

Level	Quantity	Description	Source	Unit Price	Total Price
0	1	FULL ASSEMBLY, YODA ROBOT			\$108.69
0	1	Power Supply, 5V/12V DC	SPDL	n/a	
0	1	PR-Tech12V 1A Power Supply/Transformers	SPDL	n/a	
1	1	BASE CIRCUIT SUB-ASSEMBLY			\$0.00
2	1	PIC32MX170F256B	Lab Kit	Free	
2	2	Bypass Capacitor, 0.1 uF	Lab Kit	Free	
2	2	Bypass Capacitor, 10 uF	Lab Kit	Free	
2	1	Resistor, 1k	Lab Kit	Free	
2	1	Resistor, 10k	Lab Kit	Free	
2	1	Reset Switch	Lab Kit	Free	
2	1	Assorted Breadboard Jumper Wires	Lab Kit	Free	
2	2	Breadboard, 830 tie point, Amazon: B01EV6LJ7G	Lab Kit	Free	
2	1	Breadboard, 400 tie point, Amazon: B01EV640I6	SPDL (COF)	Free	
2	1	MPLAB SNAP	Lab Kit	Free	
2	22	Male to Male Flex Jumpers	Lab Kit	Free	
1	1	HEAD SUB-ASSEMBLY			\$73.29
2	1	Birch Plywood 1/8th, Kerf Bent Head	PRL	\$6.35	\$6.35
2	1	Face, Duron	PRL	\$0.80	\$0.80
2	1	Fabric, Green, 2 sqft	JoAnne's Fabirc	\$12.00	\$12.00
2	1	Platform for Mechanism Mount, Duron	PRL	\$0.65	\$0.65
2	1	VIBRATION RESPONSE SUB-ASSEMBLY			\$1.92
3	1	Touch Sensor	Lab Kit	Free	
3	4	Vibration Motor, Micro	PRL	\$0.13	\$0.52
3	1	Capacitor, 0.1 uF	Lab Kit	Free (Lab Kit)	
3	1	Resistor 10k	Lab Kit	Free (Lab Kit)	
3	1	MOSFET, IRLZ34 N-Channel	SPDL	\$0.20	\$0.20
3	1	Diode	SPDL	\$0.10	\$0.10
3	11	Wire, 1ft	PRL	\$0.10	\$1.10
2	2	EAR SUB-ASSEMBLY			\$37.16
3	2	Foam Core Ear	PRL	\$1.75	\$3.50
3	2	Fabric, Green, 0.5 sqft	JoAnne's Fabirc	\$3.00	\$6.00
3	2	Vinyl Sticker, Pink	PRL	\$0.40	\$0.80
3	2	Ear Motor Mount, Duron	PRL	\$0.07	\$0.14
3	2	Ear Motor Mount Support, Duron	PRL	\$0.06	\$0.12
3	2	Motor Adaptor large, white, 3D print PLA	PRL	Free	
3	6	Wire, 1 ft	PRL	\$0.10	\$0.60
3	2	RC servo, standard, 3 kg-cm, ServoCity: 33322S	PRL	\$13.00	\$26.00
2	1	EYE SUB-ASSEMBLY			\$14.41
3	2	Outer Eye-Lid, Vacuum Formed	PRL	\$7.00	\$7.00
3	2	Inner Eye-Lid, Vacuum Formed	PRL	\$1.25	\$1.25
3	2	Pine Dowel, 3.75 in	PRL	Free	
3	1	Pine Dowel, 6 in	PRL	Free	
3	2	Eye Rotation Mount, Duron	PRL	\$0.05	\$0.10
3	2	Eye Rotation Mount Support, Duron	PRL	\$0.05	\$0.10
3	1	Eye Motor Mount, Duron	PRL	\$0.06	\$0.06
3	1	Eye Motor Mount Support, Duron	PRL	\$0.05	\$0.05
3	1	Motor Adaptor Small, White, 3D print PLA	PRL	Free	
3	1	RC servo, micro, 1.4 kg-cm, Jameco: 2214601	PRL	\$4.80	\$4.80
3	1	Eye Screen, Foam Core	PRL	\$0.75	\$0.75
3	3	Wire, 1 ft	PRL	\$0.10	\$0.30
1	1	BODY SUB-ASSEMBLY			\$19.11
2	1	Front, Rectangle, Duron	PRL	\$0.75	\$0.75
2	2	Side, Rectangle with hole, Duron	PRL	\$0.65	\$1.30
2	2	Arm Socket, White, 3D print PLA	PRL	Free	
2	1	Arm Frame Left, Black, 3D print PLA	PRL	Free	
2	1	Arm Frame Right, Black, 3D print PLA	PRL	Free	

2	2	Arm Suffing, 4 in^2 cotton	PRL	Free	
2	2	Arm, Fabric, 0.25 sqft, green	PRL	\$1.50	\$3.00
2	6	Nail, Vinyl, Heat Press	PRL	\$0.01	\$0.06
2	1	Cloak Main, Fabric, 2 sqft, Light Brown	JoAnne's Fabirc	\$8.00	\$8.00
2	1	Cloak Fluff, Fabric, 1 sqft, Fuzzy Dark Brown	JoAnne's Fabirc	\$6.00	\$6.00
1	1	BASE SUB-ASSEMBLY			\$8.84
2	1	Bottom Rectangle, Duron	PRL	\$1.00	\$1.00
2	1	Top Rectangle, Duron	PRL	\$0.95	\$0.95
2	1	Sub-Top Rectangle, Duron	PRL	\$0.95	\$0.95
2	2	Side Angled Rectangle, Duron	PRL	\$0.45	\$0.90
2	1	Back Angled Rectangle, Duron	PRL	\$0.45	\$0.45
2	1	Front Angled Rectangle with Display Cutout, Duron	PRL	\$0.40	\$0.40
2	1	REEL MECHANISM SUB-ASSEMBLY			\$3.69
3	1	1 MΩ A potentiometer, 16mm, Jameco: 2227145	PRL	\$1.35	\$1.35
3	3	Wire, 1ft	PRL	\$0.10	\$0.30
3	1	Badge reel, 26.5 measurement	Shape Lab	\$0.24	\$0.24
3	1	1/4" Ball Bearing, 1/2" OD, ServoCity: 535020	PRL	\$1.00	\$1.00
3	2	Small gear, 3D printed PLA	PRL	Free	
3	1	Potentiometer adapter piece, 3D printed PLA	PRL	Free	
3	1	Large gear to attach to adapter, 3D printed PLA	PRL	Free	
3	1	Potentiometer base, 3D printed PLA	PRL	Free	
3	2	Small gear shafts, 3D printed PLA	PRL	Free	
3	1	Badge reel base, 3D printed PLA	PRL	Free	
3	1	Large gear with shaft for bearing, 3D printed PLA	PRL	Free	
3	1	Base for bearing and middle gears, 3D printed PLA	PRL	Free	
3	1	Badge reel adapter piece, 3D printed PLA	PRL	Free	
3	1	Badge reel brackets, 3D printed PLA	PRL	Free	
3	10	6-32 x 1/2" machine screw	PRL	\$0.04	\$0.40
3	10	6-32 hex nut	PRL	\$0.04	\$0.40
2	1	DISPLAY SUB-ASSEMBLY			\$0.50
3	1	MAX7219 LED Display	Lab Kit	Free	
3	5	Wire, 1 ft	PRL	\$0.10	\$0.50
3	1	Bypass Capacitor, 0.1 uF	Lab Kit	Free	
3	1	74ACT244, Octal Buffer/Line Driver with 3-STATE Outputs	Lab Kit	Free	
1	1	LIGHT SABER SUB-ASSEMBLY			\$3.66
2	1	Light Saber Handle, Black, 3D Printed PLA	PRL	Free	
2	1	Half Cylinder LED Support, White, 3D printed PLA	PRL	Free	
2	1	Light Saber Sheath, White, 3D printed PLA	PRL	Free	
2	6	LED, green, diffused, 10mm, Amazon: B01Ci6EWNY	PRL	\$0.20	\$1.20
2	6	Heat Shrink Wire Wrap 1/8 in ID, 2 in	PRL	\$0.04	\$0.24
2	6	Heat Shrink Wire Wrap 1/16 in ID, 1 in	PRL	\$0.01	\$0.06
2	6	22 Ohm resistor	Lab Kit	Free	
2	12	0.1" crimp, male, Jameco: 100766	PRL	\$0.05	\$0.60
2	6	Molex crimp terminals, 0.100", TTI: 08-50-0114	PRL	\$0.06	\$0.36
2	1	74ACT244, Octal Buffer/Line Driver with 3-STATE Outputs	Lab Kit	Free	
2	1	Bypass Capacitor, 0.1 uF	Lab Kit	Free	
2	12	Wire, 1ft	PRL	\$0.10	\$1.20
1	1	PINWHEEL SUB-ASSEMBLY			\$3.79
2	1	Pinwheel base, White, 3D printed PLA	PRL	Free	
2	1	Pinwheel shaft, White, 3D printed PLA	PRL	Free	
2	1	Pinwheel panes, White, 3D printed PLA	PRL	Free	
2	1	Pinwheel standoff, White, 3D printed PLA	PRL	Free	
2	1	Pinwheel nose, White, 3D printed PLA	PRL	Free	
2	1	Hall effect, latching, Jameco: 1915907	PRL	\$1.95	\$1.95
2	2	Magnet, Neodymium, 8mm dia. x 3mm, Jameco: 2181319	PRL	\$0.45	\$0.90
2	3	Heat Shrink Wire Wrap 1/16 in ID, 1 in	PRL	\$0.01	\$0.03
2	3	Wire, 1ft	PRL	\$0.10	\$0.30

2	1	Vinyl Sticker, Blue	PRL	\$0.40	\$0.40
2	3	0.1" crimp, male, Jameco: 100766	PRL	\$0.05	\$0.15
2	1	Molex crimp terminals, 0.100", TTI: 08-50-0114	PRL	\$0.06	\$0.06
1	1	Solder roll, rosin core, .031" dia, 60/40, 0.25 lb	PRL	Free	
1	3	Hot Glue Stick, Large	PRL	Free	
1	2	Painter's Tape, 1 ft	SPDL	Free	
				Total Cost:	\$108.69
		PRL: Stanford Product Realization Lab			
		SPDL: Smart Product Design Lab			
		COF: Corner of Freedom			