-019-0095-0>

A call for cultural competence: <https://www.lifescied.org/doi/full/10.1187/cbe.17-04-0062>

Evolution education review: Dunk, R. et al. (2019). Evolution education is a complex landscape. *Nature Ecology & Evolution*, 3: 327-329.

Evolution instructors at Christian Universities: <https://onlinelibrary.wiley.com/doi/full/10.1002/sce.21317>

**Questions for an Online Survey on Evolution and Religion**

1. On a scale of 1 to 5, how well-versed are you on the topic of Evolution and Religion?

 1. Very unknowledgeable

 2. Unknowledgeable

 3. Somewhat knowledgeable

 4. Knowledgeable

 5. Very knowledgeable

2. Place yourself on the following scale:

 How compatible is evolution with a belief in God?

 1 – Totally incompatible

 2 – There are many points of conflict

 3 – Some things conflict and some things don’t

 4 – They are fairly compatible

 5 – They are completely compatible

3. How much do you agree with the following statement?

The variety of organisms that exist today are the result of the evolutionary processes that have occurred over millions of years.

 Not at all Extremely

 0 1 2 3 4 5

4. Which of the following statements comes closest to your views on the origin and development of human beings?

 1 – Human beings have developed over millions of years from less advanced forms of

 life, but God guided this process

 2 – Human beings have developed over millions of years from less advanced forms of

 life, but God had no part in this process

 3 – God created human beings pretty much in their present form at one time within the

 last 10,000 years or so

 4 – I have no opinion on this matter

5. Which of the following statements best describes your understanding of the position of your religious affiliation on evolution?

 1 – My religious affiliation’s doctrine support evolution

 2 – My religious affiliation’s doctrine is in conflict with evolution

 3 – My religious affiliation does not have a doctrine for or against evolution

 4 – I have no idea what my religious affiliation’s position on evolution is

 5 – I do not have a religious affiliation

6. How much do you think your current religious community (e.g., church, congregation,

worship group) has influenced your views toward evolutionary theory?

1 – Quite a bit

2 – Somewhat

3 – Not much

4 – Not at all

5 – I do not participate in a religious communit

7. Which of the following best represents your understanding of the “six days of creation”

in the Book of Genesis?

1 – They are six consecutive twenty-four-hour days

2 – They are six twenty-four-hour days with gap(s) of time in between

3 – They are six periods of time of unknown length

4 – They are six figurative days, not to be understood as real periods of time

5 – The The Book of Genesis is fiction, not to be understood as fact

6 – I am not familiar with the Book of Genesis

8. How much do you agree with the following statements?

 Neither

Strongly Somewhat Agree nor Somewhat Strongly

 agree agree disagree disagree disagree

It is important to let people know about how strong the evidence is that support evolution.

Evolutionary theory applies to all living organisms, including human beings.

Evolutionary theory presents a good explanation of how new species arise.

I think that the fossil evidence that scientists use to support evolution is weak and inconclusive.

I think that all organisms are related (i.e., they share a common ancestor).

I think that organisms, as they exist now, are perfectly adapted to their natural environments and, so, will not continue to change.

There is overwhelming evidence supporting the theory of evolution to explain how variations of a species develop over time.

There is reliable evidence to support the evolution of humans from ancestral primates.

9. To what degree did you accept **microevolution** (i.e., the gradual change seen in

populations of organisms over time) coming out of high school?

Strongly Accept

Accept

Weakly Accept (i.e., you had some reservations or conflicts, but more positive views than negative views)

Weakly Reject (i.e., you had some reservations or conflicts, and these outweigh the positive views a bit)

Reject

Strongly Reject

10. To what degree did you accept **macroevolution** (i.e., the broad pattern of evolution including speciation events) coming out of high school?

Strongly Accept

Accept

Weakly Accept (i.e., you had some reservations or conflicts, but more positive views than negative views)

Weakly Reject (i.e., you had some reservations or conflicts, and these outweigh the positive views a bit)

Reject

Strongly Reject