

PROJECT #2 PROPOSAL

**Name(s): Alex Leslie, Matthew Coull**

**Team Name: The “EH” Team**

**Part A: Project Ideas & Objectives**

**Our goal is to build a drone that is race ready and FPV capable for the school. we plan to use Betaflight software to program our flight controller. We will use high powered brushless racing motors to give this drone its speed. We want it to be easy to fly for anybody to try.**

**Ideas:**

**-print a MVHS themed frame for a quadcopter**

**-assemble cost effective parts for quadcopter**

**-program parts for stable flight**

**-design mount for GoPro Hero Action Camera for onboard video**

**Objectives:**

**-Research cost effective parts to construct quadcopter**

**-Learn to solder circuitry**

**-Use computers to build 3D model for mount for camera**

**-Use a computer to program flight controller and stabilizer on quadcopter**

**-Have one successful flight with onboard video**

**Part B: Electronic Resources (Make sure hyperlinks are active!)**

**plenty of kits out there for these drones, this one is perfect!**

**-**[**drone kit**](https://www.amazon.ca/SunFounder-Quadcopter-Controller-Hobbywing-Propellers/dp/B01JGAS4HA/ref=sr_1_2?ie=UTF8&qid=1507030978&sr=8-2&keywords=drone+kit)

**-**[**Transmitter and receiver**](https://www.amazon.ca/Flysky-Transmitter-FS-iA10B-Receiver-Airplane/dp/B07115X6KL/ref=sr_1_1?ie=UTF8&qid=1507031299&sr=8-1&keywords=drone+receiver)

**-**[**5v FPV camera**](https://www.amazon.ca/Micro-Camera-Transmitter-Splitter-Inductrix/dp/B01NBT3Z9I/ref=sr_1_10?s=toys&ie=UTF8&qid=1507031740&sr=1-10&keywords=aio+fpv)

**-**[**FPV display**](https://www.amazon.ca/Eachine-VR-007-Goggles-Glasses-Battery/dp/B01M7ZURMA/ref=sr_1_3?s=toys&ie=UTF8&qid=1507031975&sr=1-3&keywords=fpv+goggles)

**Part C: Materials:**

* **3D printer and software**
* **Solder and soldering iron**
* **GoPro Hero Camera**
* **6 channel transmitter and receiver**
* **Naze 32 Flight controller and 12-20 A speed controllers**
* **5045 bullnose propellers**
* **2300KV brushless motors (4)**
* **48 channel 25mw vtx and ccd camera**
* **ccd monitor\display**
* **Rp-sma LHP antenna (2)**

**Design:**

* **4 bladed 250mm drone**
* **central weighted**
* **6- axis gyro for stable and ease of flying**
* **Able to disconnect camera and race**