

The Language of Science and Faith

By Karl Giberson and Francis Collins

Study Guide

This study guide will help you focus on key questions as you read. Even though the book tries to offer “Straight Answers” we do not think we have the final answers on everything. You should feel free to disagree with us as you read.

1. Looking at the Table of Contents (p. 5) and Index of Questions (p. 248), which questions do you find most interesting? Is there another question you hope is addressed in this book?

Preface/Acknowledgments

2. What viewpoint on the relationship between science and religion do the authors present in this book? (p. 8) Ian Barbour has a small book called *When Science Meets Religion* that outlines the “four ways” that science and religion relate. If you have time, that is worth picking up.

3. Read the biographical information on [Karl Giberson](#) and [Francis Collins](#). What contributions did each author make to this book? (p. 11-12) Both authors have written several other books. How do you think this book related to their other works?

Introduction

4. What are some examples for beauty uncovered by science? (p. 16) Do you find beauty in nature—sunsets and waterfalls—to be pointers to God? Do you appreciate the “beauty beneath the beauty” that science uncovers?

5. What were the first great triumphs of mathematical physics? (p. 16) What scientists are associated with these triumphs?

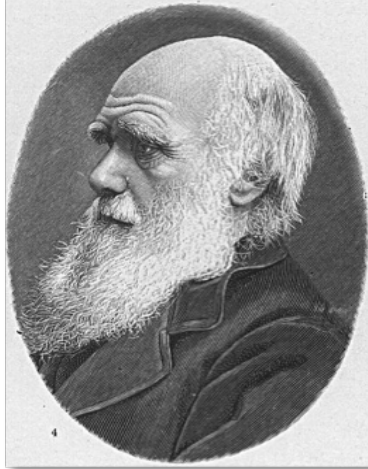
6. According to the authors, why are some Christians unable to fully appreciate how science enriches our understanding of God’s creation? (p. 17)

7. Watch [this video](#) (“Are Science and Religion in Conflict?”) and reflect on your upbringing and previous education. What is your attitude toward science? How compatible are science and faith? What attitudes have other people expressed to you in the past?

8. According to the authors, why are Christians in a difficult spot? (p. 18) How does this tension affect you? Do you have family members who also struggle with these questions?

9. What does the term *biologos* mean? Why do the authors avoid the term *theistic evolution*? (p. 18-19, 24)

10. What scientific discoveries have been made to suggest evolution is not the best theory for the origin of species? (p. 21)



11. What parallel do the authors present between Charles Darwin and Pierre Simon de Laplace? (p. 22-23)

12. What is *social Darwinism*? (p. 25) What is the ethical fallacy evoked in social Darwinism? Did Darwin support this extension of his ideas? (p. 25-27) Have you encountered this idea in other contexts?

Chapter 1

13. What are the three requirements for science according to the authors? (p. 29)

14. What is the definition of evolution? (p. 30) Is this how you would have defined this before you read this book?

15. What is the “Dissent from Darwin” list? Why do the authors reject its credibility? (p. 32-33) Do you think the authors are being too hard on the “Dissenters”?

16. Define *biological evolution*. (p. 34)

17. Give an example of a beneficial mutation and a harmful mutation. (p. 35-36)

“The theory of evolution, after all, is a theory about how *life* has changed over time; it is *not* a theory about how life first appeared.”

18. What is the theory of evolution in a “nutshell”? (p. 37)

19. What question is at the heart of evolution? (p. 45)

20. Explain the process of *speciation*. (p. 46)

21. Why can't we observe macroevolutionary changes? (p. 47) Do you think it is reasonable to say that lots of tiny microevolutionary changes can accumulate to make a macroevolutionary change?

22. According to scientific data, how old is the earth? (p. 53) Does this date bother you at all, based on what you were taught in church or school?

TAKE A BREAK and PLAY THIS GAME and try to KEEP YOUR SPECIES ALIVE!
<http://science.discovery.com/interactives/literacy/darwin/darwin.html>

Chapter 2

23. How does the time it takes for light to travel provide evidence for the age of the universe? (p. 55-56)

24. What question do the authors say we should ask instead of "What might a supernatural creator be capable of doing?" (p. 57) Do you agree that this is the right question?

25. How does the big bang provide evidence for the age of the universe? (p. 58-59)

26. Consider your past experiences in church. What interpretations of the creation story in Genesis have you encountered? What were you taught about the creation of the world?

27. What is Young Earth Creationism (YEC)? (p. 68) Have you had any experiences with this? Most evangelicals are Young Earth Creationists.

28. How is Old Earth Creationism (OEC) different from YEC? (p. 70) How is OEC different from biologos? (p. 71)

30. What was St. Augustine's view of Genesis? (p. 74) How much authority would you give to St. Augustine?

31. According to John Wesley, why was Scripture written? (p. 76)

32. When did creationism become dominant in America? (p. 77) Do you think this history matters? After all, most people were creationists before Ellen White.

Chapter 3

33. How does religion contribute to science? (p. 86-88) Do you think these are real contributions? Or is this a strained argument?

34. According to Donald MacKay, what is the primary function of scientific involvement with religion? (p. 89)



35. Define *hyperbole*. Give an example not used in this book.
36. Summarize the importance of *literary genre*, *audience* and *cultural context* in Scripture. (p. 93-97) Are you comfortable bringing these scholarly considerations to bear on the Bible? Were you raised to think about the Bible like this, or to simply read it as if it were written specifically to you?
37. How did the ancient Hebrews interpret Genesis 1:1? (p. 100)
38. What do the authors mean when they say, “the Bible is thus both literature and more than literature”? (p. 102) How does your own experience with the Bible relate to this idea?

Watch this video with N.T. Wright

<http://biologos.org/resources/nt-wright-on-understanding-ancient-texts/>

Chapter 4

39. Choose one or more of the following questions from the book and, after reading the response in the book, write a reaction to the topic.

- I. What do we do when science seems to conflict with Scripture?
- II. But doesn't science constantly change its explanations for natural phenomena?
- III. Can we ever know anything with absolute certainty?

40. What is the “gift of love” in creation according to John Polkinghorne? (p. 116) If you are interested in Polkinghorne, Dean Nelson and Karl Giberson have written a biography that looks at his ideas through the experiences of his life: *Quantum Leap: How John Polkinghorne Found God in Science and Religion*.



41. Why was it difficult for Christians to believe in an active God after Newton's work? (p. 117). Do you think there is any need to speculate about how God works in the world? Or should we just take it on faith that He does?

42. In this chapter, the authors discuss the type of questions science should answer and the type of questions religion should answer. Give an example not found in the book for these questions. Are you comfortable with the distinction they make?

Chapter 5

43. What question is often used to argue against the existence of God? What is the logic behind this question? How do the authors respond? (p. 127-128) Do you think that God's existence can be logically proved?

44. According to the authors, what valuable contribution does evolution make to Christian theology? (p. 133) Do you agree with this? Many people find this claim offensive, because it turns over some of the creative process to nature. What do you think?

45. What was Rev. William Paley's argument? Why did Darwin's ideas appear to be an affront to faith? (p. 142) Are you bothered by the collapse of Paley's style of apologetics?

46. Parts of this chapter discuss *postmodernism*. Read a definition here:
<http://www.pbs.org/faithandreason/gen gloss/postm-body.html>

47. Summarize pages 145-150. While initially the discussion may be difficult to understand, wrestle with the concepts until you have a grasp on the chapter. Working on this with a classmate may help.

Chapter 6

48. What were two important characteristics of the half-century that followed the publication of *The Origin of Species*? What aspect of evolution had the greatest potential to offend Christians? (p. 156) How did Christians make peace with evolution during this period?

“I am free to say, for myself, that I do not think that there is any general statement in the Bible or any part of the account of creation, either as given in Gen. I & II or elsewhere alluded to, that need be opposed to evolution.” – B. B. Warfield

49. Briefly describe the contributions of the following proponents of Young Earth Creationism: (p. 159-161)



- Ellen G. White (pictured)
- George MacCready Price
- John Whitcomb and Henry Morris
- Ken Ham

50. How did the discovery of radioactivity support Darwin's theory? (p. 162)

51. What is *entropy*? (p. 164)

52. What is the only truly isolated system, where the second law of thermodynamics applies perfectly? (p. 166) Have you heard the argument that the second law refutes evolution? Do you agree with it?

53. How does Darwin's theory address the origin of life? (p. 169) Do you think we should conclude that a miracle is needed to get life started? Why or why not?

“The fact that an explanation for the origin of life is currently elusive does not mean divine intervention is the only possible explanation or even the best explanation.”

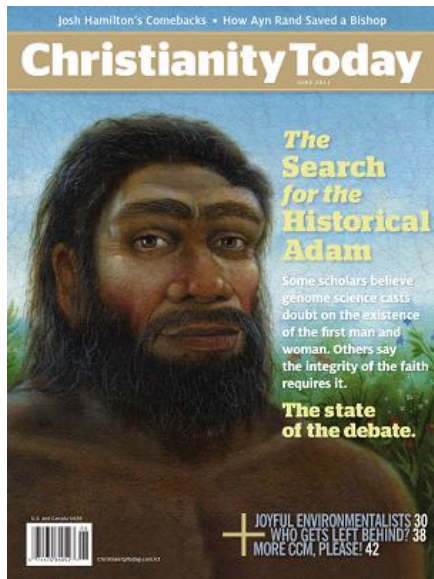
Chapter 7

54. What is *fine-tuning*? What is the best example in our universe? (p. 181)
55. What are the four forces in nature? Give a brief description of each. (p. 179) Do you find it amazing that everything that occurs happens by one of these four different kinds of force?
56. Explain the fine-tuning of one of the following: carbon, gravity, expansion or density.
57. What four responses do scientists use to explain fine-tuning without God? (p. 187-189) Are you attracted to any of them?
58. What is the authors' problem with the Intelligent Design Movement (ID)? (p. 190) Most educated evangelicals are strongly attracted to ID. Where do you stand on it?
59. According to the authors, what do *all* Christian positions on origins share? (p. 192) Do you think this is true? Can you imagine a Christian who did not hold this view?
60. What are three concerns Christians should have about the ID Movement? (p. 193-194) Are they reasonable concerns?

“The more I examine the universe, and the details of its architecture, the more evidence I find that the Universe in some sense must have known we were coming.” – Freeman Dyson

Chapter 8

61. What are the three theological speculations presented concerning God's role in evolution as related to human significance?
62. Contrast the views of Stephen Jay Gould and Simon Conway Morris on human evolution. (p. 201-202) Why do you think that world class biologists can have such different ideas about something so basic as whether evolution has a direction?
63. Define *convergence*. What is an example? (p. 203)
64. What is the significance of the Genesis account of creation? (p. 206) Is this what you would identify as the significance? What do you think your pastor or priest would say about this question?
65. What is the literalist interpretation of Genesis? What is the “everyman” reading of Genesis? What non-literal interpretation does Peter Enns offer?
66. Have you ever thought about the significance of Adam and Eve before? How do different interpretations change the significance of the beginning of Genesis in your life?



The June 2011 issue of Christianity Today has a major cover story about the controversy brewing over whether Adam was a historical figure. Both Karl Giberson and Peter Enns are quoted in the article. Read the article and think about where you stand on this. controversial question.

Chapter 9

67. Read this final chapter and write down any phrases/sentences that stand out to you. What parts are most intriguing?

68. Look back to Question 1 at the beginning of the study guide. Have your questions been answered? Pick a question and briefly answer it from the information in this book.

69. What new questions do you have? What book do you wish you could read right now, based on your reactions to this book?

70. Think about your future and possible career or lifestyle. What lessons from this book are relevant to you? Maybe they are specific discussions, like the interpretations of the Bible, or maybe they are more general themes. Some people think the topics in this book are irrelevant to Christians and it doesn't matter what we think about topics like evolution. Do you agree with this? If not, what would you say to someone who held this viewpoint?

Watch the video clip “Why is Evolution Controversial Anyway?”

<http://www.pbs.org/wgbh/evolution/educators/teachstuds/svideos.html>

Study Guide: *The Language of Science and Faith: Straight Answers to Genuine Questions* created by Karl Giberson and Carissa Schutz, June 2011