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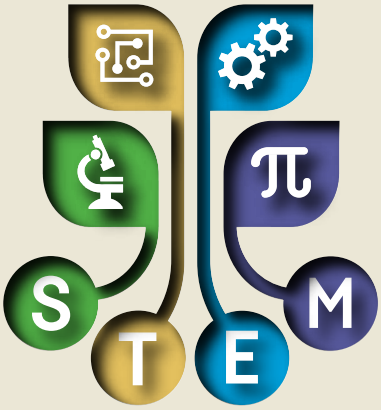
# "Why Do I Need to Know About STEM?

## I Don't Teach Science, Technology, Engineering, or Math!"

We live in a changing world. The COVID-19 shutdowns illustrated just how quickly life can change. Many educators were forced into distance or hybrid learning with little time to prepare or plan. They continue to implement safety protocols that are constantly evolving, illustrating the adaptability and professionalism of teachers. Concurrently, the education pendulum continues to swing, drawing our focus toward various aspects of teaching and learning, despite the global pandemic.




The current trend of integrating STEM throughout the curriculum was not common in education when I started teaching in 2005; however, today most educators are familiar with STEM and related terms such as STEAM or STREAM.[1] Whether or not teachers teach a STEM subject, most agree that they want their students to be successful, both now and wherever God leads them in the future. They want their students, regardless of chosen occupation, to understand advances in science and participate in making decisions and ethical choices that will impact society. How do we, as educators, achieve these goals when we don't know what jobs or societal challenges will exist in the future? Can we prepare our students to be dedicated, Bible-believing Christians as well as great scientists? STEM is essential, just as reading, writing, and history are essential; we must equip students to succeed in a changing world.

Advances in travel capability and technological innovations have exploded in recent history; thus, students' need for strong STEM skills is evident. For example, if we think back to the time when Jesus lived, most people traveled by foot, on an animal, in a chariot, and by boat. Fast forward to the Age of Discovery and Exploration (the 1400s-1600s). Although explorers had begun to traverse distant seas, most people still traveled by foot or small animal-drawn carts. Only a few traders, missionaries, and explorers traveled to faraway places by boat. By the 1800s, train travel became an affordable option for many[2]; however, it wasn't until the 1920s to 1950s, as automobiles and commercial airlines became popular and accessible, that large numbers of people began regularly traveling greater distances.

Technology has changed significantly in recent years. It has only been within the past 40 years that computers have downsized from huge mainframes owned only by large companies to small hand-held smartphones that fit in our pockets. Today, information is shared so quickly and easily that misinformation spreads faster than ever before. As a result, the need to equip critical thinkers who can analyze information, check sources, and solve problems in creative ways is also greater than ever.

Training students to be resilient problem-solvers, effective communicators, and creative thinkers can occur in any class, no matter the subject content or grade. Project-based learning is one example of a teaching method used across the curriculum and at various learning levels. Students can work together on meaningful projects that address real-world problems and, in the process, learn how to collaborate and work cooperatively. This process also helps them sharpen their inquiry and listening skills. In addition, many laboratory experiments conducted at the tertiary level require collaboration with a lab partner. Perhaps due to limited resources, schools at all levels encourage students to work together in groups to share expensive

*Continued on page 51*