If we understand our own times, we will know that we should affirm the reality of God by challenging the domination of materialism and naturalism in the world of the mind. With the assistance of many friends I have developed a strategy for doing this,...We call our strategy the "wedge." pg. 91-92, Defeating Darwinism by Opening Minds Phillip Johnson, 1997

This isn't really, and never has been a debate about science. Its about religion and philosophy." WITNESSES FOR THE PROSECUTION Darwin on Trial author brings together anti-Darwin coalition to bring down evolution by Joel Belz in Los Angeles

The objective (of the wedge strategy) is to convince people that Darwinism is inherently atheistic, thus shifting the debate from creationism vs. evolution to the existence of God vs. the non-existence of God. From there people are introduced to 'the truth' of the Bible and then 'the question of sin' and finally 'introduced to Jesus.'" Darwinism: Science or Philosophy Proceedings of a symposium entitled Darwinism: Scientific Inference or Philosophical Held on the Southern Methodist University campus in Dallas, Texas, USA, March 26-28, 1992.
Objections of Theists to the US Constitution

• There is no mention of God in the Constitution.
• It is explicitly stated in paragraph 1 of the Constitution that our laws come from men, not God.
• Paragraph 1

We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquillity, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

• 11 of the 13 ratifying states had religious tests for public office.
• Article 6, Paragraph 2

The Senators and Representatives before mentioned, and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States, shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States.
Discovery Institute
Talking Points

• Teach the controversy
• There is a scientific controversy over whether evolution by natural selection accounts for the life we see
• We aren’t creationists
• We aren’t trying to teach religion in public schools
Being a Creationist means never having to say “I’m sorry”

• Dembski believes that all life on earth has a common ancestor

• Creationists will never criticize other creationists, no matter how absurd their beliefs

• Young earth creationists fit right in, there is no criticism from other creationists
Time line

• 1840 Darwin writes notes on the theory of evolution.
• 1859 Darwin publishes *On the Origin of Species*.
• 1866 Mendel publishes the results of his experiments with pea plants. Genes are digital.
• 1884 Chromosomes are discovered.
• 1902 Sutton & Boveri theory places Mendel's genes on chromosomes.
• 1911 Morgan publishes confirmation of the chromosomal theory of heredity.
• 1930 Population genetics, Fisher, Haldane, and Wright.
• 1944 *What is Life?*, Schrödinger. "How can the events in space and time, which take place within the spatial boundary of a living organism be accounted for by physics and chemistry?"
• 1953 Watson & Crick discover the structure of DNA. The central part of Schrödinger's question is answered.
• 1965 The genetic code is complete. More details Schrödinger's question are filled in.
• 1973 Maynard Smith publishes his first evolutionary game theory paper. Game theory merged with population genetics.
• 1981 Maynard Smith publishes *Evolution and the Theory of Games* which summarizes his work in the 1970s.
• 1983 Homeo Box (HOX) genes sequenced. Evolutionary developmental biology (Evo-devo) begins.
• 1992 Harry Noller's lab discovered that ribosomal RNA is catalyzes protein synthesis.
• 2002 Mouse draft genome sequence published.
• 2003 Human Genome project complete.
• 2004 Human gene count estimate changed to 20,000 - 25,000.
**Fig. 3.7** The tool kit of animal development. The building and patterning of animal bodies are controlled by several different kinds of proteins in the tool kit. DRAWING BY JOSH KLAISS

Endless Forms Most Beautiful: The New Science of Evo Devo and the Making of the Animal Kingdom by Sean Carroll
**Fig. 5.7** A genetic wiring diagram of regulatory logic. Activators (circled letters) and repressors (squared letters) act on switches (solid lines). Arrows indicate activation effects, lines ending with a perpendicular line denote repression. Multiple tiers of activators and repressors are usually involved in building and patterning any structure. **Drawing by Josh Klaiss**
**Fig. 6.5 Evolutionary tree of arthropods and lobopodians.**
The relationships of living and extinct groups are shown. The common ancestor of both groups that most likely lived prior to the Cambrian must have possessed at least ten Hox genes because that number is found in all living descendants. **Drawing by Josh Klaiss**

*Endless Forms Most Beautiful: The New Science of Evo Devo and the Making of the Animal Kingdom* by Sean Carroll
**Fig. 6.8 The chordate evolutionary tree and the expansion of Hox clusters in vertebrate evolution.** The common ancestor of all chordates had one cluster, as do living tunicates and cephalochordates. Cluster duplication has happened several times since, on the line to jawless fish, on the line to cartilaginous fish (sharks), and again in lampreys. Because *Haikouichthys* is a Cambrian vertebrate whose evolutionary relationships are not certain, on the tree it branches out at the same (unresolved) time as hagfish, lamprey, and cartilaginous fish. DRAWING BY JOSH KLAISS
Endless Forms Most Beautiful: The New Science of Evo Devo and the Making of the Animal Kingdom by Sean Carroll

**Fig. 6.7** Shifting zones of *Hox* gene expression shape the major differences in arthropod design. *Hox* genes are indicated by number. Note the relative shifts in the position of boundaries of *Hox* genes 7, 8, and 9 among insects, centipedes, and four types of crustaceans (brine shrimps, mysids, lobsters, and cleaner shrimps) (shaded area). The number of maxilopeds (mXpds) correlates perfectly with the number of segments that express genes 8/9, and is shifted rearward from the condition in brine shrimps (which have no maxilopeds). The centipede has a poison claw (pc) just before its legs. Trilobites probably had just three body zones, defined by three different combinations of *Hox* genes. Drawing by Leanne Olds.
FIG. 6.9  Shifting zones of *Hox* expression also shape vertebrate diversity. Different vertebrates have different numbers of neck vertebrae, with mice having a short neck, geese long necks, and pythons virtually no neck at all (just a long trunk). The boundary between neck and trunk vertebrae is marked by expression of the *Hoxc6* gene in all cases, but the position differs in each animal relative to the overall body. The forelimb arises at this boundary in all four-legged vertebrates; in snakes this boundary is shifted far forward to the base of the skull and no limbs develop. DRAWING BY LEANNE OLDS
Transitional Forms

- Nostrils at front of skull: Pakicetus, 50 million years ago
- Nostrils at middle of skull: Aetiocetus, 25 million years ago
- Nostrils at top of skull: Beluga Whale, Today
Transitional forms
Why are marsupials found only in the Americas, Australia, and New Guinea?

Jurassic Period — 160 mya
Irreducible Complexity

In *Darwin’s Black Box*, Michael Behe argues that the bacterial flagellum is irreducibly complex because “A biological system cannot be produced gradually; it has to arise in an integrated unit in one fell swoop, for the natural selection of anything to act on.”
The ATP synthase (or F-ATPase), which produces ATP, is a fine example of one of nature's rotary motors. F-ATPase consists of two coupled motors, one electrically driven and the other chemically driven. There are several types of rotary motors, but only three are electrically driven: the F0-portion of the F-type ATPase, the V0-portion of V-type ATPases, and the flagellar motor of bacteria. The first two obey similar construction principles, whereas the bacterial flagellar motor is quite different. But all three types of rotary motor contain a central, ion-binding rotor ring that is embedded in the respective coupling membrane of the cell.
Gene Duplication

The duplicate gene can then evolve to perform a different function. This is why a tetrodotoxin is found in the puffer-fish, blue-ringied octopus, california newt, and birds in New Guinea.
DR. FRANCIS COLLINS: I guess I'd call myself a serious Christian. That is someone who believes in the reality of Christ's death and resurrection, and who tries to integrate that into daily life and not just relegate it to something you talk about on Sunday morning.

ABERNETHY: What do you say to your fellow Christians who say, "Evolution is just a theory, and I can't put that together with my idea of a creator God"?

COLLINS: Well, evolution is a theory. It's a very compelling one. As somebody who studies DNA, the fact that we are 98.4 percent identical at the DNA level to a chimpanzee, it's pretty hard to ignore the fact that when I am studying a particular gene, I can go to the mouse and find it's the similar gene, and it's 90 percent the same. It's certainly compatible with the theory of evolution, although it will always be a theory that we cannot actually prove. I'm a theistic evolutionist. I take the view that God, in His wisdom, used evolution as His creative scheme.

http://www.pbs.org/wnet/religionandethics/transcripts/collins.html
Francis S. Collins, a physician-geneticist noted for his landmark discoveries of disease genes, and his visionary leadership of the Human Genome Project (HGP), is director of the National Human Genome Research Institute (NHGRI). Collins developed the gene-hunting approach, which he named "positional cloning," that has developed into a powerful component of modern molecular genetics. Collins' team, together with collaborators, applied the new approach in 1989 in their successful quest for the long-sought gene responsible for cystic fibrosis. Other major discoveries soon followed, including isolation of the genes for Huntington's disease, neurofibromatosis, multiple endocrine neoplasia type 1, and the M4 type of adult acute leukemia.
Papal Condemnation (Sentence) of Galileo (June 22, 1633)

The proposition that the Earth is not the center of the world and immovable but that it moves, and also with a diurnal motion, is equally absurd and false philosophically and theologically considered at least erroneous in faith.