Conceptual

You will be hooking up an Infrared (IR) sensor and reading its input.
- ☐ Read both Arduino tutorials:
    - o [Sweep](#)
    - o [Single Servo](#)
- ☐ Make a list of useful servo commands. Write this in your Maker Journal
    - o Note: make sure to write down how you include libraries of extra functions.

Basic Make

- ☐ Make your circuit - hook up the servo to your Arduino.
    - o Note: the servo needs external power control – typically 6 volts. It is better practice to hook the servo to V_{in}. If all you are driving is the servo you can use the Arduino +5V power.
- ☐ Make a program to control the servo.
    - o Note: the program in the tutorial uses a serial monitor interface. This is covered in more detail in Make 16 (but you can try it here too).

Advanced/Extended Make

- ☐ Make a graph of the PWM value and the speed and direction of the servo.
- ☐ Duplicate diagrams using Fritzing

Equipment

- ☐ Computer with access to Fritzing and Arduino
- ☐ Circuit components: Arduino and misc electronic parts
- ☐ Servo

Objective

Physics Concepts
- ☐ DC motors and stepper motors

Experimental analysis
- ☐ Circuit design

Technology Concepts
- ☐ Schematic Symbols
- ☐ Programming Concepts – including and using libraries