GROWING EINSTEINS

at First Lutheran School

As the competition mounts from foreign countries where science and technology are paramount, there is a growing movement to encourage U.S. students to pursue academic and professional careers in science, technology, engineering and math (STEM). Young girls, especially, are being encouraged to consider these courses of study, where men have historically far outnumbered women.

*Cultivating an interest in STEM can begin early, even as young as preschool age. Our belief is that **STEM learning happens when children are actively engaged, play with intriguing materials, make mistakes, question their decisions, and are free to adapt the learning environment.***

Here in the EEC, we work to intentionally facilitate investigations -

- *we ask open ended questions rather than giving answers*
- *we create and support wonder by planning interesting science experiences*
- *we lead and challenge the child to dig deeper by scaffolding learning*
- *we provide time and space to fully explore process and results*
- *we model the practice of working and thinking together*
- *we teach the children to make observations*

STEM activities are embedded in our curriculum- math games are planned during group time and inside activity time; earth, physical and life science learning is introduced inside and outside daily; and engineering takes place when children are given blocks, ramps, and other structural elements for construction, and draw out maps and designs. By building these foundations during the preschool years, the children will be well grounded and prepared to move on to technology learning in the day school. Read on to learn details about FLS and its STEM curriculum.

The curriculum at First Lutheran School is designed to introduce students to math disciplines, technology and the sciences at every grade level, and to employ a variety of teaching experiences to engage students and to inspire them to pursue higher learning in these areas. Young students are introduced to basic science and math concepts in lessons that encourage hands-on learning and demonstrations of how the concepts affect their world.

The curriculum in ensuing grades is strategically layered, each year building upon and expanding student learning to deepen understanding. Through research and hands-on experimentation, students are encouraged to think independently and apply knowledge learned.

Further understanding comes in special projects and clubs. In the annual Science Fair, young scientists use the scientific method to experiment and analyze results in a project of their creation. In the upper grade classrooms, students perform hands-on lab assignments, from dissecting a frog to building their own volcanoes to taking “geological” samples of a layered cupcake. Students can pursue their interest in math in the after-school MATHCOUNTS club, which competes against other schools in a local competition. Math Helps offers tutoring to students who need help with their math work after school.

Another goal of the FLS curriculum is for students to understand technology and become proficient in its use to enhance their learning. Starting in first grade and every year after, students learn to use computers and related technology in weekly computer classes. Technology is infused in classroom learning with digital whiteboards that are used by teachers and students. Computers and internet access are also available for the classes to use.

As educational applications of individual devices such as e-readers and tablets continues to grow, FLS will also be evaluating their value to improving student learning and how to incorporate them into the classroom.

Thank you to Roxanne Morrow, FLS Communication Director, for her article on STEM learning in the day school.