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BREAD BOARD & LEDS

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Overview & Introduction

- This Lecture and Lab is an introduction to Breadboards, Electrical Circuit basics and LEDs
  - You will learn how a bread board works
  - You will build an LED circuit and get it to light up
- You will use a Breadboard, Resistor, Switch and LED
- You will show me a working LED circuit and be able to explain how and why it is working

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SEE APPENDIX A, FOR LICENSING & ATTRIBUTION INFORMATION

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HOW BREAD BOARDS WORK

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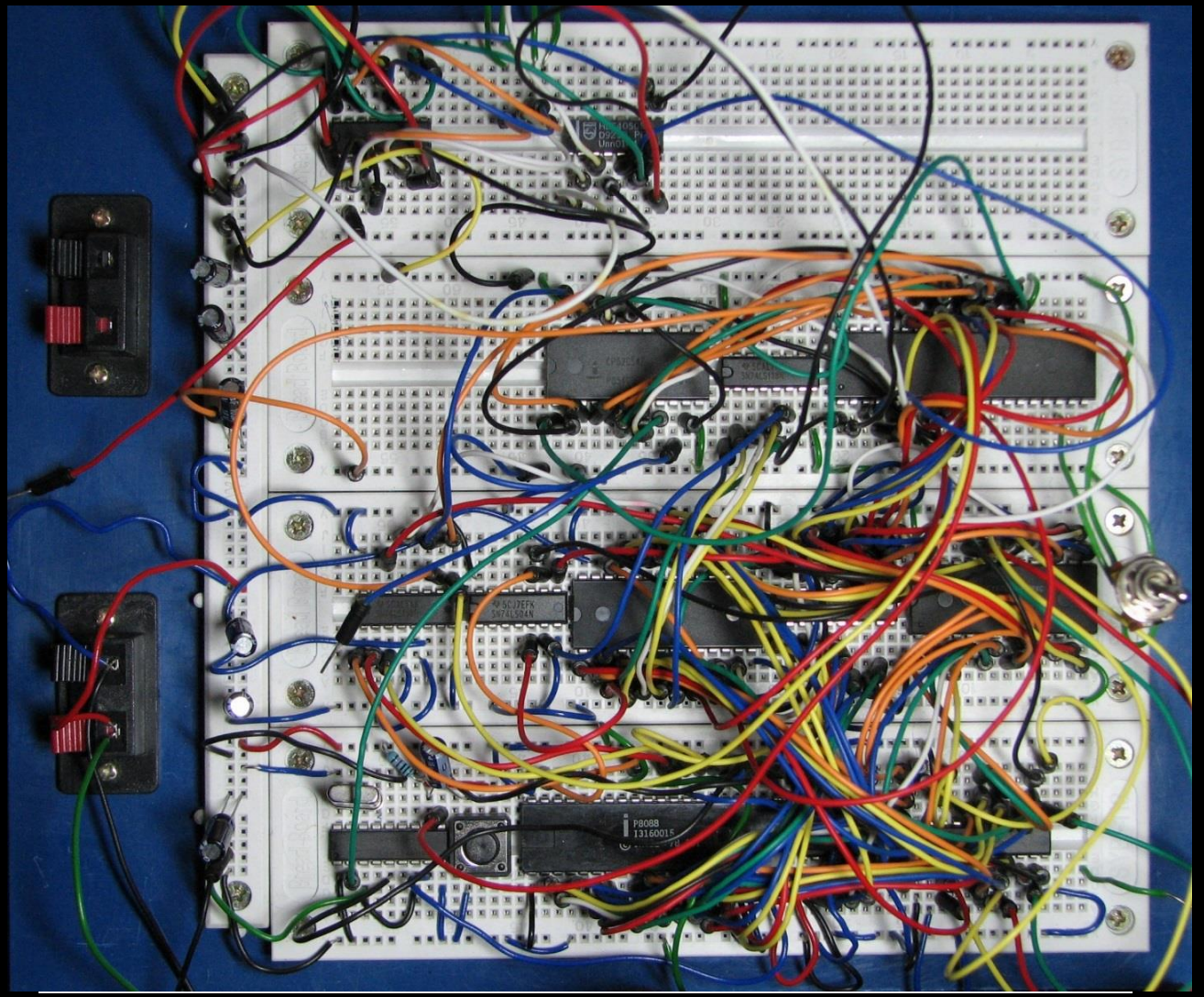
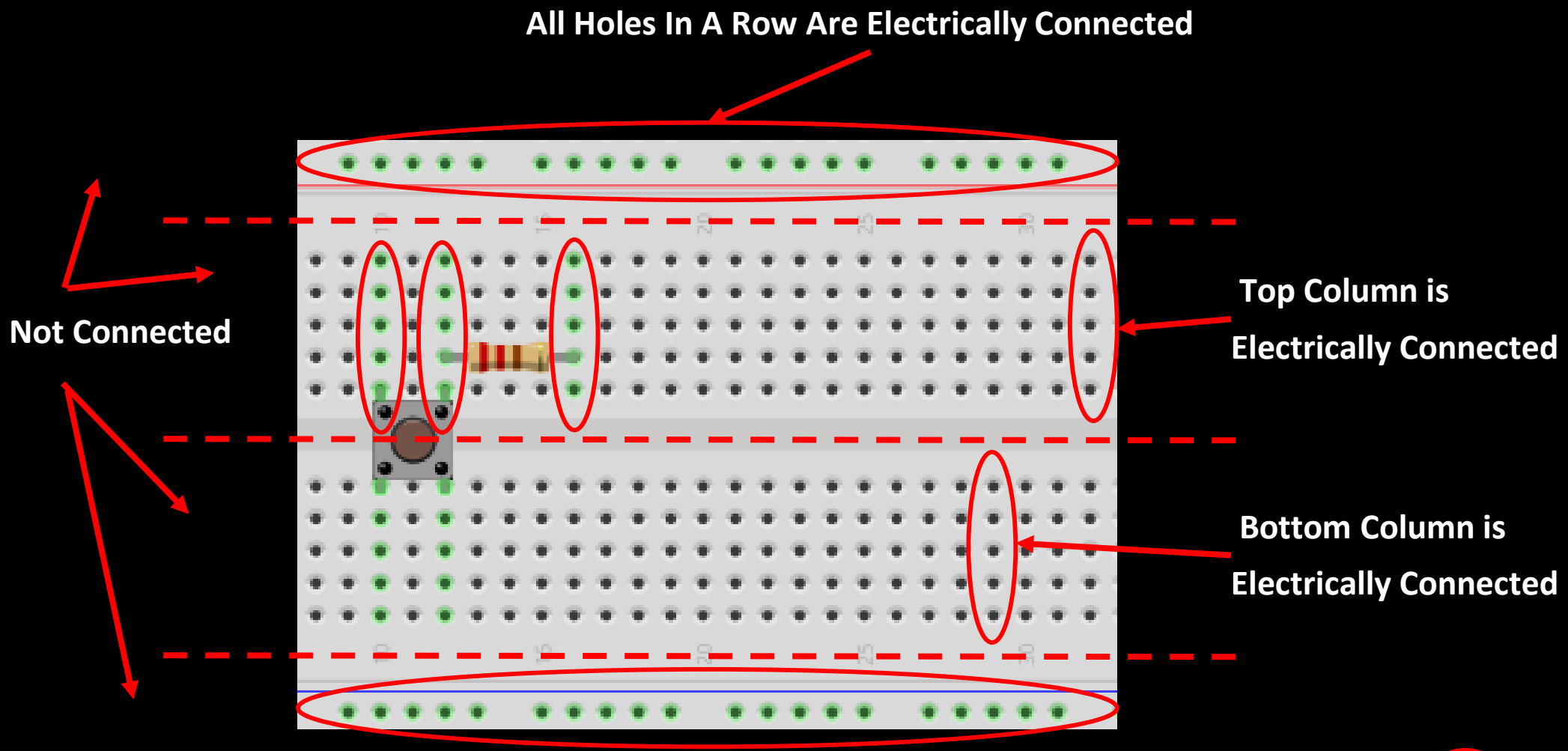
What is a Bread Board?

- The **breadboard** derives its **name** from an early form of point-to-point construction. In the early days of radio, amateurs would nail copper wire or terminal strips to a wooden board (often literally a board for cutting bread), and solder electronic components to them.



How does the breadboard work?



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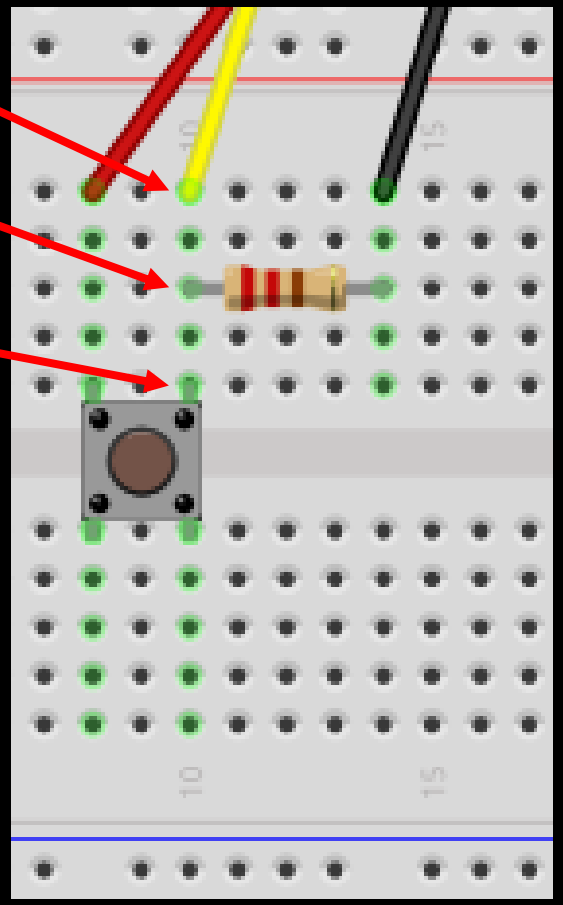
ROWS & ROWS OF ELECTRICAL CONNECTIONS

This Yellow Wire is Connected to

this Resistor pin and

this pin on the Button



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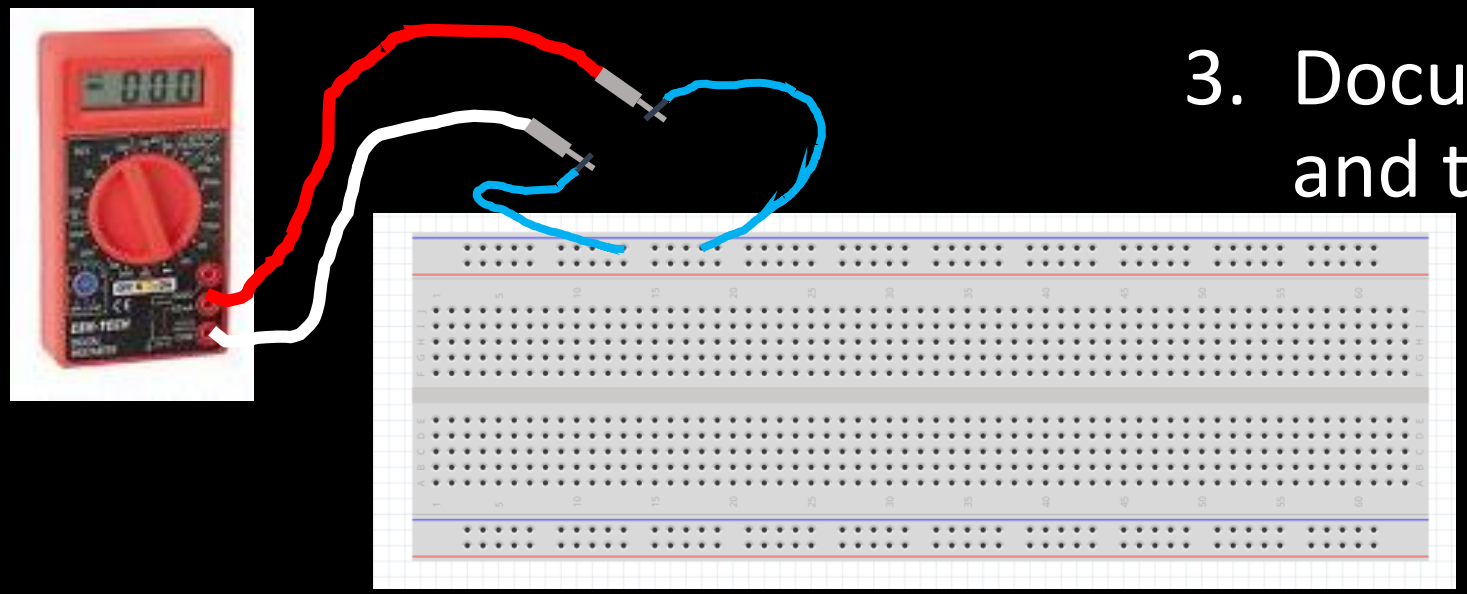
Breadboard Lab

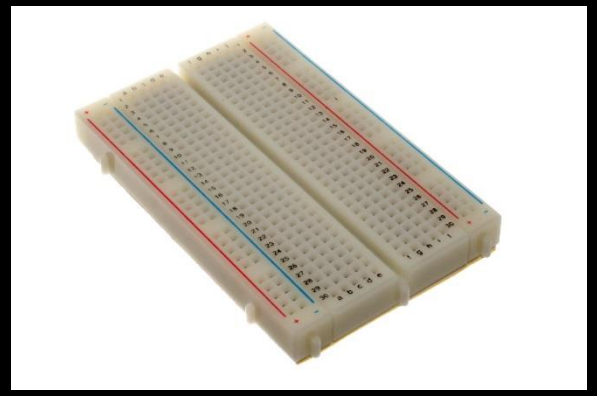
- Use A Digital Multi Metter (DMM) to probe the breadboard connections
- Use the Breadboard wires

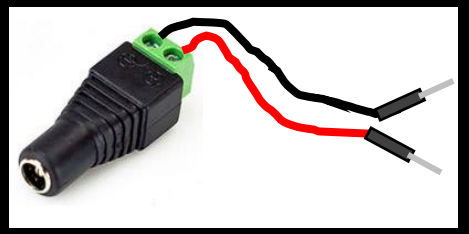


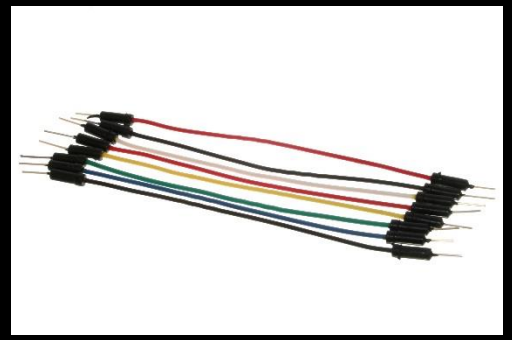
1. Set the DMM to Ω (to measure Resistance)
2. Test and verify what sections are connected
   - How do you know? Explain how the DDM works
3. Document with drawings and text in your lab books

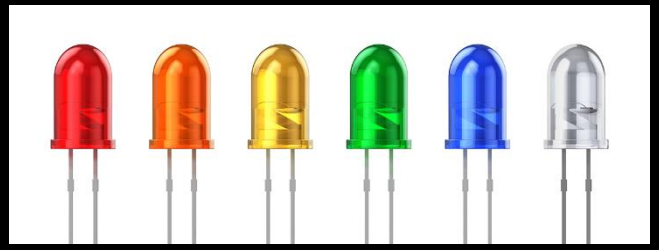
Lab Time - Working with a Bread Board

- What Do You Need?
  - (1) Breadboard
  - (1) 5 volt Wall Wort
  - (1) Power Adaptor
  - (3-5) Jumper Wire (Male-Male)
  - (1) LED
  - (1) 330Ω Resistor
  - (1) Push Button Switch









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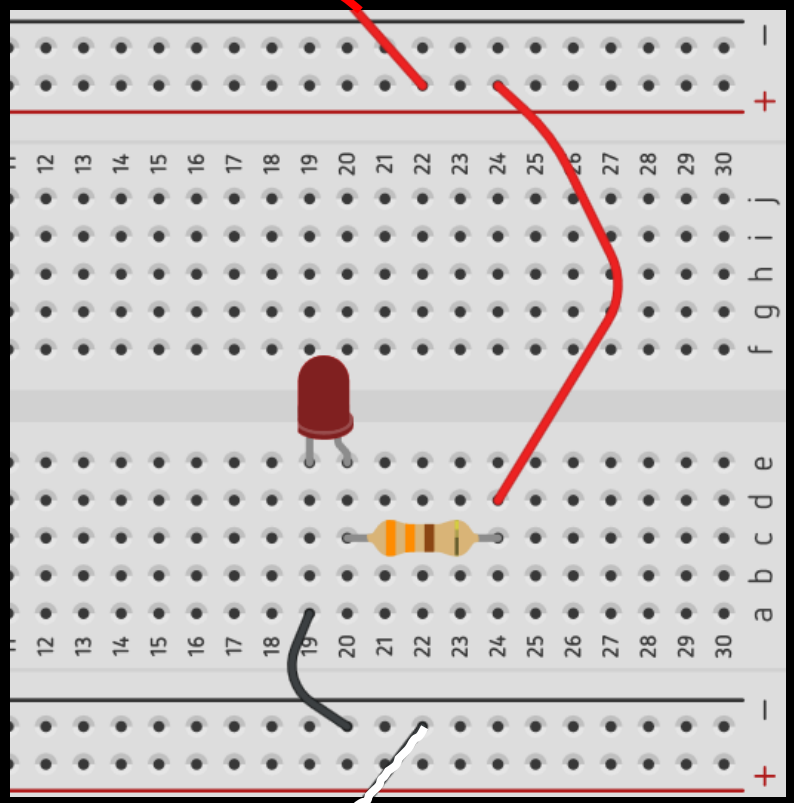
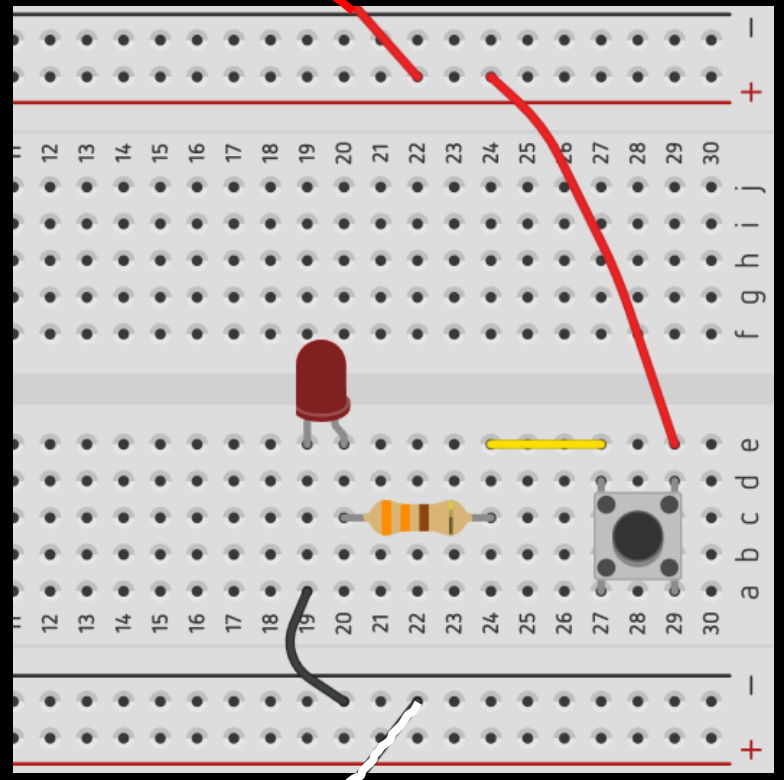
BREAD BOARDING AN LED CIRCUIT

5 volts



GND

5 volts



GND

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REFERENCE SLIDES

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APPENDIX

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