



thimble.io

STEM KIT & TOOLS CATALOGUE 2022 -2023

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INTRODUCTION

At **Thimble**, we strive to provide students with tools and programs that are carefully designed and curated to help carve a path for exploration. Launched in 2015 from our headquarters in New York, we make electronics kits that prepare students for 21st century careers through project-based learning. Thimble offers curriculum, Training, and assessment services for educators to measure student engagement and achievement through hands-on learning kits.

Our products help students learn science, engineering, and coding through virtual lessons and real engineering. Thimble works with your existing science curriculum to complement and reinforce science concepts using the 5E Model (Engage, Explore, Explain, Elaborate, and Evaluate). This proven teaching method was developed specially for learning about science and allows students to explore, test out, and experiment with key concepts. Our curriculum is compatible with several national and state standards, including but not limited to Next Generation Science Standards and Common Core Standards, which provide teachers the scaffolded support to create an engaging learning environment.

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PRICING

THIMBLE OFFERINGS

PRICING

Project-based Kits

Include:

- ✓ Lifetime warranty on parts
- ✓ 10 hours of live phone, chat, text message support

\$150 per kit

A 10-15% discount can be provided based on volume of sale

Curriculum Lesson Software

Include:

- ✓ Licenses are sold in bundles for 24/7 access to lesson plans and tutorials. Cost of license is reflective of volume.

Classroom: 24 licenses at **\$28 / student / year**

School: Up to 10 classrooms price is reduced to **\$26 / student / year**

District: 8+ schools the price is reduced to **\$24 / student / year**

Virtual Professional Development

\$600 per session; if both sessions are purchased, a 15% discount is given

In-Person Professional Development

\$2,000 not including travel and accommodations

CREATOR SET KIT

An Introduction to
Engineering & Computer
Science



SKU#: 101

MSRP: \$149 / kit

DESCRIPTION

12-in-1 reusable projects that teach students engineering, coding, and tech skills. Students start from ground zero and are exposed to basic sensors, indicators, and actuators to learn electronics and coding with Arduino.

HANDS-ON PROJECTS

Robot, night light, clapper, doorbell, intruder alarm, thermometer, kitchen timer, LCD-backlight disco, music machine, Simon Says, 8-bit music composer, moving dial.

*Grades: 4-12 • NGSS Alignment • 1-2 students / kit
Professional development, curriculum, lessons available*

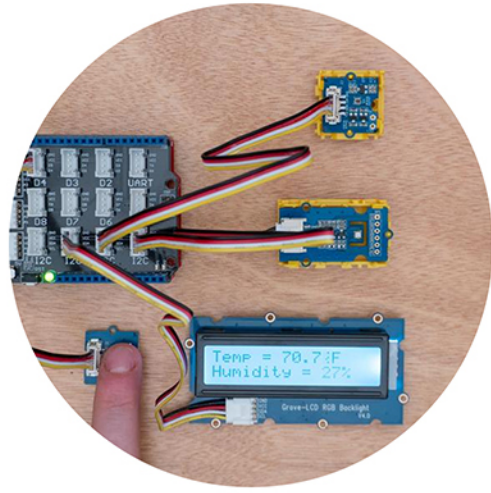
WHAT'S INCLUDED IN KIT:

- ✓ Button Sensor
- ✓ Piezo Buzzer
- ✓ LED Driver
- ✓ Light Sensor
- ✓ Servo Motor
- ✓ Touch Sensor
- ✓ Temperature Sensor
- ✓ Sound Sensor
- ✓ Volt Relay
- ✓ LCD Display
- ✓ Arduino Board
- ✓ Base Shield
- ✓ Plastic Servo Parts
- ✓ 3 LEDs, Cables, Screws

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$147 per kit	10%
Class Pack	21-30	\$145 per kit	10%
Maker Pack	31-50	\$140 per kit	10%
School Pack	51-199	\$135 per kit	10%
District	200+	\$128 per kit	15%

WEATHER KIT

Climate, Science, & Technology



SKU#: 201

MSRP: \$249 / kit

DESCRIPTION

Students build a weather station to measure and analyze units of weather (temperature, pressure, humidity)

HANDS-ON PROJECTS

Weather station, upload weather data to database via internet protocols, construct tilt bucket rain gauge using magnets, construct wireless indoor base station.

Grades: 5-12 • NGSS Alignment • 1-3 students / kit
Professional development, curriculum, lessons available

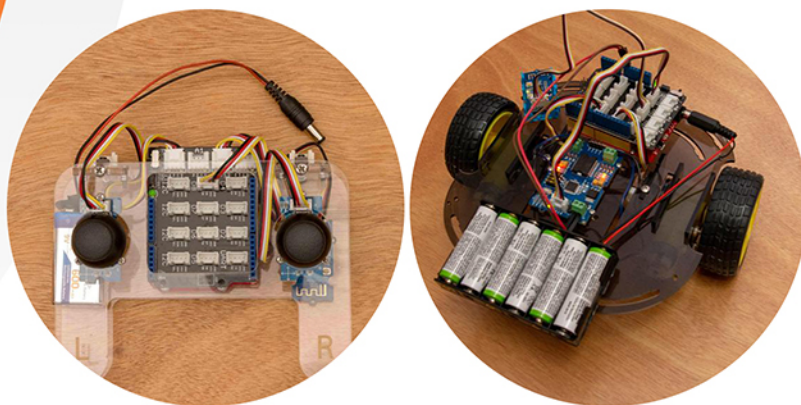
WHAT'S INCLUDED IN KIT:

- ✓ Humidity Sensor
- ✓ Sunlight Sensor
- ✓ LED Bar Graph
- ✓ Button Sensor
- ✓ Magnetic Switch
- ✓ WiFi Module
- ✓ RGB LED Lights
- ✓ Acrylic Sheets
- ✓ Arduino Board
- ✓ Plastic Wrappers
- ✓ Plastic Louvers
- ✓ Base Shield
- ✓ Cables, Screws
- ✓ Weather Stickers

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$245 per kit	10%
Class Pack	21-30	\$240 per kit	10%
Maker Pack	31-50	\$233 per kit	10%
School Pack	51-199	\$225 per kit	10%
District	200+	\$213 per kit	15%

ROBOTICS / MECHATRONICS KIT (PT. 1)

WiFi Robot & Remote
Controller



SKU#: 202

MSRP: \$199 / kit

DESCRIPTION

Students will learn to build a WiFi-controlled robot and bring to life with a remote controller (that they assemble, too!) Students will learn fundamental theory, modeling methods, hardware components, interfacing elements, simulation, and coding tools.

HANDS-ON PROJECTS

Project 1: WiFi Robot Project 2: Remote Controller

*Grades: 6-12 • NGSS Alignment • 1-3 students / kit
Professional development, curriculum, lessons available*

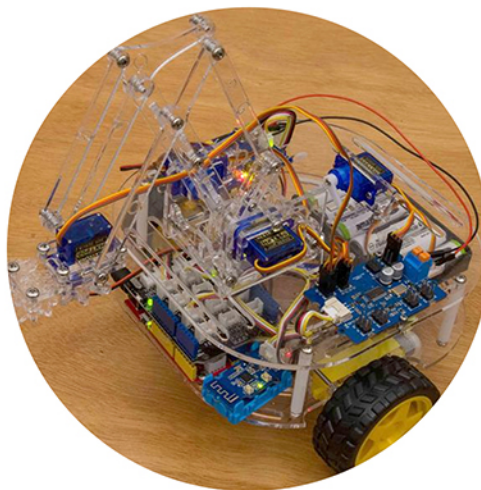
WHAT'S INCLUDED IN KIT:

- ✓ DC Motors
- ✓ 2 Tires
- ✓ 12C Motor
- ✓ Battery Holder
- ✓ Robotics Chassis
- ✓ Line Finder Module
- ✓ Controller Plates
- ✓ Acrylic Sheets
- ✓ Wheel Encoders
- ✓ Steel Omni Wheel
- ✓ Thumb Joysticks
- ✓ Base Shield
- ✓ Cable, Nuts, Bolts
- ✓ 9V Barrel Connector

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$196 per kit	10%
Class Pack	21-30	\$192 per kit	10%
Maker Pack	31-50	\$186 per kit	10%
School Pack	51-199	\$180 per kit	10%
District	200+	\$170 per kit	15%

ROBOTICS / MECHATRONICS KIT - (PT. 2)

Robotic Pen Plotter & Arm



SKU#: 203

MSRP: \$199 / kit

DESCRIPTION

Students will improve their WiFi robot with drawing capabilities by using pre-programmed logic to make shapes. The final task will be attaching the 3-axis robot arm and attaching to the bot. Students will learn the advanced kinematics behind controlling something in 3D space.

HANDS-ON PROJECTS

Project 1: Robotic Pen Plotter; Project 2: Robotics Arm

*Grades: 6-12 • NGSS Alignment • 1-3 students / kit
Professional development, curriculum, lessons available*

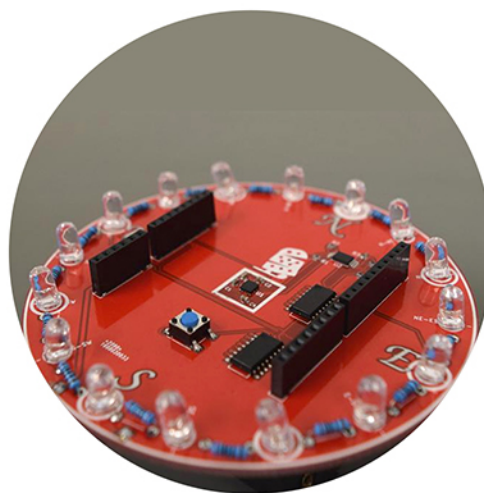
WHAT'S INCLUDED IN KIT:

- ✓ Level 2 Chassis
- ✓ Servo Motors
- ✓ Servo Board Driver
- ✓ Line Finder Module
- ✓ Taped Acrylic Sheet
- ✓ Acrylic Mounts
- ✓ Nylon Stand-offs
- ✓ Male-to-Male Jumper Cords
- ✓ Cables, Nuts, Bolts
- ✓ Jumpers, Rubber Bands

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$196 per kit	10%
Class Pack	21-30	\$192 per kit	10%
Maker Pack	31-50	\$186 per kit	10%
School Pack	51-199	\$180 per kit	10%
District	200+	\$170 per kit	15%

LED COMPASS KIT

GPS & Navigation



SKU#: 301

MSRP: \$119 / kit

DESCRIPTION

Students will build a compass that shows which way is North by lighting up the appropriate LED as well as outputting a heading in degrees through serial communication. Students will learn to program a calibration function to make their compass more accurate. Requires soldering.

HANDS-ON PROJECTS

LED Compass

*Grades: 7-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

WHAT'S INCLUDED IN KIT:

- ✓ Electronic Compass PCB
- ✓ 16, 20Ω Resistors
- ✓ 1, 10-POS Stackable Headers
- ✓ 2, 8-POS Stackable Headers
- ✓ 16 Green LEDs
- ✓ 6-POS Stackable Header
- ✓ 4xAA Battery Pack
- ✓ Arduino Board and Tape

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$116 per kit	10%
Class Pack	21-30	\$114 per kit	10%
Maker Pack	31-50	\$110 per kit	10%
School Pack	51-199	\$107 per kit	10%
District	200+	\$101 per kit	15%

RGB LED CUBE

Lights & Pattern Control



SKU#: 302

MSRP: \$149 / kit

DESCRIPTION

This kit uses the popular WS2812B Digital RGB LED. Students will assemble the 6 boards to build their own LED cube. They may add an optional IMU sensor to control the cube based on its orientation. And control the patterns on the cube. Requires soldering.

HANDS-ON PROJECTS

LED Cube

*Grades: 8-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

WHAT'S INCLUDED IN KIT:

- ✓ LED Cube Top PCB
- ✓ LED Cube Main PCB
- ✓ Straight Pin Headers
- ✓ Right Angle Pin Headers
- ✓ 8-Pin Male-Female Dupont Jumper Wires
- ✓ 8-Pin Socket (optional)
- ✓ 6DOF IMU (optional)
- ✓ Arduino Board

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$147 per kit	10%
Class Pack	21-30	\$145 per kit	10%
Maker Pack	31-50	\$140 per kit	10%
School Pack	51-199	\$135 per kit	10%
District	200+	\$128 per kit	15%

WIFI LIGHT SWITCH

Smart Home Technology



SKU#: 303

MSRP: \$119 / kit

DESCRIPTION

Students will use a small servo and an ESP sensor give them wireless control of lights from anywhere in a room. There are also many other uses for this kit that don't require it to shut off lights. Requires soldering.

HANDS-ON PROJECTS

WiFi Light Switch

*Grades: 9-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

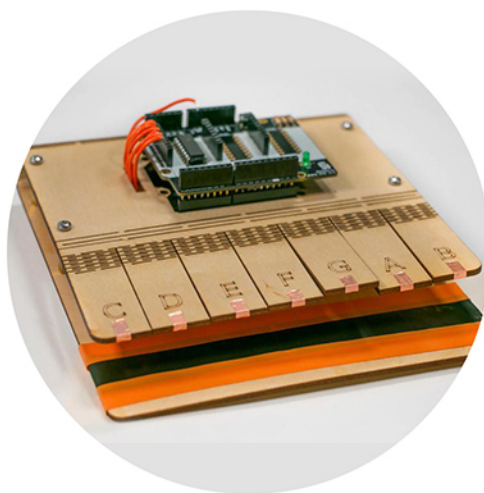
WHAT'S INCLUDED IN KIT:

- ✓ WiFi Light Switch PCB
- ✓ 0.1 uF Ceramic Capacitor
- ✓ Diode
- ✓ 40 Pin Male Breakaway Header
- ✓ 2x4 Female Socket Header
- ✓ 1x6 Female Socket Header
- ✓ 10kΩ Resistor Pack
- ✓ Small Tactile Button
- ✓ Large Tactile Button
- ✓ 3.3v Regulator
- ✓ ESP8266 Module
- ✓ MOSFETs
- ✓ 10kΩ Resistors
- ✓ Arduino Board

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$116 per kit	10%
Class Pack	21-30	\$114 per kit	10%
Maker Pack	31-50	\$110 per kit	10%
School Pack	51-199	\$107 per kit	10%
District	200+	\$101 per kit	15%

PIANO SYNTHESIZER

Music & Acoustics



SKU#: 304

MSRP: \$119 / kit

DESCRIPTION

Students will become their own DJs and create music using a MIDI keyboard. MIDI stands for Musical Instrument Digital Interface; students will learn to use their Arduino board to play standard sounds and invent their own sounds. Requires soldering.

HANDS-ON PROJECTS

Piano synthesizer

*Grades: 9-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

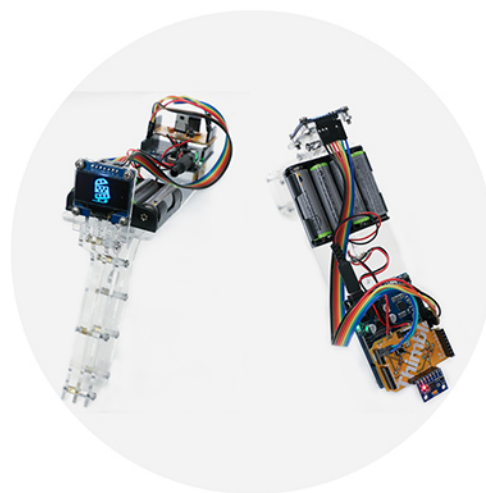
WHAT'S INCLUDED IN KIT:

- ✓ Multiplex 16DIP Package
- ✓ 10kΩ Resistors
- ✓ 200Ω Resistor
- ✓ LED 3mm Green
- ✓ 1x10 Female Headers
- ✓ 1x8 Female Headers
- ✓ 1x8 Female Socket Headers
- ✓ 1x6 Female Headers
- ✓ Small Tactile Button
- ✓ Arduino Board

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$116 per kit	10%
Class Pack	21-30	\$114 per kit	10%
Maker Pack	31-50	\$110 per kit	10%
School Pack	51-199	\$107 per kit	10%
District	200+	\$101 per kit	15%

VIRTUAL GAME KIT

Inertial Measurements



SKU#: 305

MSRP: \$119 / kit

DESCRIPTION

This project will guide students through soldering, assembling, and programming an IMU Virtual Game kit. The final product will be able to display virtual targets for students to take down - like Duck Hunt! Requires soldering.

HANDS-ON PROJECTS

IMU Virtual Game Kit

*Grades: 9-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

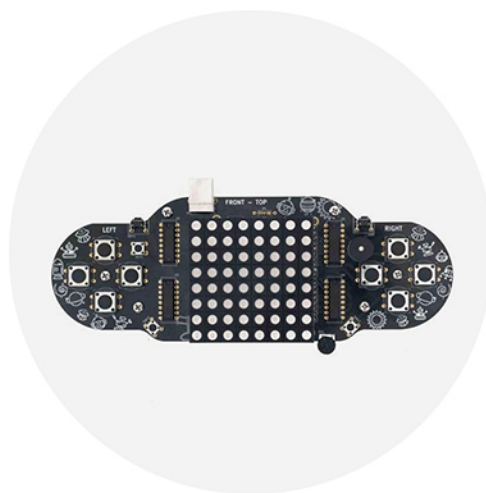
WHAT'S INCLUDED IN KIT:

- ✓ PCB
- ✓ 10K Resistor
- ✓ Capacitor
- ✓ Push Button
- ✓ MOSFET
- ✓ 8-POS Stackable Header
- ✓ 8-POS Header
- ✓ 6-POS Stackable Header
- ✓ 4-POS Stackable Header
- ✓ Arduino Board

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$116 per kit	10%
Class Pack	21-30	\$114 per kit	10%
Maker Pack	31-50	\$110 per kit	10%
School Pack	51-199	\$107 per kit	10%
District	200+	\$101 per kit	15%

VIDEO GAME KIT

RGB Matrix Arcade Controller



SKU#: 306

MSRP: \$119 / kit

DESCRIPTION

Students will learn to build their own video game controller and program games like Pong and Snake. This kit adds the ability for students to program and control different pixel groups called Sprites. 1 and 2 player settings. Requires soldering.

HANDS-ON PROJECTS

RGB Video Game Controller

*Grades: 9-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

WHAT'S INCLUDED IN KIT:

- ✓ Shift Resistors
- ✓ 12mm Buttons
- ✓ 6mm Buttons
- ✓ Speaker
- ✓ Rotary Dial
- ✓ Arduino Heads
- ✓ LED Matrix
- ✓ Matrix Headers
- ✓ Ohm Resistors
- ✓ Zener Diodes
- ✓ Ceramic Capacitor
- ✓ Arduino Board

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$116 per kit	10%
Class Pack	21-30	\$114 per kit	10%
Maker Pack	31-50	\$110 per kit	10%
School Pack	51-199	\$107 per kit	10%
District	200+	\$101 per kit	15%

INTRO TO SOLDERING

Solder Badge



SKU#: 307

MSRP: \$100 per 10-kit bundle

DESCRIPTION

Students will learn to assemble their own keychain flashlight solder badge. Requires soldering.

HANDS-ON PROJECTS

LED Flashlight solder badge

*Grades: 7-12 • NGSS Alignment • 1 student / kit
Professional development, curriculum, lessons available*

WHAT'S INCLUDED IN KIT:

- ✓ Flashlight PCB
- ✓ White LEDs
- ✓ 6mm Tactile Button
- ✓ Battery Holder
- ✓ Battery

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$98 per bundle	10%
Class Pack	21-30	\$94 per bundle	10%
Maker Pack	31-50	\$93 per bundle	10%
School Pack	51-199	\$90 per bundle	10%
District	200+	\$85 per bundle	15%

DELUXE TOOL KIT

Soldering Materials



SKU#: 308

MSRP: \$250 / kit

DESCRIPTION

For those students embarking on a journey to learn and build electronics for the first time, they'll need the right tools to properly build Thimble projects or other electronics. This toolkit provides all of the necessary tools for students' first kit and beyond. The tools are housed perfectly within a heavy-duty carrying case that is built to last.

*Grades: 4-12 • NGSS Alignment • 3 students/ kit
Professional development, lessons available*

WHAT'S INCLUDED IN KIT:

- ✓ Safety Glasses
- ✓ Wire Cutters
- ✓ Screwdriver Set
- ✓ Soldering Iron
- ✓ Solder Stand
- ✓ Solder Wick
- ✓ Colored Wire
- ✓ Hot Glue Gun
- ✓ Hot Glue Sticks
- ✓ Carrying Case

Bundle	Quantity	Price	Discount
Maker Pack	10-20	\$245 per kit	10
Class Pack	21-30	\$240 per kit	10%
Maker Pack	31-50	\$233 per kit	10%
School Pack	51-199	\$225 per kit	10%
District	200+	\$213 per kit	15%



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