



Blueprint Engineering Kit

Bring engineering excitement to your middle and high school learners at school or at home! The Blueprint Engineering Kit supports 1–2 learners, helping them grasp foundational engineering and robotics concepts as they design, build, and power working prototypes. Blueprint Engineering takes students to the next level with power, sensors, and motors—all without the need for programming—offering an accessible entry point for students with little to no robotics experience.



KEY FEATURES & BENEFITS



Easy Prototyping

The mechanical parts and electrical bits are easy to assemble and disassemble for rapid prototyping due to their practical size and visual and technical simplicity.



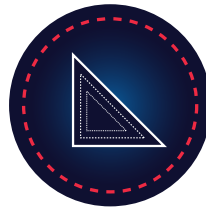
Hands-On Problem Solving

Students quickly design, build, and test mechanical and electrical engineering concepts in a single class period.



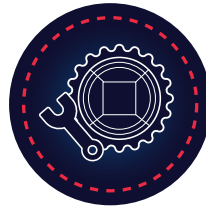
Lessons & Unit Plans Included

Includes 100+ hours of in-depth, standards-aligned lessons and unit plans (including over 30 guided builds) and 2 Educator Guides.



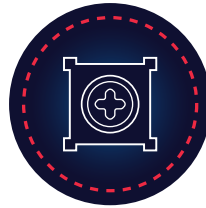
Relevant Learning

Flexible and standards-aligned lessons and unit plans help teach students about simple and compound machines and calculating mechanical advantage.



Engineering & Beyond

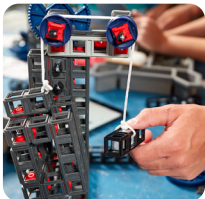
Students explore cross-curricular concepts in robotics, engineering, and design while learning critical thinking, problem-solving, and collaboration skills.



Build in CAD

Support CAD curriculums with Blueprint Engineering parts in SolidWorks, OnShape, and STEP files.

ACTIVITY EXAMPLES



Control Systems

Explore basic controls with Blueprint Bits. Adding power, motors, and sensors to the Blueprint system allows students to take their builds further and introduce basic control.



Machines in our Food System

Food supply is a pivotal part of our society and there are a lot of machines that make this system run. Learn about and build some of the machines that keep our food supply running.

WHAT'S INCLUDED?

- 1 Blueprint Build Kit: 339 parts, large storage container
- 1 Blueprint Build Engineering Expansion Pack:
 - 1 small storage bin
 - 17 bits: Power Bit, Motor Bits (2), 375mm Wire (2), 150mm Wires (4), 1m Distance Sensor, Button Bits (2), Rotary Potentiometer Bits (2), Data Display Bit, LED Bar Bit, Threshold Bit, 16 new Mechanical Build Parts, 100T Gears (2), Catapult End Effectors (2), 5x5 Plates (2), Wire Clamps (6), Rack Gears (4)
- Engineering Challenge Cards