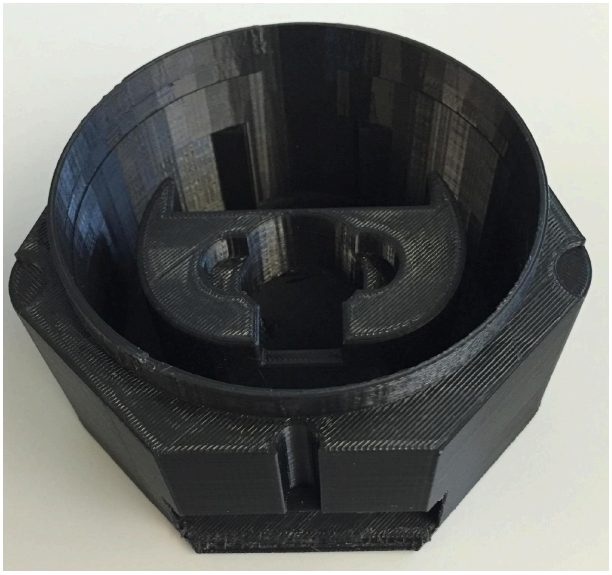

FlashLapse

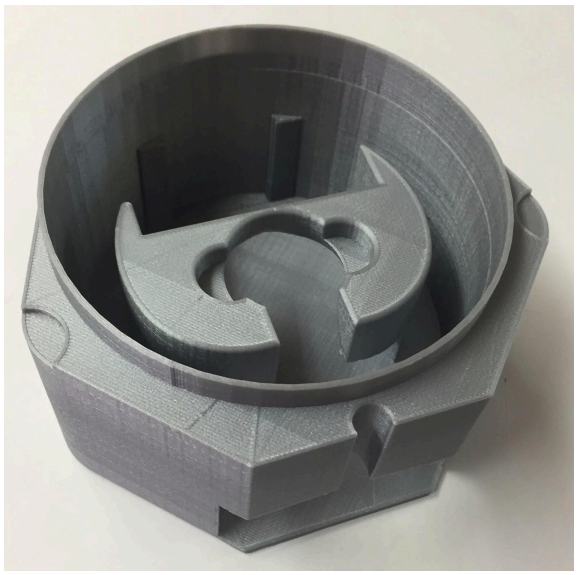
MATERIALS AND SUPPLIES

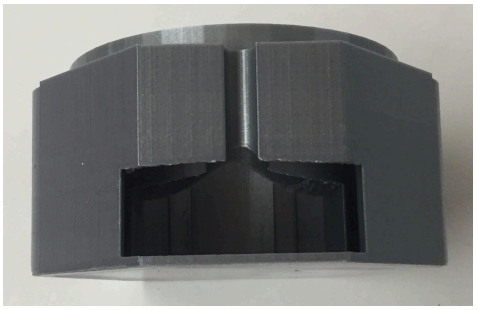
The 3D-printed Components

(Different colors and angles of each piece are shown below for reference. The pieces may be printed using any PLA filament of any color or brand.) The STL files for printing are located here: https://drive.google.com/drive/folders/1mO-4cp4KQBRxLA235H2S5TEJu_VYIAwF?usp=sharing

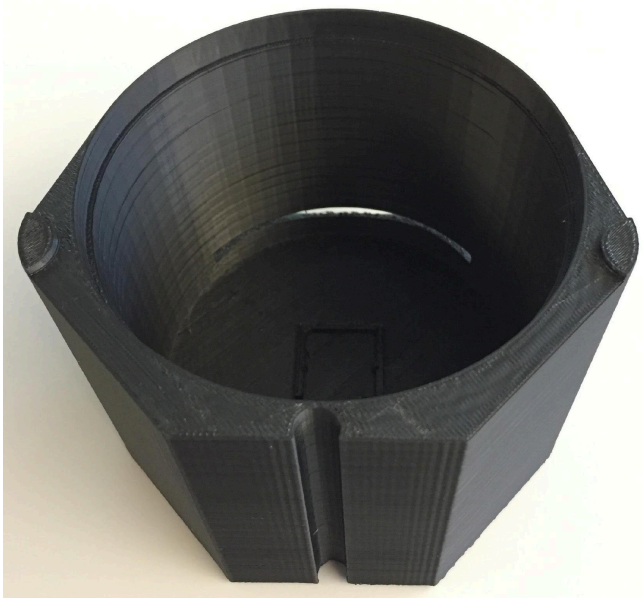
Base:

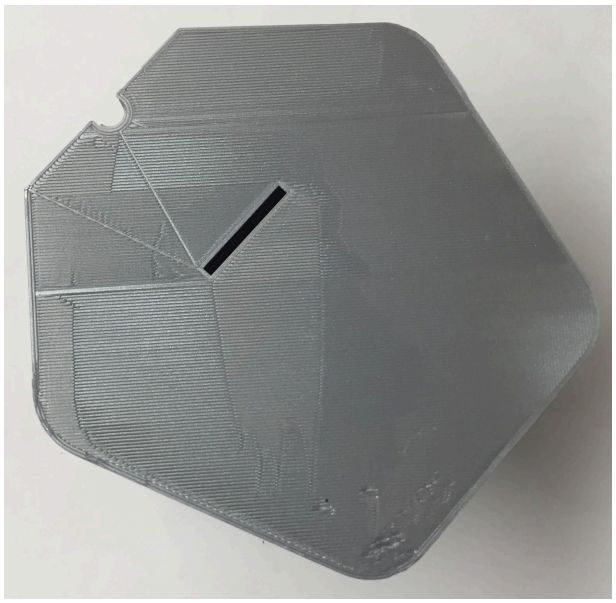




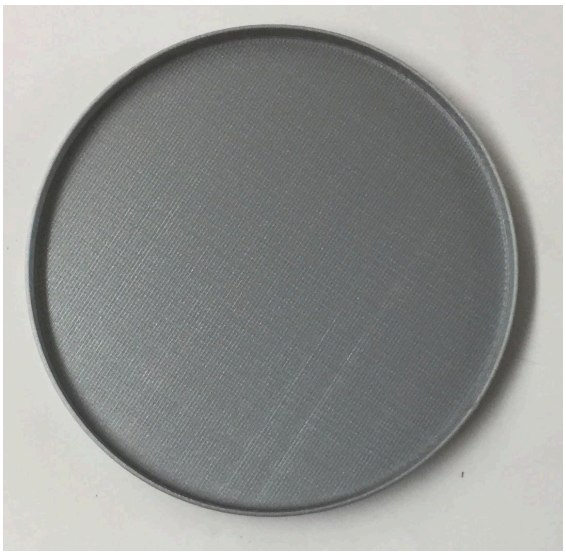


Top:

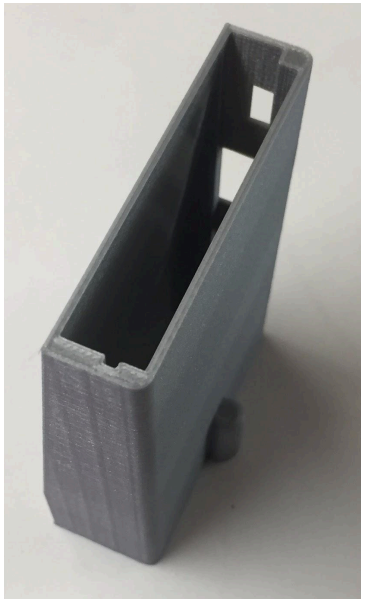
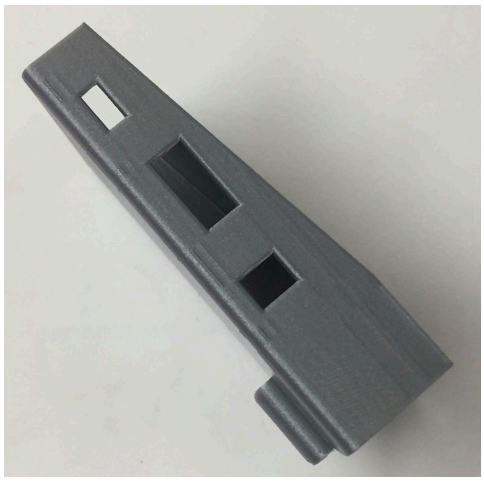




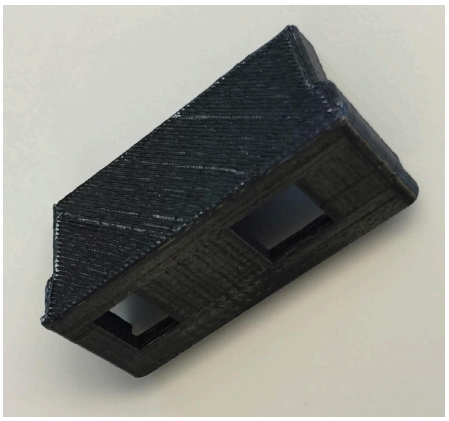
Rotor (Petri Dish Holder):

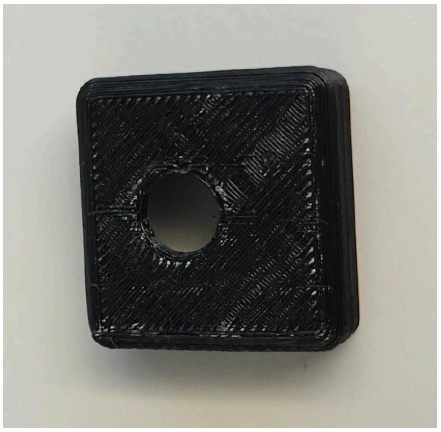
Raspberry Pi holder (for camera control):

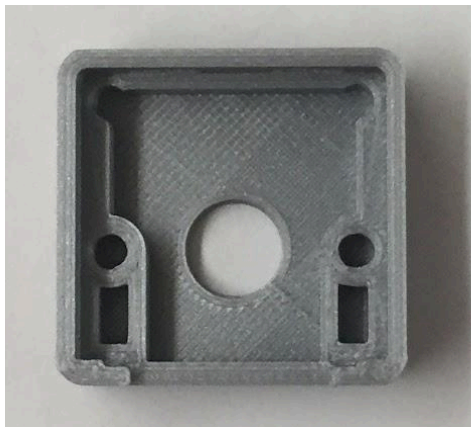



Arduino holder (for light control):




Camera cover (install after focusing the camera):

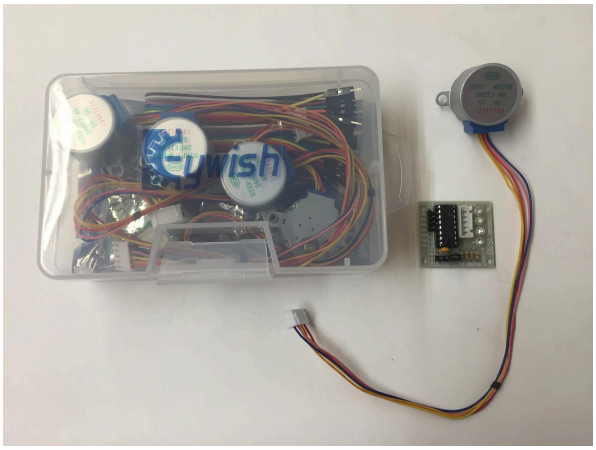




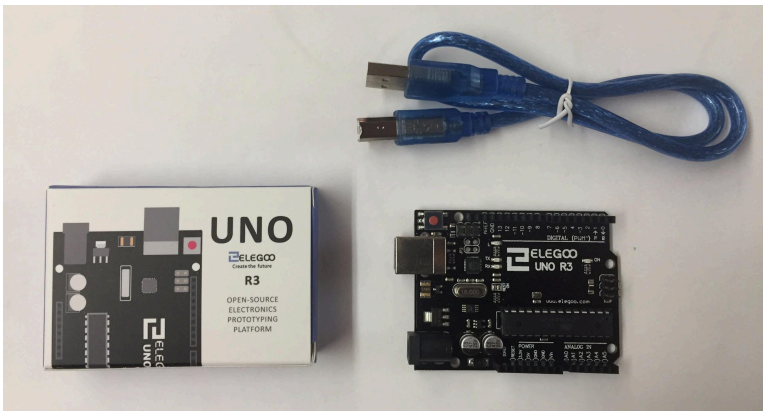
Materials:

Elegoo Dupont Wires:

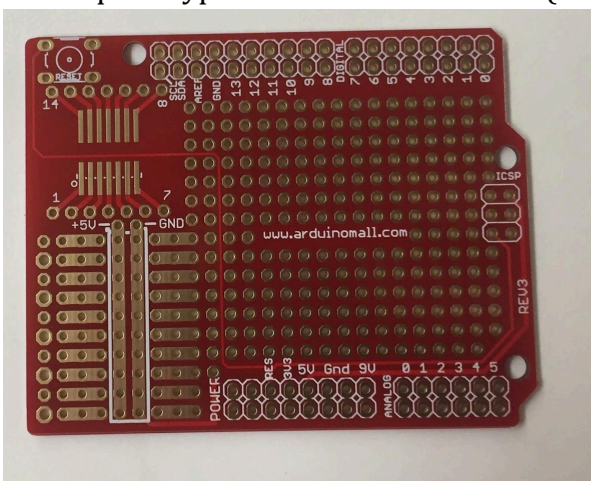
Eywish Motors (set of 5):

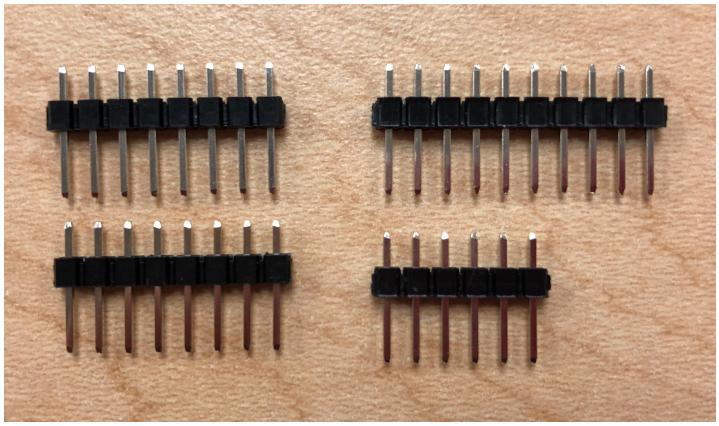


Arduino UNO R3 board with blue USB cable:



Gikfun prototype shield for the Arduino (ships as set of 3; only 1 required per flashlapse device):





Required pins for this build (as pictured): two double-sided 8 pin connectors, one double-sided 10 pin connector & 1 double-sided 6 pin connector.

Lead-free solder:

Soldering iron with temperature control and brass tip cleaner:

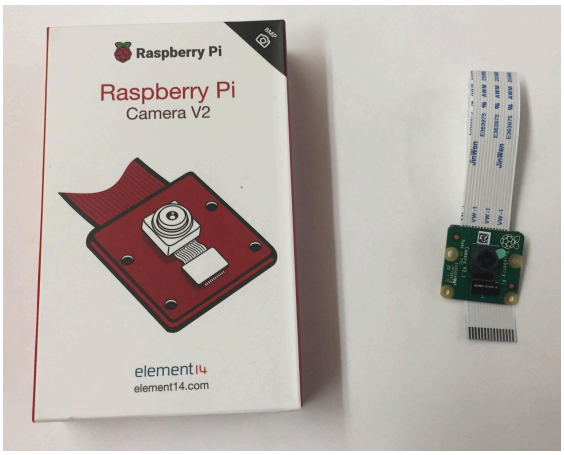
Helping hand (for soldering assistance):

Wire cutter or wire stripper:

Neopixels LED lightstrip (non-waterproof):

Raspberry Pi 3 CanaKit with power supply:

Raspberry Pi Camera V2:
(either version shown is acceptable, only one camera is needed per flashlapse unit)



3M micropore paper tape (½'' width):

100 mm or 10cm round plastic petri dishes:

hot glue gun with glue sticks:

Estink mini wireless keyboard (or, alternatively, a USB keyboard and USB mouse):

8GB microSD card with SD card adaptor:

Computer monitor (with HDMI port):

HDMI cable (for connecting the computer monitor to the raspberry pi):