

| Part # | Part Name | Qty | Description | Function | Material | Dimensions | Cost | Links to Cost Estimate |
|----------------------------|-------------------------|-----|--------------------------------------|---|-------------------------------|---------------------|----------|---|
| 1 | Plexiglass | 8 | Sheets of Plexiglass | Structure the chamber | Glass | 12inx12in | \$9 | https://www.amazon.com/Plexiglass-12-Clear-Acrylic-Sheet/dp/B01NBVKDPD |
| 2.0 | Mega 2560 | 1 | Arduino Board | Reads pressure | Plastic | 4inx2in | \$38.50 | https://store.arduino.cc/usa/mega-2560-r3 |
| 2.1 | BMP 280 | 1 | A small sensor that reads pressure. | Connects the wires to the board | Plastic | 0.8inx1.4in | \$11.90 | https://store.arduino.cc/usa/grove-barometer-sensor-bmp280 |
| 2.2 | Jumper Wires | 4 | Wires with two ends | Connects BMP 280 to Mega 2560 | Plastic and brass | 6.10in | \$3.84 | https://store.arduino.cc/usa/10-jumper-wires-150mm-male |
| 3 | Epoxy | 8 | Bottles | Connect the sheets of plexiglass together | Glue | .85 ounce | \$10 | https://www.amazon.com/Gorilla-Epoxy-Minute-ounce-Syringe/dp/B01M7VD07W/ref=sr_1_sc_2?ie=UTF8&qid=1549237961&sr=1-2-spell&keywords=epoxy%2Bgorilla&th=1 |
| 4 | Valve Stems | 4 | Pressure Transducer | Controls the amount of air that goes in. | Nickel | 1-1/4in | \$8 | https://www.amazon.com/VTR-TR-416-S-Outer-Mount-Metal/dp/B01BRVCQ7K/ref=zg_bs_3152432011_2?_encoding=UTF8&psc=1&refRID=VTFRRCMG3KQ4R1Q1AX8T |
| 5 | Plexiglass Cutter | 1 | Steel blade | Cuts Plexiglass | Steel | 7.9inx3.7inx1.2in | \$6.50 | https://www.amazon.com/Red-Devil-1170-Plexiglass-Cutting/dp/B000BZZ1D0/ref=sr_1_9?hyadid=323168400638&hvdev=c&hvlocphy=9060078&hvnetw=g&hvpos=1t1&hvqmt=b&hvrnd=13012760874514944019&hvtargid=kwd-402330189991&keywords=sheet+glass+cutter&qid=1551297109&s=gateway&sr=8-9&tag=googhydr-20 |
| 6.0 | Pinecone Vent | 4 | 3D printing at cline library | Vents the air | Plastic | 8inx8in | \$66.63 | https://nau.edu/library/3d-printing/ |
| 6.1 | Termite Vent | 1 | Free 3D printing at 3D Systems | Vents the air | 48HTR, SLA Polycarbonate-like | 8inx8in | \$0 | https://www.3dsystems.com/ |
| 6.2 | Fibonacci Sequence Vent | 3 | Free 3D printing at 3D Systems | Vents the air | 48HTR, SLA Polycarbonate-like | 7.5inx7.5in | \$0 | https://www.3dsystems.com/ |
| 6.3 | Flower Vent | 3 | Free 3D printing at 3D Systems | Vents the air | 48HTR, SLA Polycarbonate-like | 7inx7in | \$0 | https://www.3dsystems.com/ |
| 7 | Plexiglass | 1 | Sheet of plexiglass | | Glass | 7/8inX23in | \$13.48 | https://www.homedepot.com/p/LEXAN-12-in-x-24-in-x-093-in-Clear-Polycarbonate-Sheet-GE-33/202038063 |
| 8 | Weather Stripping | 1 | Installation connect to the trapdoor | Airtightness | Plastic | 1/4inx17ft | \$7.96 | https://www.homedepot.com/p/M-D-Building-Products-1-4-in-x-17-ft-Storm-Door-and-Window-Replacement-Weather-Stripping-04267/100353463 |
| 9 | Hinge | 3 | Connect to walls | Actuation | Steel | 3-1/2 in. x 5/8 in. | \$2.79 | https://www.homedepot.com/p/Crown-Bolt-3-1-2-in-x-5-8-in-Satin-Nickel-Radius-Door-Hinge-20824/205338344 |
| 10 | Release Latch | 2 | Releases the air from chamber | Releasing air | Aluminum | 1.25in Diameter | \$20.49 | https://www.amazon.com/dp/B07HFXR4W7/ref=sspa_dk_detail_2?psc=1&pd_rd_i=B07HFXR4W7&pd_rd_w=CB1H2&pf_rd_p=46cdcf7-b302-4268-b799-8f7d8cb5008b&pd_rd_wq=7MBhu&pf_rd_r=VBRQ9HZ3J52757429JT5&pd_rd_r=8690c067-6089-11e9-bb40-b11ab2c84204 |
| Budget | | | | | | | \$700 | |
| Total Expenses | | | | | | | ~\$350 | |
| Total cost estimate | | | | | | | \$199.09 | |