**Chatfield Material List**

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| **Material** | **Details** | **Source** | **Notes** |
| Bold’s Basal Media – approx. 200 ml | Growth media for the Chlorella algae – solution provided by Nick Sweeney from NREL | solution mixed by NREL scientist | The recipe and composition is readily available.  **http://www-cyanosite.bio.purdue.edu/media/table/bb.html** |
| Chlorella Vulgaris | Unmodified species | NREL | provided by NREL |
| ABS plastic | Bioreactor and other parts will be printed in ABS |  | Stratasys P400 ABS |
| 6V micro motor | 110 RPM motor | Spark Fun part number  ROB-12143 | Enclosure also included ROB-12105 |
| Camera | C329-UART-board | electronics 123 | Using lens L361RKC329 or L28IRKC329 |
| Hydrogen Sensor | 5V | SparkFun SEN-10916 |  |
| Solenoid Valve | 5V | SparkFun ROB-11015 |  |
| Photo sensor | From NESI kit |  |  |
| Button Cell Battery | CR2032 | Duracell | 3 x 20 x 20 (mm) 220 mAh |
| LED lights | 25 light strip | Sparkfun PRT-12621 |  |
|  | Various | Superbrightleds.com | WE have ordered several different lights and are currently working to see which will work the best |
| Real time clock | clock | Sparkfun COM-00540 |  |
| PCB Circuit Board | Board to hold photocells | Radio Shack  Prt: 276-004 |  |
| Cadmium-sulfide photocells | 4 photocells for Chlorella | Radio Shack  prt:276-1657 |  |
| Adhesive | fast drying | 3M 4475 | scotch-weld VOC 600 g/L |
| Adhesive | super glue | Loctite Super Glue gel |  |
| Polycarbonate | Polycarbonate to enclose the bioreactor | eplastics sample pack | [www.eplastics.com](http://www.eplastics.com) |
| Acrylic Tubing | various sizes | United States Plastic Corporations | http://www.usplastic.com/catalog/item.aspx?itemid=23401&catid=440 |
| Bearings | Tapered Outer Diameter, Flanged | F2ZZ and F3ZZ | www.astbearings.com |
| Bearings | Miniature & Instrument Series (metric) | 601XHZZ and 602XHZZ | [www.astbearings.com](http://www.astbearings.com) |
| Rubber Belt | unknown at this time |  |  |
| Gas permeable membrane | 0.005 inch cured silicone sheeting. | SSP inc. number:  SSPM823-.005  Batch EH016 |  |
| Hydrogen sensing tape | no tape has been selected at this time |  |  |
| Silicon Caulk | GE Silicon II | Home Depot |  |
| Grease | Super Lube Silicone Lubricating Compound | Home Depot |  |
| Fasteners | various |  |  |