

STUDY GUIDE

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UNDERSTANDING INTELLIGENT DESIGN

EVERYTHING YOU NEED TO KNOW IN PLAIN LANGUAGE

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CHAPTER 1:

DISCUSSION QUESTIONS:

- (1) Do you agree with the National Study of Youth and Religion that many people lose their faith in God because of intellectual skepticism? How important is it for Christians to understand the evidence for design? Besides losing their faith outright, can you think of any other negative consequences to their faith for believers who doubt the scientific case for design?
- (2) What is naturalism? If true, what would it mean for Christianity? Do the media, educational system, and even sometimes churches indoctrinate young people into naturalism? Can you think of any examples?
- (3) How significant is the worldview conflict taking place in our culture between theism and naturalism? What factors make it significant? Which side do you think currently has the upper hand? Why?
- (4) How does Nancy Pearcey define a worldview? What three fundamental questions does every worldview answer? Using these three questions, compare and contrast Christianity with naturalism.
- (5) What does Daniel Dennett mean when he says that Darwinism is a “universal acid”? Why do Darwinists want all aspects of reality to be understood within a Darwinian framework? Why might it be a mistake to understand all of reality from a Darwinian perspective?
- (6) Why is it important to challenge Darwinism? Has Darwinism become more than a scientific theory? Has it also become an ideology? Explain the difference. What are some examples from pop-culture Darwinism that suggest it has become an ideology?
- (7) How significant is the conversion of Antony Flew from atheism to theism? What evidence led professor Flew to change his mind about the existence of God? How convincing is that evidence?
- (8) According to a study by Michael Shermer, what is the top answer given by theists for believing in God? How significant has this reason been in your own life? Given that our intuitions about the world naturally incline us to believe in design, what, if anything, entitles Darwinists to shift the burden of proof on those who accept design? What burden, if any, do Darwinists bear?
- (9) How do the media regularly misrepresent intelligent design? What is the main claim of intelligent design? Do you agree that drawing design inferences is a necessary part of our lives? Would it be irrational to reject design inferences out of hand? Explain.
- (10) The media often claim that ID was defeated at Dover? Do you agree? Why should Judge Jones’ ruling against ID at Dover be treated with suspicion and skepticism?

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CHAPTER 2:

DISCUSSION QUESTIONS:

- (1) Why must nature have an underlying rational order for science to be possible? What philosophical commitments does science depend on?
- (2) Why do you think Einstein was so amazed at the comprehensibility of the world? Does naturalism or theism offer a better explanation for why our minds can comprehend the natural world?
- (3) If naturalism were true, why would this provide a good reason for *not* trusting our mental faculties? Why did Darwin doubt the conviction of man's mind?
- (4) Do you agree that naturalism and theism are both religious commitments, in the Supreme Court's sense? Do you find naturalism liberating or a modern form of idolatry? From a biblical perspective, why is naturalism idolatry? Why is it foolish to engage in idolatry?
- (5) In what way does naturalism permeate Western culture? Can you think of any additional examples that reveal the dominance of naturalism?
- (6) What would happen to a police detective who relied solely upon natural causes in a criminal investigation? Does naturalism encumber scientific investigation the same way?
- (7) What is the difference between microevolution and macroevolution? What controversial claim do Darwinists make about microevolution? Specifically, what is the Darwinian mechanism for generating new species? Do you find it plausible?
- (8) What is theistic evolution? Why is it indistinguishable from atheistic evolution? What is the most important question that needs to be asked about the natural world?
- (9) What is creationism and how is it different from intelligent design? Why do you think the media repeatedly refers to ID as a form of creationism?
- (10) Why doesn't intelligent design identify the designer? Why is science limited in its ability to identify the designer?

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Chapter 3

DISCUSSION QUESTIONS:

- (1) What is your reaction to the claim that the evidence for evolution is weak? Do you find it hard to believe? Do you agree?
- (2) Why do you think only ten percent of the public accept strict Darwinism? Is it for lack of training or because the evidence is weak? What do you think prevents many scientists from recognizing the lack of evidence for evolution?
- (3) In what ways are vestigial structures supposed to support evolution? What problems exist for this “evidence”? What crucial question does the appeal to vestigial structures completely ignore? How are vestigial structures consistent with ID?
- (4) Do you believe that apparent imperfections in nature count against design? List some examples of designed objects with imperfections. Why is the idea of perfect design really a myth?
- (5) What is the *real* genetic similarity between chimpanzees and humans? Is this similarity best accounted for by Darwinian evolution or design? Support your answer.
- (6) What did Darwin believe to be the most convincing evidence for his theory? What is the problem with Haeckel’s drawings? What does the actual embryological evidence show?
- (7) What is “evo-devo”? What mechanism does it consider the cause of macroevolution? What is the core problem for evo-devo?
- (8) Do you think HIV mutations can be extrapolated to account for all the complexity and diversity of life? Why or why not? After 50 years of adaptation and mutation, to what extent has the HIV virus evolved?
- (9) On a scale of 1-10, how would you rate the evidence for Darwinian evolution? Can you think of any other common evidences offered for evolution not discussed in this chapter? Do these “evidences” solely support evolution, or could they also be understood from the perspective of design? Justify your answer.
- (10) Did your view of Darwinian evolution change at all after reading this chapter? Do you think Darwinism should be abandoned? Do you think it will be overturned in your lifetime? Why or why not?

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Chapter 4:

DISCUSSION QUESTIONS:

- (1) What is paleontology? How are paleontologists like detectives? What role do background assumptions play in the study of fossils as compared to the study of gravity? How would the assumption of naturalism influence one's interpretation of the fossil record?
- (2) What did Darwin consider the "gravest objection" to his theory? Does the fossil record match Darwin's great "tree of life" in which organisms branch out gradually over time? Why is Darwinism committed to a gradual form of evolution? Does the fossil record reveal the transitional fossils predicted by Darwinism? Is *Archaeopteryx* a good example of a transitional fossil? Why or why not?
- (3) What are the three striking features of the fossil record? What is the Cambrian Explosion? Why is the Cambrian Explosion so problematic for evolution? What does it mean that the fossil record has remained constant over time? Why types of gaps exist in the fossil record?
- (4) What are the four solutions offered to explain the scarcity of transitional fossils? If you were going to pick one of the proposed solutions to explain away the fossil record, which one would you pick? Can you think of any other possible solutions? Why does the claim that not enough fossils have been found not square with the evidence? How significantly has the fossil record been explored?
- (5) What is punctuated equilibrium? How does punctuated equilibrium match up with the fossil record? What is the most significant problem for punctuated equilibrium?
- (6) What does it mean to explain the lack of transitional fossils as the result of abrupt emergence? What analogy does Frederick Hoyle use to illustrate the possibility of complex organisms emerging abruptly? Is this a weak analogy or a strong analogy? Support your answer.
- (7) Why can't fossils, in principle, even prove common descent? What method do scientists use to draw conclusions about ancestor-descendant relationships between fossils?
- (8) What is the file-drawer effect? Why does this call into question the use of "successful" fossil progressions to support evolution?
- (9) How did Tim Berra's Corvette illustration—which was meant to demonstrate gradual evolution—actually support design? At best, what would his example actually prove? In what way is the fossil record consistent with design?
- (10) In what way is biology "a science of information"? How does the emergence of biological information in the fossil record point to design? What is the Darwinian solution to this phenomenon? What is the problem with this attempted solution? On a scale of 1-10, how convincing is this evidence for design?

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Chapter 5:

DISCUSSION QUESTIONS:

- (1) If the evidence for Darwinian evolution is so weak, then why are the academic establishment, the media, and Hollywood so committed to it? Do you agree with Alvin Plantinga, that if naturalism is true, then evolution is the only game in town? Why or why not?
- (2) Why do many Darwinists relegate ID to the status of non-science? How do disciplines such as archaeology and forensic science rely upon accurately identifying when an intelligent agent has acted? Should this same reasoning be applied to biology? What type of non-human designers do we have experience with?
- (3) Does science only deal with phenomena that are observable? Why do scientists often accept non-observable phenomena? If scientific processes must be observable, what would follow for macroevolution?
- (4) Do you agree that design should be rejected as science since we can always ask, "Who designed the designer?" What is wrong with the methodology that always requires an additional explanation? How is archaeology a good counter example to this criticism?
- (5) Is science restricted to studying only phenomena that are repeatable? If this were true, what phenomena would be excluded? What scientific disciplines study phenomena that are *not* repeatable?
- (6) Is intelligent design testable? How are Darwinists caught in a catch-22 when they deny that ID is testable? Give a specific example of how ID is in principle testable.
- (7) Should ID be excluded from science on the grounds that it is limited to studying what is natural as opposed to supernatural? What is the proper contrast regarding influences in nature? What can intelligent causes do that natural causes cannot?
- (8) What is methodological naturalism? How does it exclude intelligent design from the start? What is the central problem with methodological naturalism? What is the proper definition of science? How is this different from the way naturalists want to define science?
- (9) What's the problem with appealing to the scientific consensus in support of Darwinism? Give three examples of how the scientific establishment has been overturned in the past.
- (10) How does Darwinism stifle scientific inquiry? What different predictions do Darwinism and intelligent design make regarding the functionality of "junk DNA"?
- (11) According to Darwinists, why do design theorists oppose evolution? Is this a fair criticism? Do you believe there is a link between Darwinism and the

undermining of traditional morality? What was Michael Behe's motivation for rejecting Darwinism? Ultimately, why is motivation irrelevant to the truth of a scientific theory?

- (12) What is an argument from ignorance? Do you think Darwinism or intelligent design is more of an argument from ignorance? Support your answer.

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Chapter 6:

DISCUSSION QUESTIONS:

- (1) What is a design inference? What special sciences rely upon detecting intelligence? Is there a common methodology they all employ? Why do we draw a design inference for Mount Rushmore but not for the Grand Canyon? List some basic design inferences that you make on a regular basis.
- (2) What is specified complexity? How do the scientists in the movie *Contact* rely on specified complexity to identify the marks of intelligence? Why are both specificity and complexity necessary for recognizing design?
- (3) What is the Explanatory Filter? Explain the process by which the Explanatory Filter detects design. What feature must an event, object, or structure exhibit to warrant a design inference?
- (4) What mechanism do Darwinists believe accounts for specified complexity in living organisms? Explain Richard Dawkins evolutionary algorithm. Why does his example actually support intelligent design rather than Darwinian evolution?
- (5) Do you believe that a monkey, if given enough time and resources, could produce the entire works of Shakespeare by typing on a computer? Why or why not? What is the longest sequence of letters and spaces that chance could produce in our universe? What happened when some students and teachers actually put the monkeys-typing-Shakespeare theorem to the test?
- (6) Is it possible that the Explanatory Filter merely assigns design to an improbable event? Although every seating arrangement at a football stadium is improbable, which type of seating arrangement would warrant a design inference? How does the biblical story of Joseph support this point?
- (7) How do we know the Filter doesn't mistakenly attribute design to certain regular arithmetic sequences that seem to arise naturally in biological systems? Why is it problematic to point to Fibonacci sequences as the result of an unintelligent process?
- (8) How likely do you think it is that we will eventually find a natural explanation to account for design? Why is this risk not exclusive to intelligent design? Do you think the scientific community will eventually realize that naturalistic evolution is a dead end? Why or why not?
- (9) Does the Filter mistakenly separate chance and necessity, and therefore fail to consider their combined efforts? How can a system be influenced by chance and necessity yet still bear the marks of design?
- (10) How reliable is the Explanatory Filter? What is a false negative? Give an example. Why are false negatives not problematic for the Filter? What is a false positive? Does the Filter ever output false positives?

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Chapter 7:

DISCUSSION QUESTIONS:

- (1) What is the scientific community's unanimous conclusion about the origin of life? How did Darwin attempt to account for the origin of life? Do you agree that Darwin's theory is incomplete without an account of the origin of life?
- (2) How did scientists during the time of Darwin view the cell? How has our understanding of the cell changed with technological advancements? Do you think it is helpful to compare the cell to modern machinery? Why or why not?
- (3) What is spontaneous generation? How did Francesco Redi discredit macroscopic spontaneous generation? How did Louis Pasteur discredit the spontaneous generation of microscopic organisms?
- (4) What is chemical evolution? How did Miller and Urey put this hypothesis to the test? What was the result? What problems emerged for the Miller-Urey experiment when scientists probed deeper?
- (5) What does it mean that non-living matter can organize itself into life? What was Dean Kenyon's theory in *Biochemical Predestination*? Why did he subsequently change his mind?
- (6) What is panspermia? What are the two different forms of panspermia? Do you find either one convincing? Why do all such theories ultimately collapse?
- (7) How does origin-of-life research face a chicken-and-the-egg problem? What is the RNA-first model? Why is the RNA-first model not currently a viable explanation for the origin of life?
- (8) What is the central problem the Cambrian Explosion raises for the emergence of first life? Why do current naturalistic models fall short of explaining this phenomenon?
- (9) Why is information theory the key to gaining a scientific understanding of life? How is information different from physical matter?
- (10) How does DNA store information? In what way is DNA analogous to a written language? Do you think design is the best explanation for the information content of DNA, or are material forces sufficient? Support your answer.

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Chapter 8:

DISCUSSION QUESTIONS:

- (1) What test did Darwin give for disproving his theory? How is this similar to finding the bones of Christ? In actuality, why is Darwin's test really no test at all?
- (2) What is a black box? List three things you personally consider a black box. What did Darwin consider to be a black box? What was Michael Behe's central claim in *Darwin's Black Box*?
- (3) What is an irreducibly complex system? What is the irreducible core? How is a mouse trap irreducibly complex? How would an irreducibly complex biological system put Darwin's theory to the test?
- (4) What is the bacterial flagellum? Describe its function and purpose. In what way is the flagellum irreducibly complex like a mousetrap? Why is this problematic for Darwinism?
- (5) What is a direct Darwinian pathway? What is an indirect Darwinian pathway? Give an example of each. Why is the direct Darwinian pathway of natural selection unable to explain irreducible complexity? What evidence is there for an indirect pathway?
- (6) What is co-option? How does co-option attempt to counter the argument from irreducible complexity? Do you find co-option a convincing explanation for irreducible complexity? What three key difficulties does this explanation encounter?
- (7) What is the type III secretory system (TTSS)? How is it meant to explain away irreducible complexity? Is it a likely evolutionary precursor to the bacterial flagellum? Support your answer. What is the bottom line regarding evidence for the evolution of the flagellum?
- (8) Some Darwinists admit that they have no explanation for the origin of the flagellum, but they believe such explanations are forthcoming if we search long and hard enough. Do you find this response convincing? Why or why not?
- (9) Why is the appeal to Darwinian evolution to explain irreducible complexity really an argument from ignorance? What does Michael Behe's recent book, *The Edge of Evolution*, reveal about the gaps in Darwinism?
- (10) How is irreducible complexity a positive argument for design? What is it about irreducibly complex systems that point to design? On a scale of 1-10, how convincing is this reasoning?

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Chapter 9:

DISCUSSION QUESTIONS:

- (1) If you came across an abandoned cabin that happened to be suited just to your wants and needs, what would you conclude? Is this a fitting analogy for the universe as a whole? Why or why not?
- (2) What does it mean that the universe is fine-tuned for life? Which of the three examples of cosmic fine-tuning do you find most compelling? How improbable is the fine-tuning when we combine all the necessary factors? Why does cosmic fine-tuning defy a Darwinian explanation?
- (3) What two facts about fine-tuning does Antony Flew highlight in his book *There is a God?*
- (4) Why is necessity incapable of explaining the fine-tuning of the laws of physics? Why would it not help naturalists if we found some mega-law that explains why all the constants of nature have the values they do? Is chance a convincing explanation? Why or why not?
- (5) What is the anthropic principle? Respond to the following rejoinder: “We should not be surprised by the fine-tuning of the laws of nature. After all, if the universe were not fine-tuned, then we would not be here to observe it.”
- (6) What is the multiverse theory? What evidence is there for the existence of a multiverse? According to Flew, how does the multiverse theory actually make things worse for naturalists? Why do you think this theory accepted by many scientists and philosophers today?
- (7) What did Copernicus discover in 1543? What is the Copernican Principle? What have Christians always believed about our significance in the universe as related to our size?
- (8) List the physical factors that must be set just right for life to be possible on Earth. Which of these do you find the most compelling? Are you aware of any more?
- (9) What factors must be met to observe a solar eclipse? What remarkable correlation have scientists found recently regarding solar eclipses? What is the premise of *The Privileged Planet*? List two other examples of how Earth is suited for life and discovery.
- (10) What did atheists and theists each believe was eternal up until the 20th century? How did the findings of Einstein and Hubble settle this debate scientifically? How does the Big Bang actually support intelligent design? What two important conclusions follow from acceptance of the Big Bang?

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Chapter 10:

DISCUSSION QUESTIONS:

- (1) Do you believe that intelligent design will revolutionize science? Why or why not? What evidence is there that this revolution is already taking place?
- (2) What three important points did Thomas Kuhn make in *The Structure of Scientific Revolutions*? In what way are these three points playing out in the intelligent design movement?
- (3) How important are young people in the design revolution? What role do you think they will play? Why do you think young people would want to get involved—and some even commit their lives—to revolutionizing science?
- (4) What is the sincerity rule? How does its practice differ in the law as opposed to science? How are scientists actually discouraged from raising doubts about unintelligent evolution? How does the response to Jonathan Well's *Icons of Evolution* illustrate this point?
- (5) What happens to people who attack intelligent design (e.g. Judge Jones)? What regularly happens to people who reject Darwinian evolution and publicly embrace ID? How can supporting ID be a form of martyrdom? What advantages do ID supporters have in this debate?
- (6) Why do you think some Christians refuse to embrace intelligent design? According to Francis Ayala, why does Darwinian evolution “remove a major burden” off the shoulders of ID proponents? Do you accept his reasoning? Why or why not?
- (7) What is an op-ed? How can writing an op-ed help advance ID in your community? Comment on the effectiveness of Richard Halvorson's op-ed (reprinted here from the *Harvard Crimson*) in reaching the Harvard Community.
- (8) What is the argument from bad or malevolent design? How is it used by some religious thinkers to criticize intelligent design? Does their argument hold up? Explain.
- (9) What's the best way to deal with hard-core critics of ID? Is time spent trying to “convert” them to ID well spent? Or are you better off trying to win over the undecided middle? Explain (see also Appendix D).
- (10) After reading this book, what will be your next step? In what ways can you use this book as a resource to make a practical difference for the design revolution? Which of the ten ways of making a difference are you eager to implement and why?