

LINCOLN PUBLIC SCHOOLS
Engineering Learning Expectations: Grade 2

Strand

Inventions

Massachusetts Standard:

Students will understand that engineering design requires creative thinking and consideration of a variety of ideas to solve practical problems.

Big Ideas

- ❑ Technology and Engineering uses math, science and creativity to solve problems.
- ❑ Technology and Engineering makes life easier or better through engineered products.
- ❑ The Engineering Design Process is used to design prototypes that solve specific problems.

Key Outcomes

- ❑ Students will demonstrate an understanding of **inventions** by planning and building a prototype that solves a problem.

Essential Knowledge and Skills

Students will be able to:

- ❑ Use the engineering design process to guide their work.
- ❑ Know what engineering and technology are and demonstrate what engineers do.
- ❑ Work as a team to plan, build and redesign a prototype.
- ❑ Communicate their results in multiple ways such as oral reports, prototype demonstrations, sketched or digital pictures and simple videos.
- ❑ Describe what an invention is and how it solves a given problem.
- ❑ Use tools and various materials to build an invention.
- ❑ Demonstrate how an invented prototype solves a given problem.
- ❑ Identify and describe the safe and proper use of tools and materials (e.g., glue, scissors, tape, ruler, paper, toothpicks, straws, spools) to construct simple structures.
- ❑ Identify tools and simple machines used for a specific purpose, e.g., ramp, wheel, pulley, lever.