

Solar SPELL Digital Library
Version 1
Bill Of Materials

Item	Specifics	Where purchased (with specific link to where we purchased items)	Approx. Cost (USD)
10-Watt Solar Panel	ECO-WORTHY 10 Watt 12 V Solar Panel Module Garden Fountain Pond Battery Charger	Amazon http://smile.amazon.com/ECO-WORTHY-Portable-Fountain-Battery-Charging/dp/B00FF1KEMI/ref=sr_1_3?ie=UTF8&qid=1431889055&sr=8-3&keywords=eco+worthy+10+watt+solar+panel	\$30
Waterproof Plastic Box	14" L x 8-7/8" W x 2-1/8" H OD Waterproof Tuff Tainer. POLYPROPYLENE Manufacturer Flambeau® Manufacturer Part # 6750TE WT5000	US Plastics http://www.usplastic.com/catalog/item.aspx?itemid=103181&catid=598	\$20 (with shipping)
Voltage Regulator	USB Car Adapter DC 8-22V 12V to 5V 3A Step Down	Ali Express or Amazon http://www.aliexpress.com/item/20-PCS-LOT-USB-Car-Adapter-DC-8-22V-12V-to-5V-3A-Step-Down-Synchronous/1628725203.html http://smile.amazon.com/gp/product/B00U2DGKOK?psc=1&redirect=true&ref=oh_aui_detailpage_o07_s02	\$11
Battery	RAVPower Element 10400mAh Portable Charger iSmart Technology (External Battery Pack, Power Bank, 3A Output, Dual USB)	Amazon http://smile.amazon.com/gp/product/B00DMXJITQ/ref=od_aui_detailpage_s00?ie=UTF8&psc=1	\$20
Banana Pi	Banana Pi Mini	Amazon	\$40

Computer	PC Open Source Mainboard - A7 DualCore / 1GB DDR3	http://smile.amazon.com/Banana-Mini-Open-Source-Mainboard/dp/B00MWA5JKM/ref=sr_1_1?ie=UTF8&qid=1439686284&sr=8-1&keywords=banana+pi	
Banana Pi Case	We recommend to use clear plastic case so computer can be seen	Amazon http://smile.amazon.com/SainSmart-Enclosure-Transparent-Acrylic-Banana/dp/B00UAJ72H0/ref=sr_1_6?ie=UTF8&qid=1439686608&sr=8-6&keywords=banana+pi+case or http://smile.amazon.com/Quality-Clear-Banana-Access-assembly/dp/B00SEFRI9E/ref=sr_1_3?ie=UTF8&qid=1439686663&sr=8-3&keywords=banana+pi+case+clear	\$10
WiFi Dongle	Comfast® WU810N 150Mbps 802.11n Nano Wireless N WiFi USB Adapter	Amazon http://smile.amazon.com/Comfast%C2%AE-Wireless-Miniature-invisible-Supported/dp/B00PJPSY40/ref=sr_1_8?ie=UTF8&qid=1431893374&sr=8-8&keywords=comfast+wu8+wifi	\$10
SD Card	32GB Class 10 SDHC Memory Card	Amazon http://www.amazon.com/Patriot-UHS-1-Memory-Transfer-Speed/dp/B0080MQY24/ref=sr_1_1?s=electronics&ie=UTF8&qid=1431542731&sr=1-1&keywords=PEF32GSHC10333	\$15
USB to Micro USB cable	One was included with the RAV Power batteries we ordered	Amazon	(included)
Heat Shrink Tubing (and use of heat gun)	Gardner	Home Depot (we used this to hide the wires when we soldered together the wires from the solar panel to the voltage regulator and make it waterproof/water resistant)	\$5
Solder/Solder Iron		Home Depot (We soldered together the wires from the solar panel to the voltage regulator)	
Velcro	VELCRO Brand -	Amazon (We used Velcro to fasten	

	Industrial Strength - 2" Wide Tape, 15' -	/hold down the battery and computer to the box) http://smile.amazon.com/VELCRO-Brand-Industrial-Strength-White/dp/B0006HWYJM/ref=ln_i_t?ie=UTF8&psc=1&smid=ATVPDKIKX0DER	
Glue	<p>3M glue + gun + plunger + nozzle</p> <p>3M Scotch-Weld Structural Plastic Adhesive DP8005 Translucent, 1.25 fl oz/35 mL (Case of 12)</p> <p>3M scotch weld; 10:1 plunger</p> <p>3M Scotch-Weld EPX Plus II Applicator W 2:1 and 1:1 Plunger Model 91</p> <p>3M Scotch-Weld EPX Plus 35mL 9164 Nozzles 10:1 Ratio (3M 31382 12 35mL Nozzles)</p>	<p>PLEASE NOTE: THE BOX IS MADE OF POLYPROPYLENE. THIS IS A VERY CHALLENGING MATERIAL TO GLUE. WE PURCHASED A VERY SPECIALIZED GLUE FOR THIS PROJECT—YOU MAY FIND A DIFFERENT GLUE THAT WORKS. OURS WAS A VERY COMPLICATED, INVOLVED, EXPENSIVE SOLUTION, BUT IT WORKED VERY WELL.</p> <p>Amazon http://www.amazon.com/gp/product/B009ZLESR6?psc=1&redirect=true&ref=oh_aui_detailpage_o05_s00 and http://www.amazon.com/gp/product/B00PME7FN4?psc=1&redirect=true&ref=oh_aui_detailpage_o03_s00 and http://www.amazon.com/gp/product/B001ANXYF4?psc=1&redirect=true&ref=oh_aui_detailpage_o05_s00 and http://www.amazon.com/gp/product/B00XAJUDZA?psc=1&redirect=true&ref=oh_aui_detailpage_o06_s00</p>	<p>\$350 (for 12 glue sticks) \$20 (plunger) \$65 (glue gun) \$30 (for 12 nozzles)</p>