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Modern Science and the Book of Genesis

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**Effective Strategies for Teaching Evolution and Other
Controversial Topics**

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Foreword

In using science to explain natural events, Copernicus, Galileo, and Darwin opened some doors that led many of their contemporaries to view the world in a different manner. Today, scientists open these doors at a faster pace, and the new knowledge that emerges often challenges traditional thought and poses ethical questions. For a variety of reasons, citizens may challenge the process and products of science in an uninformed manner. Because of the multifaceted consequences of the wrongful use of the conclusions and products of science, it is important that citizens have a voice in determining how science is used. However, this voice should be informed.

Despite its centrality to understanding the natural world and much of today's research, evolution's rightful place in the science curriculum has not been attained because of the persistent opposition of antievolutionists and their enablers. The opposition and enablement have been fueled by a lack of understanding of the methods of science and, too often, by an uninformed view of the purpose and context of Genesis and how it was written. Dr. Skehan, in this revision of his earlier important work, skillfully clarifies the differences in the basis of the claims of religion and science. In detailing the history and theological meaning of the book of Genesis, Skehan shows why Genesis is not the literal explanation for the nature and history of the natural world.

Students who repeatedly experience the strategies described by Dr. Nelson in this volume should gain a solid understanding of the nature of science. They will learn how to test claims and ideas in an informed manner, regardless of their origin. They will learn how to consider alternatives to various claims and the benefits and consequences of accepting or rejecting them. Also, Nelson shows the differences in how basic science and creationism answer important questions about the origin and evolution of the universe and life.

I am confident that this small volume will provide readers with additional understanding of the nature of science and the relationship between science and religion. Hopefully, this understanding and the use of the strategies will facilitate the professional practice of science teachers. These teachers have the immense task of preparing students for life and work in a century where advances in our understanding of the natural world continue to open doors that will challenge long-held views and pose difficult ethical questions.

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NSTA President, 1985–86

Modern Science and the Book of Genesis

James W. Skehan, S.J.

Many religious people, including scientists, hold that God created the universe and the various processes driving physical and biological evolution and that these processes then resulted in the creation of galaxies, our solar system, and life on Earth. This belief, sometimes termed *theistic evolution*, is not in disagreement with scientific explanations of evolution. Indeed, it reflects the remarkable and inspiring character of the physical universe revealed by cosmology, paleontology, molecular biology, and many other scientific disciplines.

The advocates of “creation science,” a proactive kind of Christian religion that purports to be scientific, hold a variety of viewpoints about the age of Earth. Some creationists claim that Earth and the universe are relatively young, perhaps only 6,000 to 10,000 years old. Some creationists believe that the present physical form of Earth can be explained by “catastrophism,” with a worldwide flood as one of the catastrophes, and that all living things (including humans) were created miraculously, essentially in the forms we see them today.

Other advocates of creation science are willing to accept that Earth, the planets, and the stars may have existed for millions of years. But they argue that the various types of organisms, and especially humans, could only have come about through supernatural intervention, because they show “intelligent design.”

There are no valid scientific data or calculations to substantiate the belief that Earth was created just a few thousand years ago. Independent scientific methods consistently give an age for Earth and the solar system of about five billion years, and an age for our galaxy and the universe that is two to three times greater. The conclusions derived from these methods make the origin of the universe as a whole intelligible, lend coherence to many different branches of science, and form the core of a remarkable body of knowledge about the origins and behavior of the physical world.¹

