

A Low-cost Electrical Circuit Prototype to Help with the Heimlich Maneuver

- ✓ Introduction and Motivation
 - Lucas Law
 - The Heimlich Maneuver
- ✓ Prototype Development
 - Required Resources
 - Printed Circuit Board
 - Final Version (3D Modeling)
- ✓ Prototype Demonstration

INTRODUCTION AND MOTIVATION

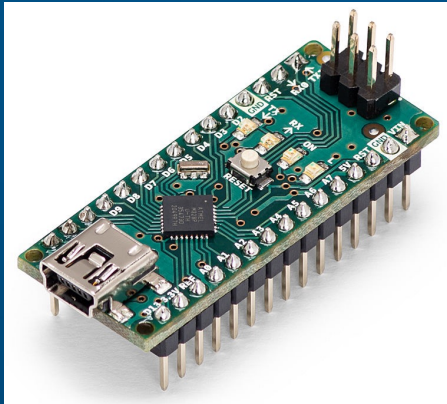
- ✓ Sanctioned in 04/10/2018, the Lucas Law was created after an incident in a school trip, where a boy named Lucas, age 10, lost his life after choking on a piece of sausage. None of the teachers or employees knew how to help him
- ✓ Because of this, the law made first-aid training of elementary school employees and teachers an obligation
- ✓ Even though the law is in effect today, it is not actively enforced. Interviews made in 2021 in a school show that 57% of the employees had done first-aid training in the last years, and only 40% enrolled in a first-aid course during graduation

- ✓ The maneuver is made using the hands, making pressure in the diaphragm so that the object can be expelled
- ✓ While effective, it is not recommended for pregnant people and infants aged 12 months or younger

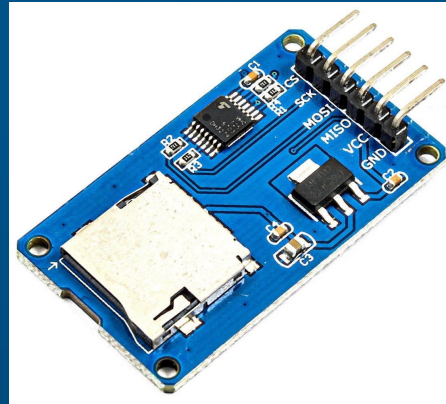


PROTOTYPE DEVELOPMENT

✓ Arduino Nano
(\$25.00)



✓ SD Card Adapter Module
(\$6.00)



✓ Speakers
(\$10.00)



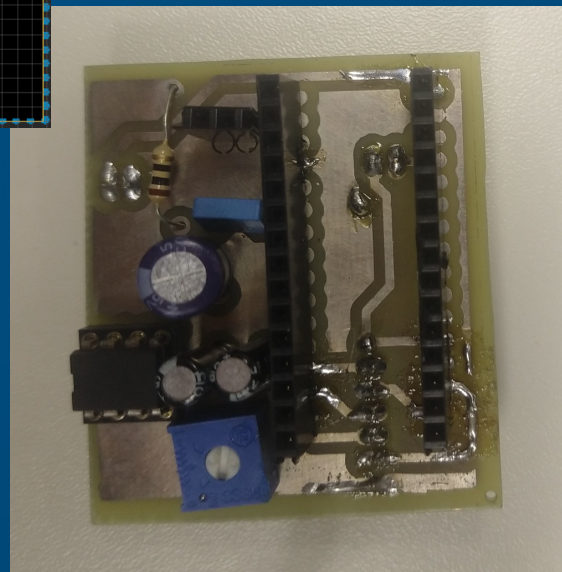
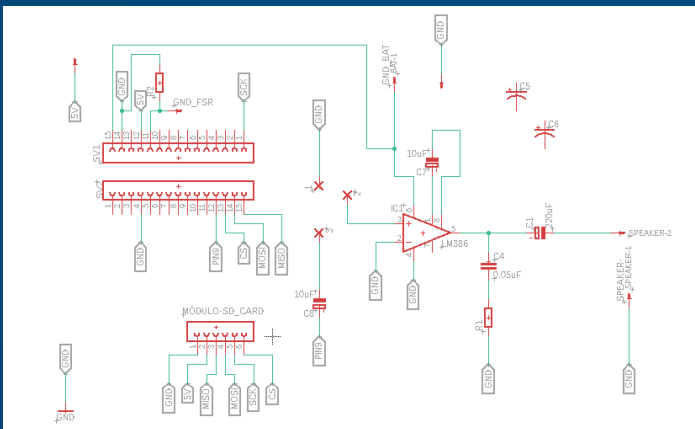
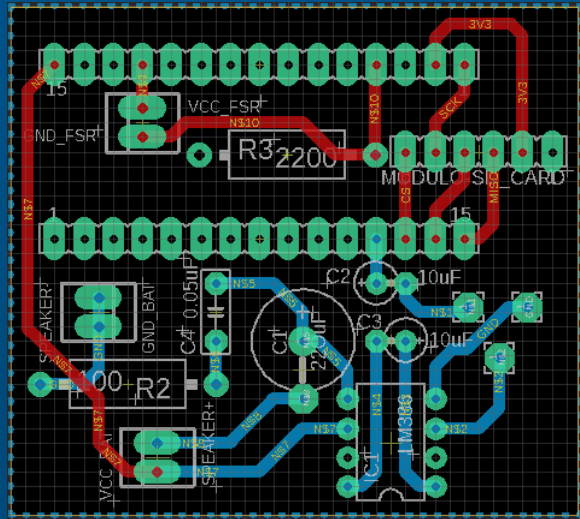
✓ Batteries
(\$12.00)



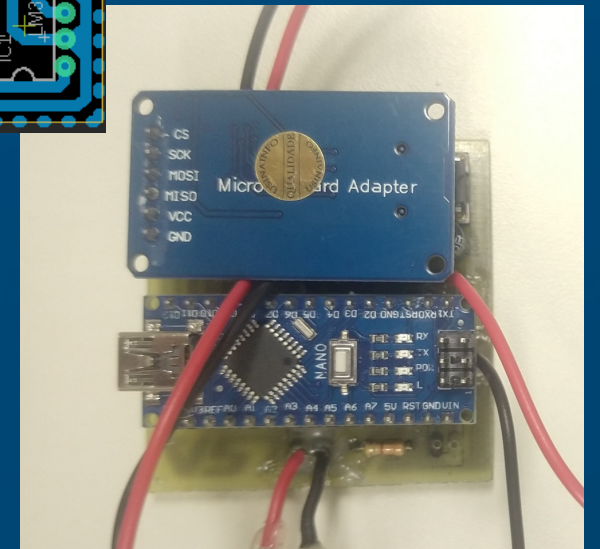
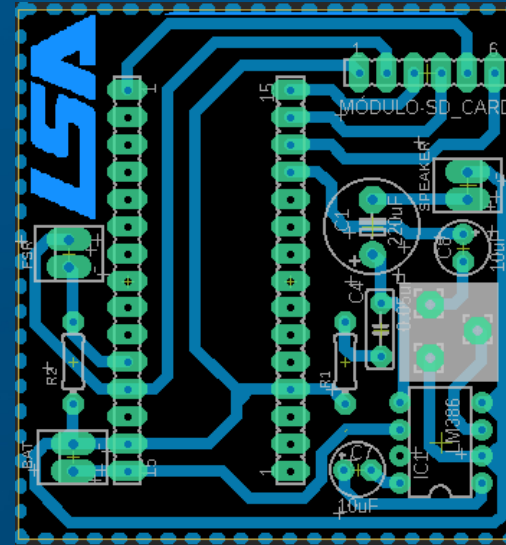
✓ Force Sensing Resistor
(\$7.00)



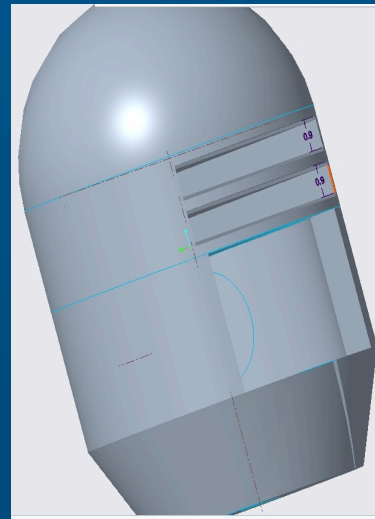
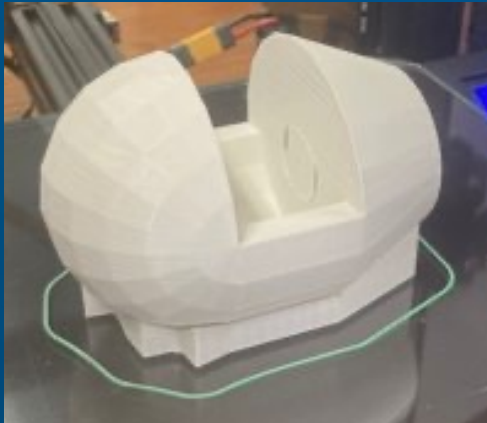
First Version:



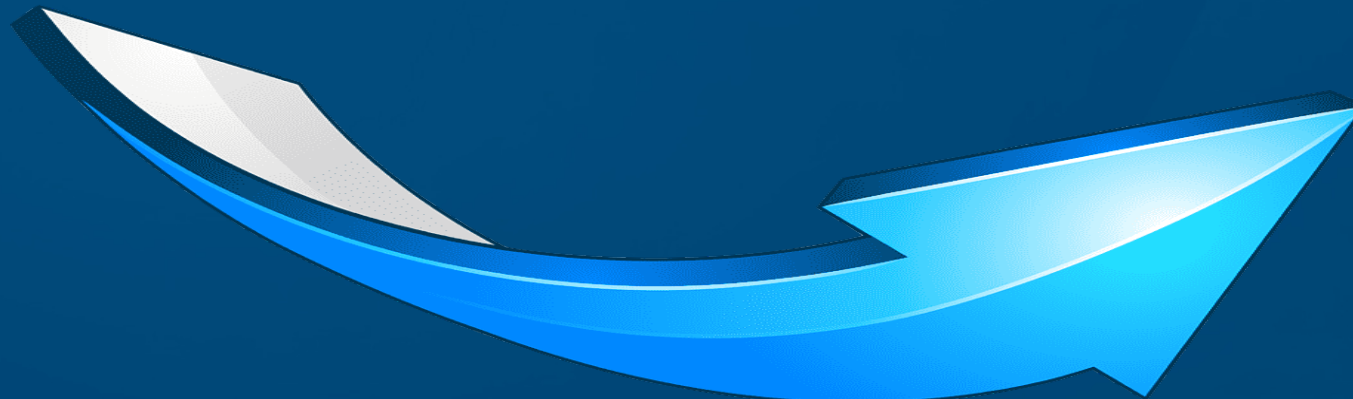
Final Version:



First Version:



Final Version:



PROTOTYPE DEMONSTRATION

THANK YOU !!!