

# Arduino Project ideas

*Starting this week we will be beginning our Arduino projects! This project can be anything as long as it relates to the programming and microcontroller knowledge we have learned up to this point. While I don't want to stifle your creativity with this process, I've provided a list below for some projects.*

## **Project Ideas**

- One motor car
  - Adjust speed in response to input signal (potentiometer, temp sensor)
  - Follow (adjust speed in response to ultrasound signal)
- Servos
  - Solar tracker
- Horticulture project\*\*\*\* STEAM SYMPOSIUM PROJECT!!!!
  - Use temp and humidity sensor to do something
  - Open/close lid
- Security
  - Use tilt switch to activate alarm
  - Use ultrasound to activate another alarm
- Replicate the CHSH hand sanitation system
- Do something weird with the photo-resistor
- controlling a two motor car
  - (drive forward, backwards, left, right)
  - Move based on input signal (potentiometer, temperature sensor, ultrasound, etc.)
- IR receiver to control lights & sounds
  - Patterns
  - Different colors
  - LED strips?
- Make some type of musical instrument
  - Example, an xylophone – when different pieces are hit a different tone sound is produced
- Control the Arduino from your phone
  - Windows has a free software which lets you control an Arduino over USB or bluetooth
- Google a project!!!
  - If there are any special materials/components you think you might need, let me know ideally today (Friday) so I have over the weekend to see about finding/getting it