What is STEM?

STEM stands for Science, Technology, Engineering and Mathematics. The essence of STEM is problem based learning. Children are presented with a problem and design something that solves the problem. In the process, they apply science knowledge and math skills. They use technology to research, then design, test and present their ideas.

The process has 5 parts: Investigate, Brainstorm, Plan, Build and Test and Present. Each design problem begins with a challenge. This is presented to the students along with the criteria, which is the list that students use to determine that a solution is successful. The Constraints specify limitations on materials and time. The Materials needed will be provided to students upon completion of the proposal form and participation in the STEM workshops offered at lunch recess time or after school.

Students will investigate materials and brainstorm as a group in the lunch recess/after school sessions with Mrs. Sicotte. They can work on the STEM problem at school, but will need to complete the presentation board at home. The presentation board should include photos and information about the process leading up to the testing. There will be a flyer attached to the presentation board with gives a lay-out for the board and questions to be answered.

STEM

Kindergarten and 1st STEM

Challenge: Design and build a windsock that will fly in the wind.
Must be attached to a stick (like a pole) Must stay together for 20 sec in wind
May only use materials form the ones provided

2nd and 3rd STEM

Challenge: Design and build a kite to fly.
Must hold together on its own May only use materials provided
Must stay within budget of $.25 science pennies

4th and 5th STEM

Challenge: Design and build a parachute to safely land a cargo load.
Must hold together when landing
Must still be attached to the cargo load when landed
Must stay within a budget of $5.00 Science Bucks
Must use only materials provided