FOCUS ON THE FAMILY'S

The Truth Project™

Key Terms
Lesson 5 – Science: What is True?

Charles Darwin (1809-1882): British naturalist who proposed the theory of evolution through natural selection in his book *The Origin of Species* (1859). This book, and Darwin's theories, have had massive ideological and philosophical effects on our world and humanity.

Darwinian Evolution/Darwinism: A specific area of evolutionary biology involving natural selection proposed by Charles Darwin.

Directed Panspermia: Theory that suggests that highly-evolved life forms sent microorganisms or biochemical compounds from outer space to earth. Francis Crick developed this hypothesis to explain life on earth.

Fossil Record: The fossilized remains of plants and animals that provide the evidential means to understand when those organisms were alive, where they lived, and what they looked like.

Francis Crick (1916-2004): Co-discoverer of DNA who rejected the evidence of design. During the 1960s he became concerned with the origins of the genetic code and in the early 1970s proposed the theory of Directed Panspermia.

Great Cosmological Question: Where did the cosmos come from? The cosmos either had a beginning or has always existed.

Hypothesis: Very early assumption made on the basis of limited evidence used as a starting point for further investigation.

Intelligent Design: Scientific theory that nature and complex biological structures were intelligently designed and, as such, are not the result of chance. Proponents of intelligent design argue that there is empirical evidence that is subject to scientific investigation that complex biological systems and the information bearing properties of DNA could not have been created by natural selection.

Irreducible Complexity: A complex system that could not function if it were any simpler, and therefore could not possibly have been formed by successive additions to a precursor system with the same functionality. An analogy often given in support of irreducible complexity is the mousetrap.

Jonathan Wells: Biologist, senior fellow of the Discovery Institute, and author of *Icons of Evolution*. A prominent spokesperson for the intelligent design movement, Wells' book proves that many of the most commonly accepted arguments for evolution are invalid.

Law: A statement of scientific fact that a particular natural or scientific phenomenon is invariable under given circumstances

Michael Behe: American biochemist, senior fellow of the Discovery Institute's Center for Science and Culture, and author of *Darwin's Black Box*. Behe is a leading advocate and spokesperson for the intelligent design movement who is most well known for articulating the concept of irreducible complexity.

Molecular Biology: The branch of biology that deals with the formation, structure, and function of macromolecules essential to life; in particular t he interactions between the various systems of a cell, including the interrelationship of DNA, RNA and protein synthesis and learning how these interactions are regulated

Paley's argument for design: Named after William Paley (1743-1805), this is sometimes referred to as the watchmaker analogy: it is plain to see that the parts in a watch are designed and placed in relationship with each other for a purpose and that the watch therefore must have a maker. In the same way, our universe bears evidence of design and purpose and, therefore, must have a maker.

Punctuated equilibrium: A theory in evolutionary biology that says the appearance of new species occurs suddenly and without continuous slow variations; species will show little or no evolutionary change throughout history

Science: The systematic study of the structure and behavior of the physical and natural world through observation and experiment. Science and philosophy are both attempting to develop truth claims about reality; philosophy in the realm of universals, science in the realm of particulars.

Stephen Jay Gould (1941-2002): American paleontologist and evolutionary biologist who taught at Harvard University and worked at the American Museum of Natural History. He was an influential and widely read author that developed the theory of punctuated equilibrium (see glossary entry) due to the lack of evidence in the fossil record for gradual Darwinianism.

Theory: Idea or belief about something formed by speculation, conjecture, or deduction from certain facts within certain parameters