

tangible

ANALOG INPUT

Tangible Matrix

Context	DIGITAL	ANALOG
INPUTS	BUTTON	POTENTIOMETER photoCell
OUTPUTS	LED BLINK	LED FADE

Analog INPUTs

Context	DIGITAL	ANALOG
INPUTS	BUTTON	POTENTIOMETER photoCell
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INPUTS and OUTPUTS

When we discuss **INPUT** and **OUTPUT**
we mean relative to **ARDUINO**.

INPUT

Electric **SIGNAL** that moves **INTO** the **Arduino**

OUTPUT

Electric **SIGNAL** that moves **OUT** of the **Arduino**

ANALOG

Refers to **SIGNALS**, **CIRCUITS** or **LOGICAL** systems that

are

VARIABLE OR GRADUATED

ANALOG INPUT

Signals that vary continuously between 0V and 5V.

They can be visualized as a **STAIRCASE-like** SIGNAL that moves **INTO** the Arduino.

Range: 0-1023

The CODE

Analog **Input** (**Read** a PhotoCell)

```
int state = analogRead( pin );
```

state = 0-1023

Digital **Input** (**Read** a Button)

```
int state = digitalRead( pin );
```

state = 0, 1

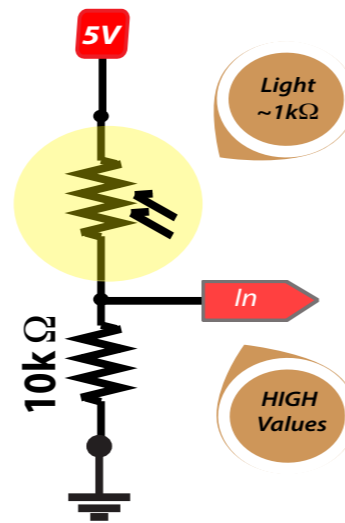
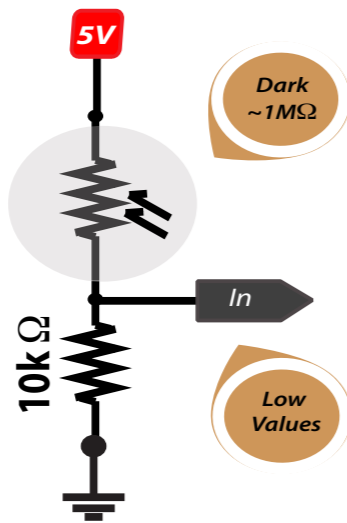
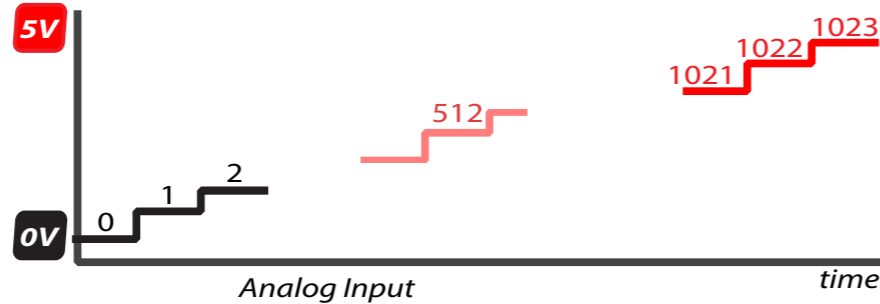
REFERENCE - Card is in your kit.

Analog Input

CONTEXT

	Digital	Analog
Input		
Output		

CIRCUIT



COMMAND

```
int state = analogRead ( pin );
```

- *pin* = A0-A5
- *state* = 0 - 1023 (*int*)

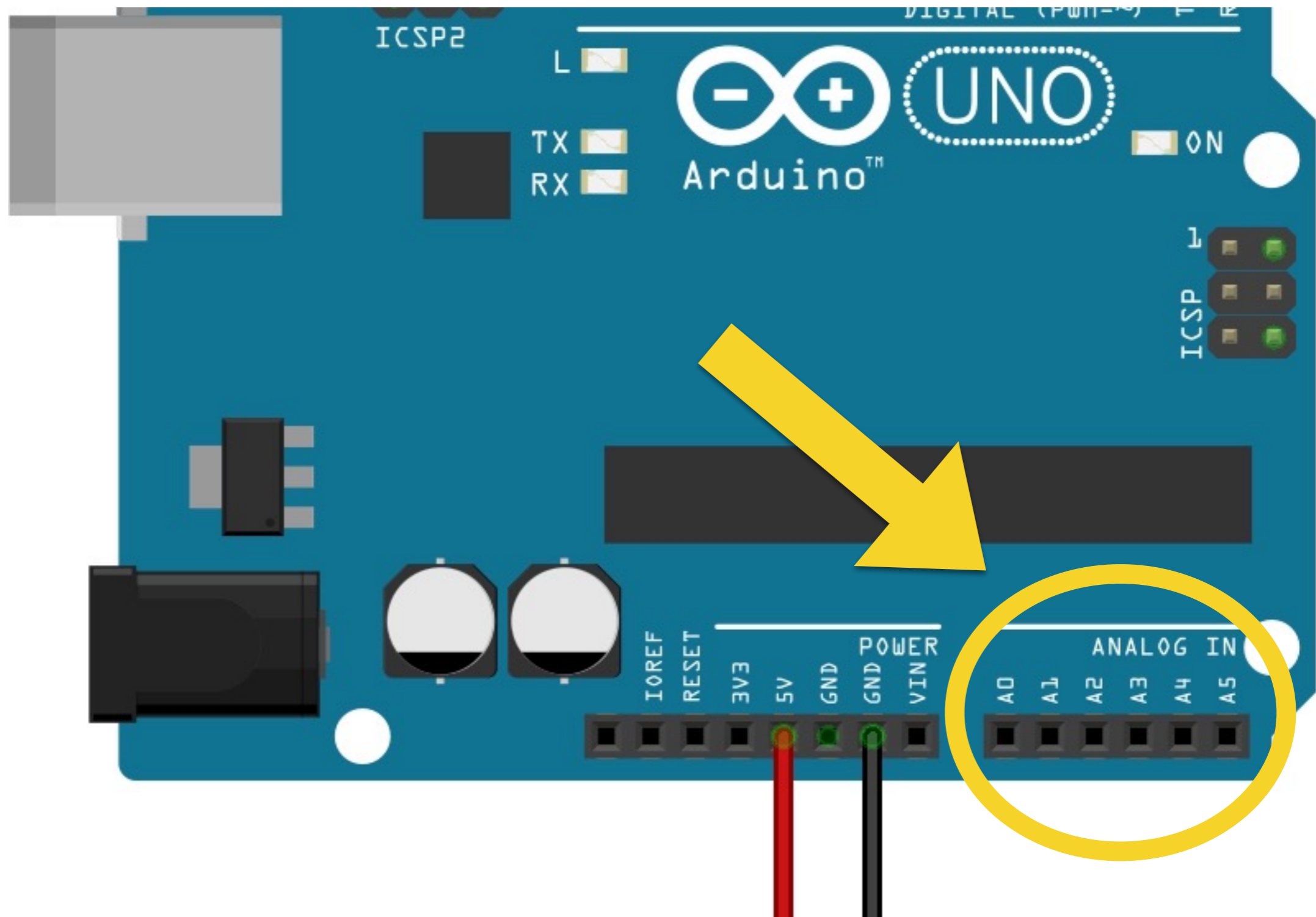
CODE

```
int lightPin = 5; // or A5
int state = 0;

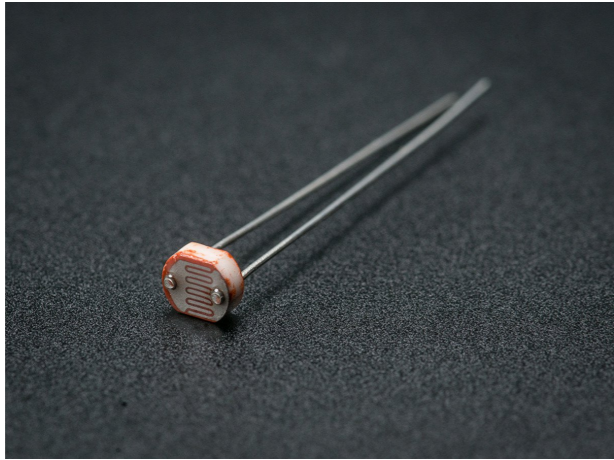
void setup() {
    pinMode(lightPin, INPUT);
    Serial.begin(9600);
}

void loop() {
    state = analogRead( lightPin );
    Serial.println(state);
    delay(50);
}
```

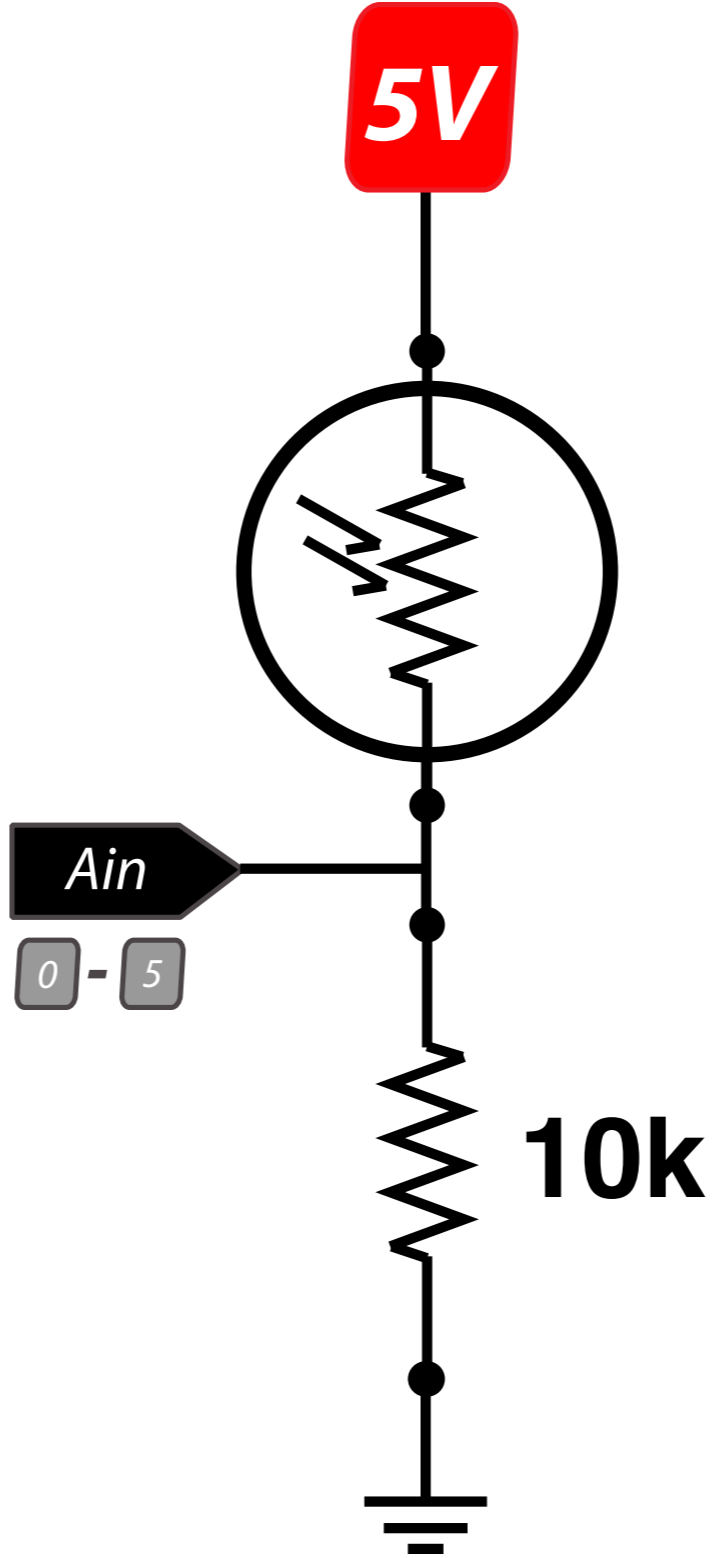
Analog INPUT :: Connections



Analog INPUT :: Schematic



fixed : br, bl, or



photocell
(variable resistor)