# SparkFun Inventor's Kit for Photon Experiment Guide

## Introduction

The SparkFun Inventor's Kit for Photon, also known as the SIK for Photon, is the latest and greatest in Internet of Things kits. Whether you're a software developer just getting in to hardware, an electronics engineer learning software, or somewhere in between, this kit will help you get your projects hooked up to the Internet in no time.

For an overview of the Photon RedBoard and a preview of the kinds of experiments you'll get to build with this kit, check out the video below.


**Set Aside Some Time** - Each experiment in this kit has two parts, with the second half usually containing an Internet-connected component. Please allow yourself ample time to complete each experiment. You may not get through all the experiments in one sitting. Please understand that the second half of each experiment is bonus material and relies on outside services, websites and technologies, to which some of you may not have access.

## Included Materials

Here is a complete list of all the parts included in the SIK for Photon.

The SparkFun Inventor's Kit for Photon Includes the following:

- SparkFun Photon RedBoard
- Photon RedBoard and Breadboard Holder
- White Solderless Breadboard
- Pocket Screwdriver Set
- Small Servo
- 9V Alkaline Battery
- 9V to Barrel Jack Adapter
- USB microB Cable - 6 Foot
- Jumper Wires
- JST Right Angle Connector - Through-Hole 3-Pin
- Soil Moisture Sensor
- SparkFun Micro OLED Breakout (with Headers)
- SparkFun Triple Axis Accelerometer Breakout - MMA8452Q (with Headers)
- PIR Motion Sensor (JST)
- RHT03 Humidity and Temperature Sensor
- Magnetic Door Switch Set
- Photocell
- Red, Blue, Yellow, and Green LEDs
- Red, Blue, Yellow, and Green Tactile Buttons
- 10K Trimpot
- Piezo Speaker
- 330 Ohm Resistors

If, at any time, you are unsure which part a particular experiment is asking for, reference this section.

## Suggested Reading

The following links are here to help guide you in your journey through the SIK for the Photon. Referencing these documents throughout this guide will help you get the most out of this kit.

- The Photon RedBoard Hookup Guide - This guide goes over the features of the Photon RedBoard in great detail, from the functions of

each pin to a compare and contrast between the Photon RedBoard, the Photon, and the classic Arduino Uno.
- Photon Development Guide - Learn how to develop with your Photon or Photon RedBoard using the three different methods described in this tutorial.
- Getting Started with Particle - The Particle website has tons of great documentation to get you started in the world of IoT development.

Each experiment will also have a Suggested Reading section to aid you in understanding the components and concepts used in that particular experiment.