

What Is Science?

by Dave and Mary Jo Nutting

Students around the country are again busy hitting the books. Most are enrolled in some sort of science class, but just what is science? To the layman, science is often a mysterious endeavor which involves myriads of test tubes, microscopes, lab coats and all kinds of complicated apparatus.

Reactions to science range from indifference to boredom to fear to an almost worshipful awe, and scientists are variously seen as eggheads, villains or gods.

In reality, science is not such a mysterious thing. In a nutshell, it is understanding our physical selves and the universe we live in. Good science begins with observation. It involves careful investigation of the living and non-living world through the use of our senses — sight, hearing, touch, smell and taste. Technology has aided (and complicated) this investigation by developing many tools and instruments to extend our senses, but it has not really changed the essence of the abilities used.

Scientific investigation can begin at any age. In fact, two year olds are, in some senses, better scientists than many adults! They have boundless curiosity about their world, and seem to have unlimited time to observe and ask questions. If you don't believe that, try taking a walk through the woods with a young child. They see bugs, rocks, twigs, flowers and dirt you probably never knew existed (and long since ceased caring about). In some ways, true scientists are just people who never grew up. They maintain a deep curiosity aboout the world and "what makes it tick," and they aren't afraid to ask questions. Hopefully, their observational skills have sharpened and their questions have become more sophisticated, but the same skills and attitudes are at work.

Many times students are "turned off" to science because of the way in which it is presented. Face it, nobody gets too excited about memorizing long lists of complicated terms, seemingly unrelated facts, and meaningless numbers - but that isn't science. Most students enjoy asking questions and trying to find the answers themselves, though. Science classes become much more exciting when students are allowed to actually become scientists, rather than just learning about science. In the process they develop many valuable skills that they can use throughout their lives - skills like observing, classifying, inferring, predicting, measuring, and interpreting data. They also learn to design experiments to test their ideas and to communicate their findings to others. Science, then, is not mysterious; it is a rewarding and educational process that involves thinking and doing. Young and old alike can participate in this exciting process of learning more about God's wonderful world.



A Biblical Framework for Science See Spotlight on Science



■ Evolutionists often claim that no true scientists are creationists. The fact is, that many of the great scientists of the past accepted the Biblical account of creation. The following quotes are taken from *Men of Science, Men of God*, by Dr. Henry M. Morris, 1982.

- Johann Kepler (1571-1630) is considered to be the founder of physical astronomy. ... It was he who discovered the laws of planetary motion and who established the discipline of celestial mechanics. ... He was apparently the first scientist to state that ... he was merely "thinking God's thoughts after Him". ... Kepler wrote in one of his books, "Since we astronomers are priests of the highest God in regard to the book of nature, it befits us to be thoughtful, not of the glory of our minds, but rather, above all else, of the glory of God." (pp. 33-35)
- Isaac Newton (1642-1727) is famous for, among other things, his discovery of the law of universal gravitation, the formulation of the three laws of motion which make possible the discipline of dynamics and all its subdivisions, and his development of the calculus into a comprehensive branch of mathematics. ... This man of gigantic intellect was also a genuine believer in Christ as his Savior and in the Bible as God's Word. ... He wrote strong papers refuting atheism and defending creation and the Bible. He believed that the worldwide Flood of the Bible accounted for most of the geological phenomena, and he believed in the literal six-day creation record. Finally, he said: "We account the Scriptures of God to be the most sublime philosophy. I find more sure marks of authenticity in the Bible than in any profane history whatsoever." (pp. 45-47)
- Samuel F. B. Morse (1791-1872) is justly famous for his invention of the telegraph. . . . The first message sent (in 1844) over the wire, "What hath God wrought!" (Numbers 23:23), was indicative of Morse's whole life and purpose, desiring to honor the Lord in all things. . . . Just four years before he died, Morse wrote: "The nearer I approach to the end of my pilgrimage, the clearer is the evidence of divine origin of the Bible, the grandeur and sublimity of God's remedy for fallen man are more appreciated, and the future is illumined with hope and joy." (pp. 61-62)
- Louis Pasteur (1822-1895) is one of the greatest names in the history of science and medicine. ... He undoubtedly made the greatest contribution of any one man to the saving of human lives, and most scientists today would say he was the greatest biologist of all time. Yet, in his lifetime, he was the object of intense opposition by almost the entire biological establishment, because of his own opposition to spontaneous generation and to Darwinism. When asked about his faith, Pasteur would reply:

"The more I know, the more does my faith approach that of a Breton peasant. Could I but know all, I would have the faith of a Breton peasant woman." (pp. 80-84).

 George Washington Carver (1864-1943) was the great black scientist who was considered the world's authority on peanuts and sweet potatoes and their products. . . . He developed over 300 products from the peanut and over 118 from the sweet potato. Carver was also a sincere and humble Christian, never hesitating to confess his faith in the God of the Bible and attributing all his success and ability to God. In 1939 he was awarded the Roosevelt medal, with the following citation: "To a scientist humbly seeking the guidance of God and a liberator to men of the white race as well as the black." (pp. 104-105)

■ All of the above and many more were great scientists, yet they were at the same time Bible believers. Scoffers may argue, "Well, they were just the product of their times. Everybody back then believed the Bible." Henry Morris, who himself is listed in *Who's Who in Science*, deals with this argument:

• But that's exactly the point! It was no coincidence that it was in the milieu of the Reformation and the Great Awakening that modern science first grew and began to thrive. Fruitful scientific research almost demands a Biblical world view, either consciously or subconsciously, a world view in which like causes produce like effcects, where natural phenomena follow fixed and intelligible natural laws, and where we can have confidence that we can think rationally and meaningfully. Such a world presupposes no random, chaotic origin but an origin under the control of a great mind and will, an intelligent and volitional First Cause, a great Lawgiver who can enact, implement and enforce His created laws. (*Biblical Basis of Modern Science*, 1984, p. 29)

■ As in the past, many good scientists today are Biblebelieving creationists and Christians. Their faith does not detract from their science. For many, it enhances their motivation and ability to work carefully and honestly as they sincerely seek to understand the workings of God's world.

The 1988 expanded and enlarged edition of *Men of Science, Men of God* is a valuable reference for students and Christians in general. It is available from Alpha Omega Institute for \$4.95 + \$1.00 shipping. Order your copy today.

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Biblical Framework for the Study of Science

Many people believe that the Bible is incompatible with science. However, most of the great scientists of the past were Bible believers. Men like Newton, Galileo, Copernicus, Bacon, and others found no conflict between the Bible and science. While the Bible is not a "textbook" of science, it does give a broad framework within which to understand our physical universe.

Science itself is limited to a study of objects and processes that exist in the present. It deals with empirical events, those events which can be observed and tested and is limited to the study of natural objects and events which can be studied either directly or indirectly. Therefore, science cannot authoritatively speak about events in the past, nor about non-physical things such as values and emotions. The best that science can do concerning the past is to propose theoretical frameworks or models with which to explain the past. These models can be tested against known physical data existing in the present to see how well they "fit."

The Bible claims to have authoritative information about the history of the world. While it cannot be "proven" or "disproven" scientifically, it can be tested to see if it fits with our understanding of the facts of nature, limited though they be. The evolution model could be tested in a similar way.

From a Biblical perspective, the basic premise undergirding the study of science is "The earth is the Lord's" (Ps. 24:1). Therefore, science is a study of God's world. We learn from Genesis and many other references that this world was created by God's powerful Word (Heb. 11:3). Nowhere in Scripture does it say the creatures of the earth evolved. In fact, the overwhelming testimony of Scripture is that God finished His creative work in 6 days (Gen. 2:1-3, Exz. 20:8,9,11).

Isaiah (45:18) tells us that the earth was created with a purpose (to be inhabited) - it was not just the accidental result of chance cosmic events. The Bible says the creation was "very good." It was a perfectly balanced world which supplied mankind with a beautiful and bountiful home. The Bible seems to indicate the existence of some sort of water canopy above the atmosphere. This would tend to moderate the climate and screen out much harmful radiation. As a result, man and animals could live much longer. In addition, it was an orderly world. God instituted orderly "natural laws" by which His world would operate. These laws must have included such basic principles as the law of biogenesis (life comes only from life), the orderly motion of the sun, moon, stars and planets (for signs and for seasons), the law of gravity, the laws of electricity and magnetism, and the other basic laws of chemistry and physics. These "laws" are responsible for the ordinary day-to-day functioning of God's universe and are under His control.

The home that God created for man was ideal in every way and yet something happened to change it. When Adam and Eve sinned (Gen. 3), death entered the world (Rom. 5:12). The entire creation was cursed and the perfect balance changed (Rom. 8:19-21). It was probably at this time that the Law of Entropy (the Second Law of Thermodynamics) became operative. Decay and disorder came into God's perfect creation, and mankind now had to obtain his food by the sweat of his brow.

Over the years, sin multiplied until the whole earth was covered with violence and God determined to bring a cataclysmic judgment. The vapor canopy collapsed, causing rain to fall upon the earth for 40 days. At the same time, catastrophic events within the earth's crust caused waters to spew out from under the surface of the earth as "the fountains of the deep were opened." The waters rose until the entire earth was covered with water and all land creatures that were not on board the ark died (Gen. 6:8). The millions of fossils buried in the sedimentary rocks of the earth provide a grim reminder of God's judgment on sin and the reality of the Flood.

Conditions on the earth after the Flood are drastically different than they were before. Even though under the curse, the pre-Flood world still had the protective canopy to moderate climate and screen harmful radiation. After the Flood, with the canopy gone, the climate must have suddenly become quite harsh by comparison. Many of the creatures which had gone onto the ark evidently could not survive long under the new conditions, as seen by the vast number of creatures which have become extinct. In addition, the increased radiation probably caused mutations and aging. Thus, animals and man could not live as long as they did before the Flood. This too is consistent with the Biblical record.

The world we live in is the post-Flood world. This is the world we can study scientifically. We may be able to make some inferences from science about the pre-Flood world, but we cannot "prove' them by direct scientific means. The pre-Fall world is even more fascinating. What would a world be like without disorder, death, and decay? We can hardly even imagine it! What would the ecological system have been like? How did the early hydrologic cycle function? We can only speculate. God has not given us the answers and there is no way to investigate it scientifically.

The Biblical model may seem like a child's fairy tale to some because of its simplicity. But, does it fit the facts? Our years of research have confirmed to us that yes indeed it does. It is consistent with observation and the known facts of science. Evolution, on the other hand, contradicts many of the known laws of science and must rely on much speculation and many assumptions. The Bible claims to be the Word of the Creator Who was there. It is consistent with what we know about the real world. Therefore it makes sense to believe it.



Science object lessons can provide a very effective way to communicate spiritual truths and at the same time teach some very practical skills of scientific investigation. This is especially true for elementary age children, but even adults can gain new insights into God's character and the workings of His world through object lessons. For example, try the following activity and see what you can discover:

You will need the following items: a saucer or broad shallow bowl, a clear drinking glass, a small candle, a match, and some water. Light the candle. Drip some wax in the center of the saucer and stand the candle securely in it. Partially fill the saucer with water. Place the clear drinking glass upside down over the burning candle. Watch what happens.

If you try this with children, they will ask why the water was pulled into the glass, but don't be too quick to explain (even if you do know!). Get them to observe carefully and suggest some possible answers first. Then have them think of ways to test their suggestions. By this process, they learn some valuable skills of science, so let them repeat the experiment several times (which they will want to do) and encourage them to ask many questions even if you don't have the answers.

Activities like this can provide springboards for some good spiritual discussions as well as scientific ones. One spiritual application you might draw from this activity is the need to surround yourself with an atmosphere which is conducive to Christian growth. When you block yourself off from God and the freshness of His life-giving Word, your light will go out, you will be

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left with a void in your life, and you will begin to drown in the things of the world. How many other applications can you come up with?

By the way, what really happened in this activity? We would welcome your letters including comments as to what your children think happened. If you wish, send a SASE and we will return a 'textbook'' analysis of the experiment.

Try this fun experiment!



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