# "Twisted" Simon Says

Arduino Ignition Grant

Zaza Soriano Brian Taylor

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## Listings

## 1 Goals

### 2 References

## 3 Hardware

- · Arduino Board
- USB Cable
- Breadboard
- Wires
- 5 x Resistor 220 $\Omega$
- 4 x LED
- 4 x Button
- Speaker
- Rotary Knob (Potentiometer)
- Light Sensor (Photocell)
- Motion Sensor (Tilt Switch)
- Temperature Sensor
- · Conductive Fabric
- · Conductive Thread
- Velostat
- Tape
- Scissors

## 4 Discussion

#### 4.1 Sensor Basics

#### **4.1.1 Button**

If already familiar with the button, please skip to Section 4.1.2.

#### 4.1.2 Potentiometer

If already familiar with the potentiometer, please skip to Section 4.1.3.

#### 4.1.3 Photocell

If already familiar with the photocell, please skip to Section 4.1.4.

#### 4.1.4 Tilt Switch

If already familiar with the tilt switch, please skip to Section 4.1.5.

#### 4.1.5 Touch Switch

If already familiar with the touch switch, please skip to Section 4.1.6.

#### 4.1.6 Temperature Sensor

If already familiar with the temperature sensor, please skip to Section 4.1.7.

#### 4.1.7 Custom Build Push Button

If already familiar with the custom built push button, please skip to Section 5.3.

#### 4.2 Sound Basics

### 5 Procedure

### 5.1 "Not so twisted" Simon Says

- 1. Wire the Arduino with 4 LED's, 4 push buttons, and 1 speaker (insert refs to images)
- 2. Load the Twisted\_Simon\_Says.ino file onto the board.

## 5.2 "Twisted" Simon Says

- 1. Replace one of the push buttons with an analog sensor
- 2.

## 5.3 Simon Says Basics

#### Α

## **Arduino Code**