**Listes matériaux avec liens : Maréchal Mélanie et Maxime Fède**

Laser 5v : https://www.ebay.fr/itm/Diode-laser-5V-point-rouge-650nm-avec-cable-Ideal-arduino-raspberry-etc/173592475476?hash=item286aeaf754:g:oYQAAOSwredbxlbI

2 capteurs de luminosités : https://www.ebay.fr/itm/Photoresistance-GL5528-5mm-Arduino-Raspberry-capteur-luminosite-detecteur/272886134836?hash=item3f8947f834&var&\_trkparms=ispr%3D1&enc=AQAEAAADMKvsXIZtBqdkfsZsMtzFbFsbX3WcW5fmB%2Fx7ZbaZTyexki2QsHbwqS7bcaYPqH5YtmUvmvq8RBpm4hAkPKHPvDx5e1Dx3YCOBym%2FvboBRliLO1wIl08tNlbzUe1FuUw4YkBTH%2BYrSKIwuzI25k7AGCVjJHH%2Fo9c2FfkB1WrT3hmLxiOAyp2bYan8VPwDI5p7of1Pv90XNFczt4%2F%2FZa6Q4C4fR%2Bqb8jOy3nBwb3EsqVd%2BiHwdh6ke%2FDgQgJOwwrJO5Pkd4vqbMAw3vzZladBhT4gqFLmuMjxDG%2F%2BhIOe8mOPfhPfn%2FqQy6TjHoFF5i3l8ev0Imixo2N0QN8jWFwDuiiJWBG6w2w%2FLIa%2FQSriZifTv8nZqTLpyh5Y5A%2FqbErUT6hubiBoGdWAKwKLEK6x8iaC3m8m%2FBadtaN4n3nCqwh7wH0sCwmXjLF%2BzzNR8xMip36pFlMLZWNmXI%2BH7TxJpIP%2F8loCfwpAJqG%2BsTEwM6bMdl8wXhUr5rV3c2hyVlzHQmM6qolEgPJjNf072MdJKmWqfQK2nYfeepDNa3VdqX8YLPOViW3owbVB3jKMLeo9uOOiO0BFJDfUXtRzmkGdUk3PgUxwZC%2F4UtC%2BNbuztYjtKCkubZp9UecH01xUSRhqAVhz9ZeUPif68Uq8EN65lqPcWtPAv7pNSRVhVWk7CyL4IPRF3gJyeV%2BYOwCDuLDGbPQ%2FG9EJVCPlVmIzwM5%2BOiyJ1MbmHZ2V46C9HpasZlxyE8EyOe5S1xLQl0%2FdA64%2BTlRyKWlFAwgOKEE6b2PY9CLk6RMvVNlGd8VgUsPcjo7Y1EQPimRZlNReT%2F3XiH6t8ScsMlKI69YeTUTcYNpOBbbUZu5wRLJ1GM8fJ73U%2BdS%2FZgs1iLt%2FHDQaSkGb6ReFYhQJvYA43zxGrUJ015beTrdY2UU8zC66pigsQ5WqPYhHh1W57UUz%2BZpRuRnR0iJ5nqDCATMG9d0drEahv%2F9Mob%2BvwWuXtWJpcxzQFNwrzJh%2FbR2yIa%2FZ2YeebTxPUhEju2GMjHCWUYZdBmxvMS2IMqPRte%2BZj96y7NhKVmuHTjSgFIxRzkIGSvJ%2Fh8xD9oYtPUA%3D%3D&checksum=27288613483679332bcc5df442acb7a4441dbd1b8be7

Un relais 5V : https://www.ebay.fr/itm/Carte-relais-5v-pour-Arduino-PIC-ARM-AVR-DSP-low-trigger-relay-5V/190823079261?hash=item2c6df11d5d&var&\_trkparms=ispr%3D1&enc=AQAEAAADIKvsXIZtBqdkfsZsMtzFbFsbX3WcW5fmB%2Fx7ZbaZTyex5KVna9JkJ2M1QnfbOS8x3cJoLMlONPne4xQG0SZwB6hj9y5lFVC4oLOcj3123X33aEcBXf%2FO6UMuGuUMaBm5XwgpOujCX4qCw2I19Flepq7VZtK2TTOQcTAg8NB5q2Y7SdPQqZRqgzgtIY90HscMP2YpWHqOAV%2BBmtpIBc%2FL8HWYQC9pEZTDVd9UkjAk7xi2jJfSgfjRc3XR2lE8%2Bklw5iF5JpAvJ9YcSafYi8SJENaoC7ALX0mH7r93zmp8KLlTzRjPq%2BKGlSJM9TSCSvM%2FpuleGF5ioJJ%2FzHMStI7e2yotzVc%2Fry2sU40nZTPwO6tIGWvimMIoZlst5Jk%2B%2FTZkNNCX1PIOQ1%2FTKoOm3PhAfTgUjJ%2BMz3OxoGQ5ff5zz%2B6qfyRcatrEWHjM04csJ%2BMxWldihz21zwpYuLDIS4TRDcrUIWSjAxnv8br31Coi7mFBhqC9G7t%2FcsI4dIQV4v9ndZLSthanC3St2pOL8ZRO44d%2FjlU2SwWVnUbC0uc9l7L5CT5fB0VpqvGo%2B%2FLWOlPT65%2FhHyLrBi66OnIHG206Eoxpofj2z%2FCTt1VufMi7b6yMgs941t%2BtGn1qA9vV4qS3nkMeW%2BtL1pgYDfD6zE%2BSc5cy8qTxkMlcz%2BaZhIlRC01BtT2%2BmyRQRJeoW2Tkq3y163KzP6jqCspnozXKyW0Ku10iBZu%2BFQG4dOx4QPdydmtlyNbqKxvfHm2gIkHrl8Qi3rNvzAni89PWHf0NrfTI%2Fn%2F7H0T3VpY4xyZLwbCi%2Br4PIKHm3fzQv86ei3PGJ97heM21TQZNEsYZSzUoKixgR6CNfqdWRfZy4H3Zn17a9Xm39W6aqJJhkhaYqYYPQ%2BcC75TSefLqWI2Jkk2Ln4Zpfttl2ENXhhGTF9778ePAeAmQ1uUpDCBnuWAqKhr8dnD4AVsbxbfQHv%2Brzz2PgV48fqNzBy9zSs9zUCtpS4rTSbl%2BgRd834xBIY%2BYyMwfvwbu6b4q%2FiUbWNGQJXUM2ilx%2FOH6PnqG7ZRBR49YnD1f0gVO&checksum=190823079261fab1efed025c4f189513466bacbd67fd

Module arduino HC-06 Bluetooth : https://www.ebay.fr/itm/HC-05-HC-06-Module-bluetooth-emetteur-recepteur-ou-module-de-base-HC05-HC06/173876607370?hash=item287bda798a:m:mEJoZBZpGRYxZHwSrBv-ARw

un capteur LM35DZ : https://www.ebay.fr/itm/10x-LM35DZ-Capteur-de-temperature-LM35-TO-92-ic-inductanc-IY-ZH/153639293109?hash=item23c59d90b5&\_trkparms=ispr%3D1&enc=AQAEAAADIKvsXIZtBqdkfsZsMtzFbFsbX3WcW5fmB%2Fx7ZbaZTyex6mZJuUHfQYYHz1b18KwSPstrBxrZiGiezdICwcjO%2FzdNDiHfFd7HH6NFWLF5amFwRkh2O2dvIilVjCMCmdrFUpZlviNL4OPR6hvCVeHl2%2Fksfef1YPFDgn9d7zXnO%2F1L0s3xZe4XcGiPxI%2B4U7SEMB8ULQ4s8v%2BgjpBz0rVtn1wiAGcEiF9kqylYCts%2BjiPk%2B5t%2FqDgqq0k9JXTcMLIKf27%2BwDN0P2c5m41eD3UwYT%2Bk9z5k%2F7uQ8QeQqII83upRpfENn0ps1rVECd27yol%2FQFm8kyc8BjYGTnfhZjAeSe0lmIJ%2FlExmaU%2B%2BBT9uhfGp2uwrx8F1Y2StrMRCW1zOJSo8C5EfJjintajAIF9rsfUUBvQieKY%2B7t6EsvO9PW6n1LBqZTdO9bANA944I9NvB5GAeh1TXO4b2TiUNY0wYO4jrrR4wr0rm6lKOfbZW5zKdVj6fMPFh2hjTWnQa06zIbap85XUOegBWhRKObphp8jysPPE%2FgCOBXAaVPN6SlmHYy9jiRl%2B1hciZe45vts9h8rFdE7sjpQmgd%2FIHtDrP5Wf0ed2NMPAYlLtjQRCTImYqWbWLYQdxgqusgaH0k2vTMH73wtYVe11rcnRqwDdSgjZeS8oMfJgBR4k%2BaA3MgtSGbVmoNi9RwsMKttkNprQXt8mSJf3LFDUucJQ336DrQsTMTfYDnEPu9cKsunntowbftitUmm5B823J%2Bk6X44LG11TAY%2FUhDwNngnIRsE45ZxkQ9Z2d%2BHArbTrTixJyqbCJfCQPrYkNs60JeJ1y7WFhg6l8kD5Vp6UoHsV%2B4b94%2BOM3KoWnp9Fb7XLaUTPWpXiWJ3ZMepLt8vPxecg1U7ulxjls%2BU1GELQZVElLJ9YTRMvbJbuInTc8zmO%2B%2Fpkx1TyqazQ%2BREySidkfNk159sDWWLQX%2BUKU8X5rvzQzBvNBxIcGXnk%2F%2F0vg6hy12OF7SL8lFLWLh3vFnbrus3Oam5QKb1Yz8Y5YgCAlGPAlFzi5%2FTU4%2Fb8%2ByIWQ3maZ%2BU%2FzAE1&checksum=15363929310949225bab3c3f474890480001ff62ab08

servo moteur : Je ne sais pas s’il faut ce type de servo moteur https://www.ebay.fr/itm/Servo-Moteur-SG90-9g-ARDUINO-Micro-Avion-servo-pour-Helicopter-Airplane-RC-Robot/392554429356?hash=item5b66113bac:m:msG0RPfmosnsXtWuZ84QZdA

un lecteur de badge RFID : https://fr.aliexpress.com/item/32768106353.html?spm=a2g0o.productlist.0.0.3e133089QylNO8&s=p&algo\_pvid=44ccef4d-7bb0-4acf-b9cc-bc0da59c606c&algo\_expid=44ccef4d-7bb0-4acf-b9cc-bc0da59c606c-2&btsid=7026cb7b-1061-46d7-bd9d-c8d3dd01922f&ws\_ab\_test=searchweb0\_0,searchweb201602\_7,searchweb201603\_55

lecteur de carte micro SD : https://www.ebay.fr/itm/lecteur-de-carte-micro-sd-pour-arduino-Micro-SD-Card-Module-SPI-For-Arduino/183149348288?hash=item2aa48d45c0&var&\_trkparms=ispr%3D1&enc=AQAEAAADQKvsXIZtBqdkfsZsMtzFbFsbX3WcW5fmB%2Fx7ZbaZTyexj4OlfQIUUHPG1jjBWywAmVyk9HJIGUGSeJ8DFA0q5thuQCPeylukuXTYVdio7SwrS2kC9zfxRa8sRyjCb1QybVI224HtApqFHKaI1nIY%2BlvRPny%2B87lHLKWGG0NNZkKDz6pT9BEJzi9nmmu1sv04p0E%2FFGP2N0TLpDoOqlwFEmpc85MbSTwsBmmTiVXDZYlzW310v8xVAxW3T%2Fc%2Bdq%2FFP%2FpfvktHaGvbhhlZxxahImKStsnkGL83hMgBC6V2LGZMt%2Bgw5OGB1AIQCn0LFbsuKXwBCKG%2FlK3mPFefqsFHJmw9LT4C1FfkoRXXZJGoyabMkr2nmQ9AWkTc4eJ3H%2F39UO2vuCHlwAUJQEHsZwkQjZRKap4SzgEbvkPti7h35QONZOoqQFKXq0k84sCwP7NS1a%2BGh8KglHviK4ETdXdeoHIZaAiXcqbLT5vRxxywTS3fiVbKr1jXzQaSm8XSDqz80fCNC97wY60bMCEnkxLlkDO2QFcOCZ5rcCDK4E8LRFViHpg%2BpISTb8rl75Czfw3aoPufyymUQKE9ZXLC42J4rlm70ZtFfFWAx0xARkGElM%2BuXfPY2uJ%2BJne%2BThlEw%2F%2Bjy9ctxwkQnP%2BsiHLSsX5H43WKxpF3%2BrXw8LxuJrOIZtuz7jZUHXPRC3weyULkIVEEyHX7oEeVkGnonVwco1yKh%2FTKOQpPG%2FWcNJbkvVj2xnIe9ry%2F6iF8%2FhTcpwcK%2FA%2FkrUlWAhTghGg0VF3QH88yvLk6%2FQdpBzWmRAXqZmrbDUhzaZabGFZPffZZNEWvpeQrPgf3%2F3UlLTPvqMZKz4hr9LwSESdQP36ZHNtvJYiyNtRj9bzE5cE2dStMFJAcyFUDugmTA9yeHX1kDNzP3eB8vEftbVQovVkaVDb%2B%2FSz3hEfLtz55pVapiPY%2BSTQBnDbu1ShmvAS%2FqInwbPAJewcVg7nHQLcBd0K0MS7dOgT00uOnofmcPMudkScoVMah31%2FdCzjLCjry6Ri2cbHtXhvNSuSO%2BrqFLDbhOJ2yNxNL4vURNjJ8rnn6%2BM39PkDVENSK3%2FJF3YcvualjK5P9YKkLfIE%3D&checksum=1831493482882929f3daab8c425c89159e51749e149d

badge RFID : https://fr.aliexpress.com/item/32791721094.html?spm=a2g0o.productlist.0.0.20bb32e1JASQQm&s=p&algo\_pvid=8631b966-9931-468b-9039-a7a15d3acc23&algo\_expid=8631b966-9931-468b-9039-a7a15d3acc23-0&btsid=aef1fd93-e2cd-41f6-b3c6-2c1564ee6d6a&ws\_ab\_test=searchweb0\_0,searchweb201602\_7,searchweb201603\_55

capteur de charge CZL639HD (100g) : https://fr.aliexpress.com/item/4000096678656.html?spm=a2g0o.productlist.0.0.35276f90MhBCi8&algo\_pvid=b6ec497e-086f-4763-82d7-afd2f5528e10&algo\_expid=b6ec497e-086f-4763-82d7-afd2f5528e10-0&btsid=061422bb-40ca-4d21-a30a-eb62d8cf5d7a&ws\_ab\_test=searchweb0\_0,searchweb201602\_7,searchweb201603\_55