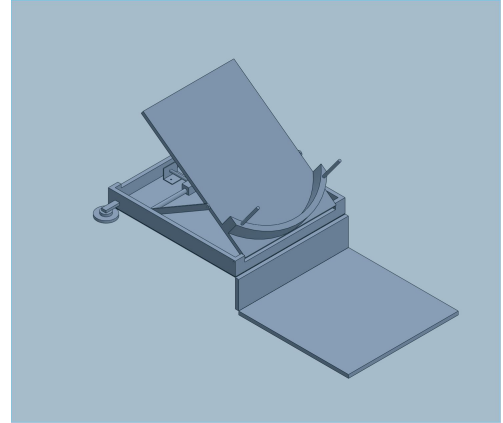


## Bill of Materials for Pouring Assistant



Part/Material	Quantity	Link
3/8 inch HDPE sheet 2' x 3'	1	<a href="https://www.mcmaster.com/catalog/124/3726">https://www.mcmaster.com/catalog/124/3726</a>
8" long 1/4-20 threaded steel rod	1	<a href="https://www.mcmaster.com/90322a655">https://www.mcmaster.com/90322a655</a>
1 feet of 3/8 inch rope	2	<a href="https://www.amazon.com/Ravenox-Natural-Twisted-Glitter-Triple-Strand/dp/B0167TMRT4/ref=sr_1_1_sspa?ie=UTF8&amp;qid=1543799786&amp;sr=8-1-spons&amp;keywords=black%2Broke&amp;psc=1&amp;th=1">https://www.amazon.com/Ravenox-Natural-Twisted-Glitter-Triple-Strand/dp/B0167TMRT4/ref=sr_1_1_sspa?ie=UTF8&amp;qid=1543799786&amp;sr=8-1-spons&amp;keywords=black%2Broke&amp;psc=1&amp;th=1</a>
Aluminum hinges	4	<a href="https://www.mcmaster.com/1494a42">https://www.mcmaster.com/1494a42</a>
Motor	1	<a href="https://www.amazon.com/dp/B0721T1PXQ/ref=sspa_dk_detail_2?psc=1&amp;pd_rd_i=B0721T1PXQ&amp;pd_rd_w=M3yZf&amp;pf_rd_p=21517efd-b385-405b-a405-9a37af61b5b4&amp;pd_rd_wg=rlgtY&amp;pf_rd_r=SJB38JDB4SX9CAYF11YK&amp;pd_rd_r=8fdd70a0-fe90-11e8-a0dc-3120f592a7d1">https://www.amazon.com/dp/B0721T1PXQ/ref=sspa_dk_detail_2?psc=1&amp;pd_rd_i=B0721T1PXQ&amp;pd_rd_w=M3yZf&amp;pf_rd_p=21517efd-b385-405b-a405-9a37af61b5b4&amp;pd_rd_wg=rlgtY&amp;pf_rd_r=SJB38JDB4SX9CAYF11YK&amp;pd_rd_r=8fdd70a0-fe90-11e8-a0dc-3120f592a7d1</a>
Aluminum sheet 14" x 12"	1	<a href="https://www.mcmaster.com/89015k119">https://www.mcmaster.com/89015k119</a>
Aluminum sheet 1/8" x 1/2" x 24"	4	<a href="https://www.mcmaster.com/8975k577">https://www.mcmaster.com/8975k577</a>
Aluminium rod 3/8" diameter, 36" long	1	<a href="https://www.mcmaster.com/8974k24">https://www.mcmaster.com/8974k24</a>
5/16" x 24" aluminium rod	1	<a href="https://www.mcmaster.com/8974k23">https://www.mcmaster.com/8974k23</a>
0.790" x 24" aluminium track for roller	2	<a href="https://www.mcmaster.com/60135k13">https://www.mcmaster.com/60135k13</a>
Track roller for 0.790" rail	2	<a href="https://www.mcmaster.com/60135k91">https://www.mcmaster.com/60135k91</a>
DPDT Toggle Switch	1	<a href="https://www.amazon.com/Support-Momentary-Miniature-Toggle-Dashboard/dp/B0748DTR7T/ref=sr_1_19">https://www.amazon.com/Support-Momentary-Miniature-Toggle-Dashboard/dp/B0748DTR7T/ref=sr_1_19</a>

		?s=automotive&ie=UTF8&qid=1544666492&sr=1-19&keywords=dpdt+toggle+switch
Suction Cup	2	<a href="https://smile.amazon.com/Suptig-Suction-Session-Windshield-surfaces/dp/B01G6IEC08/ref=sr_1_1_a_it?ie=UTF8&amp;qid=1544666797&amp;sr=8-1-spons&amp;keywords=suction+cup+go+pro&amp;psc=1">https://smile.amazon.com/Suptig-Suction-Session-Windshield-surfaces/dp/B01G6IEC08/ref=sr_1_1_a_it?ie=UTF8&amp;qid=1544666797&amp;sr=8-1-spons&amp;keywords=suction+cup+go+pro&amp;psc=1</a>
Rocker Switch	1	<a href="https://www.alliedelec.com/zf-electronics-srb22a2fbbnn/70207340/?mkwid=sjXpftxgT&amp;pccid=30980760979&amp;pkw=&amp;pmt=&amp;gclid=Cj0KCQiAgMPgBRDDARIsAOh3uyJIN9Gn-A41JtsFzCEJvbe1gi9kN72HI3ZTQwNGYUAdY7XQB21-SMEaArHMEALw_wcB">https://www.alliedelec.com/zf-electronics-srb22a2fbbnn/70207340/?mkwid=sjXpftxgT&amp;pccid=30980760979&amp;pkw=&amp;pmt=&amp;gclid=Cj0KCQiAgMPgBRDDARIsAOh3uyJIN9Gn-A41JtsFzCEJvbe1gi9kN72HI3ZTQwNGYUAdY7XQB21-SMEaArHMEALw_wcB</a>
Red LED	1	<a href="https://www.amazon.com/100pcs-Ultra-Bright-Emitting-Diffused/dp/B01GE4WHK6/ref=sr_1_5?s=industrial&amp;ie=UTF8&amp;qid=1544665664&amp;sr=1-5&amp;keywords=red+led">https://www.amazon.com/100pcs-Ultra-Bright-Emitting-Diffused/dp/B01GE4WHK6/ref=sr_1_5?s=industrial&amp;ie=UTF8&amp;qid=1544665664&amp;sr=1-5&amp;keywords=red+led</a>
AC/DC Adaptor 110VAC to 6 VDC	1	<a href="https://www.amazon.com/gp/product/B01LXYM051/ref=oh_aui_detailpage_o03_s00?ie=UTF8&amp;psc=1">https://www.amazon.com/gp/product/B01LXYM051/ref=oh_aui_detailpage_o03_s00?ie=UTF8&amp;psc=1</a>
1k Resistor	1	<a href="https://www.amazon.com/Watt-Carbon-Film-Resistor-s-pack/dp/B00EV2QC96">https://www.amazon.com/Watt-Carbon-Film-Resistor-s-pack/dp/B00EV2QC96</a>
2k Resistor	1	<a href="https://www.amazon.com/Projects-100EP5122K00-Ohm-Resistors-Pack/dp/B07C91S45M/ref=sr_1_3?s=industrial&amp;ie=UTF8&amp;qid=1544665643&amp;sr=1-3&amp;keywords=2k+resistor">https://www.amazon.com/Projects-100EP5122K00-Ohm-Resistors-Pack/dp/B07C91S45M/ref=sr_1_3?s=industrial&amp;ie=UTF8&amp;qid=1544665643&amp;sr=1-3&amp;keywords=2k+resistor</a>
3D printed C-shaped Support	1	See Solidworks Download File
3D printed electronics enclosure	1	See Solidworks Download File
Velcro (dimensions)	1	<a href="https://www.amazon.com/dp/B00C3CAIKU/ref=twister_B07FQ28TJD?_encoding=UTF8&amp;psc=1">https://www.amazon.com/dp/B00C3CAIKU/ref=twister_B07FQ28TJD?_encoding=UTF8&amp;psc=1</a>
Grip Liner (dimensions)	1	<a href="https://www.amazon.com/Duck-Select-Drawer-12-Inch-10-Foot/dp/B002AS9N58/ref=pd_lpo_vtph_201_lp_t_3?_encoding=UTF8&amp;refRID=HSGWF5TW7P4NSEHZ5RGA&amp;th=1">https://www.amazon.com/Duck-Select-Drawer-12-Inch-10-Foot/dp/B002AS9N58/ref=pd_lpo_vtph_201_lp_t_3?_encoding=UTF8&amp;refRID=HSGWF5TW7P4NSEHZ5RGA&amp;th=1</a>
Attachable spout and attachable strainer	1	<a href="https://www.amazon.com/gp/product/B07DWRH4BM/ref=oh_aui_detailpage_o00_s00?ie=UTF8&amp;psc=1">https://www.amazon.com/gp/product/B07DWRH4BM/ref=oh_aui_detailpage_o00_s00?ie=UTF8&amp;psc=1</a>

## **Recommended Tools and Machines**

Bandsaw

Belt sander

Mill

Drill Press/Lathe

Tap Handle

Hand drill

3D printer

Scissors

Glue

Sharpie