

STEM – GRADE 1 AND GRADE 2

In grades 1 and 2, students will be engaged in a number of STEM challenges. These challenges will be interdisciplinary, and will use LEGOs, the LEGO WeDo Robotics Program, and other hands-on materials to teach science, technology and engineering concepts.

FIRST GRADE STEM

The first grade STEM curriculum is focused on engineering concepts and was developed by Tufts. Students will be active participants in challenges designed to establish a collaborative environment, an understanding of the engineering process, and beginning computer-programming skills. Students will go through the engineer-design process to solve real-world problems, using LEGOs and other hands-on materials as their tools.

SECOND GRADE STEM

The second grade STEM curriculum will build upon the experiences students had in first grade. In grade 2, students will use the LEGO WeDo Program to create intricate robots and use developmentally appropriate computer programming software to make their robots move and make sound.

SKILLS AND LEARNING GOALS

- Brainstorm ideas, think creatively, and work collaborative to make a working model
- Develop vocabulary and communication skills about engineering challenges
- Make fair tests and observe and measure the effect of changing a variable
- Follow 2D drawings to build 3D models
- Use pulleys, gears, and levers to solve an engineering problem
- Modify developmentally appropriate computer program to make a robot move or solve a problem
- Develop a working definition of engineering
- Understand what it means to be producers of technology rather than just consumers of technology



