

EDUCATION STARTER KIT

CURRICULUM GRID

Objective Number	Common Standard Concepts	Lessons										
		Overall	Lesson 1 - Electricity Fundamentals	Lesson 2 - Ohm's Law	Lesson 3 - Traffic Signals	Lesson 4 - Dimmer Switch	Lesson 5 - Project Holiday Lights	Lesson 6 - Sports Robot	Lesson 7 - Windshield Wipers	Lesson 8 - Musical Keyboard	Lesson 9 - Light Wave Radar	Lesson 10 - Project Greenhouse Control System
Coding - Concepts												
1	Flowcharts/Pseudocode	■	■		■	■	■	■	■	■	■	■
2	Program Structure	■	■		■	■	■	■	■	■	■	■
3	Graphical Programming											■
4	Algorithms/Task Sequences	■	■		■	■	■	■	■	■	■	■
5	Digital Inputs & Outputs	■		■	■		■	■	■	■	■	■
6	Analog Inputs & Outputs	■				■		■	■	■	■	■
7	Mathematical Operators	■						■		■	■	■
8	Variables and Data Types	■			■		■	■	■	■	■	■
9	Conditionals	■			■		■	■	■	■	■	■
10	Loops	■				■				■	■	■
11	Nested Loops/Compound Conditionals	■								■	■	■
12	Functions	■								■	■	■
13	Data Validation											■
14	Arrays	■								■		■
15	Classes & Objects								■			■
Coding - Practices												
1	Organize Code for Reuse	■		■		■	■	■	■	■	■	■
2	Reuse Existing Code	■				■		■	■	■	■	■
3	Test & Refine Programs	■		■		■		■	■	■	■	■
4	Code Collaboratively	■						■	■	■	■	■
5	Debug Programs	■	■			■		■	■	■	■	■
6	Justify Code Structure	■									■	■

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For more info visit:

<https://www.pitsco.com/Arduino-Education-Starter-Kit>

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Electronics - Skills												
1	Electronic Safety	■	■		■	■	■	■	■	■	■	■
2	Breadboarding	■		■		■	■	■	■	■	■	■
3	Soldering / De-Soldering											
Electronics - Components												
1	Electrical Sources	■	■	■	■	■	■	■	■	■	■	■
2	Resistors	■		■		■	■	■	■	■	■	■
3	Diodes & LEDs	■		■		■	■	■	■	■	■	■
4	Switches / Buttons / Potentiometers	■			■	■	■	■	■	■	■	■
5	Microcontrollers	■	■			■	■	■	■	■	■	■
6	Piezo Buzzers / Speakers	■								■	■	■
7	Sensors	■			■						■	■
8	Motors/Servos	■							■		■	■
9	Fuses/Circuit Breakers											
10	Capacitors	■							■		■	■
11	Inductors											
12	Transformers											
13	Transistors										■	■
Electronic - Concepts												
1	Electronic Measurements	■	■			■	■	■	■	■	■	■
2	Electronic Test Equipment / Meters	■		■		■	■	■	■	■	■	■
3	Schematic Diagrams	■		■		■	■	■	■	■	■	■
4	Simple Circuits	■	■		■	■	■	■	■	■	■	■
5	Series and Parallel Circuits	■				■	■	■	■	■	■	■
6	Electrical/Magnetic Properties	■		■		■	■	■	■	■	■	■
7	Ohm's Law	■		■		■	■	■	■	■	■	■

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