

Schematic Electric Diagram

Orange - In Cart

Purple - At School

Green - Owned

Red - Out of Stock

Inventory List

1. Microcontroller - Arduino Nano Every / Nano RP2040 Connect (for more power + wireless) / ESP32-S3
2. Impact Sensor - LSM6DSV32X 6-Axis IMU with 32 g Accelerometer
3. Audio Output - Piezo Buzzer
4. LED Feedback - LEDs from class
5. Power Supply
 - a. Li-Ion Battery 3.7V / 1200–2500mAh LiPo
 - b. Battery Charging Module / TP4056 USB-C Module (with protection circuit)
 - c. Boost Converter / (if powering 5V LEDs from 3.7V battery)
6. Wiring & Connectors
7. Mechanical & 3D Print Supplies
 - a. Wood
 - b. 3D Print Filament / PLA+, ABS, or PETG
 - c. Grip Material / Rubber grip tape or silicone wrap
 - d. Fasteners / M3 screws, standoffs
 - e. Foam or Vibration Dampening / For sensor cushioning
8. Tools Required
 - a. Soldering iron + solder Circuit assembly
 - b. Multimeter Debugging/testing
 - c. Hot glue gun Fixing components inside hammer
 - d. 3D printer Structural fabrication
 - e. Wire strippers/cutters Wiring
9. Testing & Debugging Components
 - a. USB to Serial cable For Arduino programming
 - b. Cheap Breadboard Prototyping before permanent soldering
 - c. Logic level shifter (optional) If interfacing 3.3V/5V devices
 - d. Serial monitor software Arduino IDE or PlatformIO serial debug