Why and How Lutherans Teach Science

Michael D. Plocher

As a child some of my earliest memories revolve around my love for nature. On my eighth birthday, I received a butterfly collecting kit from an aunt. I spent hours outside that summer collecting butterflies and mounting them on Styrofoam. A good friend of mine at the time also began doing this on his farm. Over the next couple of years I remember swapping stories with him during recess about the Polyphemus moth, Cecropia moth, or Eastern Tiger Swallowtail that he or I had captured and painstakingly mounted. Sometime later I came to realize I did not need to kill butterflies to enjoy their beauty and stopped capturing them with my butterfly net. Since I was still curious and wanted to find out even more about butterflies and moths, I began to look into what they ate, their habitat, and their reproductive cycle and began to observe them in their natural habitat. I didn't realize it at that young age, but by exploring butterflies and moths I was using an inquiry method of learning about creation. Now that I am a teacher of science, I draw on those earliest memories of my love for searching out things in God's creation and seek to provide the same experiences to the children in my classroom. When it comes to science education, science should be taught using a guided inquiry approach so that students are led to appreciate the works of the Creator as they construct knowledge of his creation.

When we use inquiry to teach science, we can provide safe, problem-based, group-based learning activities. This provides students an opportunity to discover and share knowledge and also to create a way to demonstrate or display the results of their learning. Collaboration takes place as they use their classmates, teacher, family members, or others as learning resources (Brown 2003). Sometimes when students use inquiry things may not go according to plan. When

they come to a roadblock when doing science and constructing knowledge through inquiry lessons, Naumann (2013) reminds us that, “the teacher needs to [see] that moment when the students can't go any farther on their own and step in to guide them.” When using inquiry-based learning and focusing students’ attention on the natural world, we must also remember to point out and teach the concrete details that, as Galstad (1984) states, “hold our interest.” It’s these fine points and concrete, specific details that create a richer learning experience that then leads to a greater understanding of the larger picture.

Using inquiry in its purest form allows students’ questions and curiosities to drive curriculum. However, pure inquiry could lead to an individual who is undereducated and who does not know Jesus, because understanding the world around us only shows that there is a creator but not who that creator is. To prevent this from happening, I still follow a curriculum and guide students through it, and I also must share the gospel with them. This is one of the favorite aspects of my calling as a Lutheran school teacher.

Some agree to an inquiry approach that leads to a deeper appreciation of creation, but they also go one step farther, believing we should use science, our observations, and our reason to prove the Bible is true. This is called the theology of glory and contrasts with the theology of the cross, a term coined by Martin Luther to refer to theology that states the cross and God’s Word as the only source of knowledge concerning who God is and how God saves.

While these people may believe that all God’s Word is correct, they attempt to prove its validity by tying in things that are observable. They also cite statements within the Bible consistent with known scientific facts as proof the Bible is true. After all, if the Bible is not true or if it is filled with errors, Christianity would only be a “’blind faith’—something people believe without any evidence to support it” ("Clarifying Christianity" 2011). Their thinking is that their

proofs will strengthen their conviction in the validity of the Bible and will help as they work to convince others about the validity of the Bible. Furthermore, some have added the claim that "because in the last 100 years scientists have discovered many proofs that confirm the Bible's accuracy, and we can understand those proofs scientifically, it makes sense to trust the parts of the Bible we cannot yet understand" ("Clarifying Christianity" 2011). Boehlke (2013) cautions against this when he says, "If we support Scripture with science . . . do we not lean onto our own changing understandings (Proverbs 3:5)? Scripture does not need our assistance." We need to take heed that we do not rely on nor do we encourage our students to rely on proofs demonstrating the accuracy of the Bible before we trust parts of it we don't understand. If someone is struggling to understand part of God's Word, it is better to remind them that we should not look to science or our sin-tainted reason to help us find things in the Bible that are in line with the natural world before we put our faith in them. Boehlke (2005) states that Scripture is not a science book. The function of Scripture is to tell us how we can get to heaven through faith in Jesus Christ, our Savior. Since science is an ever-changing body of knowledge based on scientists' attempts to explain the natural world, and since sinful logic is used as people add information to that ever-changing body of knowledge, we would be wise to avoid mixing faith and reason. Tying our faith in Christ to something that is always changing can lead us to become unsure of our salvation.

While we may not understand everything in Scripture, this basic tenet is sufficient for eternal salvation and can plainly be seen from cover to cover: faith in Jesus Christ saves. Should some in my classroom still be concerned that they cannot understand parts of Scripture and begin to look toward science and their own reason to assist them in their understanding, I would gently remind them that there are some things we may never fully understand about God and that this

should not be a cause for concern, especially since God is the Creator and we are his created. We may not always understand why the Creator does what he does. “For my thoughts are not your thoughts, neither are your ways my ways,” declares the Lord. “As the heavens are higher than the earth, so are my ways higher than your ways and my thoughts than your thoughts” (Isaiah 55:8-9). When teaching science, we must make clear that God’s creation does not allow us to know God’s thoughts; rather, it simply allows us to use our reason as we learn what God has done. This leads us to marvel at his creation, ask more questions, and then look again, all the while “praising God for his continuing preservation and providence” (Boehlke 2013).

As we look back on the history of science, the belief that faith and reason are compatible was present from early on. This can be seen beginning with St. Augustine in the fourth and fifth centuries. He argued four points that “not only became fundamental to Christian theology but are key to the science-religion interaction” (Levinson 2006). St. Augustine argued that (1) contradictions between science and theology must be resolved by the use of reason; (2) the Bible and nature are complementary ways God reveals himself to us; (3) both nature and the Bible require careful interpretation; and (4) while religion is to be higher than science, scientific knowledge is to assist true religion.

Continuing in this line of thought, Galileo argued that Scripture had to be interpreted in light of scientific knowledge and that “faith and reason were compatible” (Levinson 2006). This view that faith and reason are compatible continues to this day and can be observed in the teachings of many Christian denominations. The views found on the Clarifying Christianity website I mentioned earlier have risen from the Fundamentalist movement that began in the early 20th century. Levinson (2006) states that “Fundamentalism is a reactionary movement in response to social anxiety over the loss of an old order.” This old order, the religiously oriented

Anglo-Saxon Protestant America, began to decline in the early 20th century at the same time as Charles Darwin's previously published *On the Origin of Species* and *In The Descent of Man* became more widely read, accepted, and incorporated into public school systems. To counter this, Christians in the 1960s wanted creation science, which attempts to provide scientific evidence for the Genesis account, to be taught in the public schools. In the 1980s they made the same request of the Intelligent Design (ID) theory, which holds that "certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection" (Discovery Institute — Center for Science and Culture 2013).

In 1987, however, the Supreme Court recognized creation science as religious doctrine, (Levinson 2006), and in 2005 the US District Court of Dover ruled that the implementing of teaching about ID violated the Establishment Clause and that "ID cannot uncouple itself from its creationist, and thus religious, antecedents" (Matsumura & Mead 2007).

Despite these rulings, the desire by many Christians to use science and reason to prove the Bible is true continues. As a teacher of science, I will admit that I use ideas found in ID, such as irreducibly complex cells, in my teaching. I use these ideas not as proof that the Bible is valid, but as examples of how God paid attention to the little things, the trifles, even when it came to the very cells he created as he formed Adam out of the dust of the ground and breathed life into him. God is all-powerful, and for this we praise him.

Science should be taught using a guided inquiry approach so that students are led to appreciate the works of the Creator. Science should not be taught with the intent that it will allow us to know the mind of God or to validate the Bible. Because Scripture needs no support and stands completely on its own, science and our reason cannot be used in any way to prove its validity. When I teach science I will make every effort to do so in a way that allows inquiry

learning but discourages my students from using science or their reason to support their understanding of the Bible. Finally, I will teach science in a way that will lead students to give praise and honor to God for his amazing creation.

References

Boehlke, P. (2005). Contemplating our navels: Consideration of time that never was. *CHARIS: A Journal of Lutheran Scholarship, Thought, and Opinion*, *4*(2), 23-30. Retrieved from http://www.charis.wlc.edu/publications/charis_spring05/boehlke.pdf

Boehlke, Paul. (March 1, 2013). Teaching Science in the Spirit of Wittenberg. In Issues in Lutheran Education. Martin Luther College, retrieved on May, 6, 2013, from <http://blogs.mlc-wels.edu/wels-educator/2013/03/01/teaching-science-in-the-spirit-of-wittenberg/>

Brown, K. (2003). From Teacher-Centered to Learner-Centered Curriculum: Improving Learning in Diverse Classrooms. *Education*, *124*(1), 49-54.

Clarifying Christianity. (2011). Retrieved from http://www.clarifyingchristianity.com/science.shtml

Discovery Institute — Center for Science and Culture. (2013). *Definition of intelligent design*. Retrieved from http://www.intelligentdesign.org/whatisid.php

Galstad, Martin. (1984) *Findings: Explorations in Christian Life and Learning.* Milwaukee: Wisconsin Lutheran College Press, 2008, 133-5.

Levinson, M. H. (2006). SCIENCE VERSUS RELIGION: A FALSE DICHOTOMY?. *ETC: A Review of General Semantics*, 63(4), 422-429.

Matsumura, M. & Mead, L. (2007, July 31). Ten Major Court Cases about Evolution and Creationism. Retrieved from http://ncse.com/taking-action/ten-major-court-cases-evolution-creationism

Naumann, E. (2013, March 6). Topic 9: Designing an Inquiry Lesson in Science, Online Class "EDU5103 Improving Instructing in Mathematics and Science" conducted from Martin Luther College, New Ulm, MN.