

Northshore Christian Academy

A Ministry of Northshore Christian Church ~ www.northshorechristianschools.org

5700 – 23rd Drive West ~ Everett ~ WA ~ 98203

Phone: (425) 407.1119 Fax: (425) 322.2386



Project Lead the Way— K-5 Curriculum Overview

We are pleased to announce that Northshore is an **official Project Lead The Way (PLTW) School!** NCA has been accepted by PLTW to take part in the Elementary Launch of its new K-5 program for the 2014-2015 school year. Below is an overview of the program at each grade level. Please follow this link to learn more from the PLTW website: <https://www.pltw.org/our-programs/launch>

Project Lead The Way is the leading provider of rigorous and innovative Science, Technology, Engineering, and Mathematics (STEM) education curricular programs used in elementary, middle, and high schools across the U.S. The elementary program is new for 2014. The program is set up in modules that follow the design process. Each 10-hour module is aligned to grade-level standards and incorporates the process of hands on engineering.

Kindergarten—Structure and Function

Students discover the design process and how engineers influence their lives. In small groups, students design, build, and test a paintbrush out of available materials to withstand force. Then, the students use the design process to sketch, build, test, and reflect on improved paintbrush design.

Grade 1—Light and Sound

Students investigate light and sound waves including vibration from sound waves and the effect of different materials on the path of a beam of light. The students use the design process to sketch, build, test, and reflect on a device that uses light or sound to communicate over a distance.

Grade 2—Materials Science: Properties of Matter

Students investigate and classify different kinds of materials by their observable properties. After testing materials and analyzing the data, the students determine the best material to solve a design problem.

Grade 3—Stability and Motion: Science of Flight

Students are introduced to how aircraft vehicles fly while investigating the effects of balanced and unbalanced forces on the motion of an object. Students develop an understanding of how engineers work and are introduced to aspects of the aerospace engineering field. Students also learn sketching techniques, discover computer aided design, and use basic descriptive geometry as a component of design and measurement to model their solutions. Using an engineering notebook and other forms of documentation, students document the process by which the design models and solve problems.

Grade 4—Energy: Conservation

Utilizing mobile robotics and building on their prior experience, students design, model, test, and refine a device that converts electrical energy to mechanical energy. The students explore engineering careers that involve energy conservation and mechanical design.

Grade 5—Robotics and Automation

Students explore ways that robots are used in today's world and the impact of their use on society and the environment. Students learn about a variety of components to build and test mobile robots that may be controlled remotely.

NCA Parent Survey Quote:

"With a commitment to teaching Jesus, prayer, math and science, you have the best teaching staff in the world!"