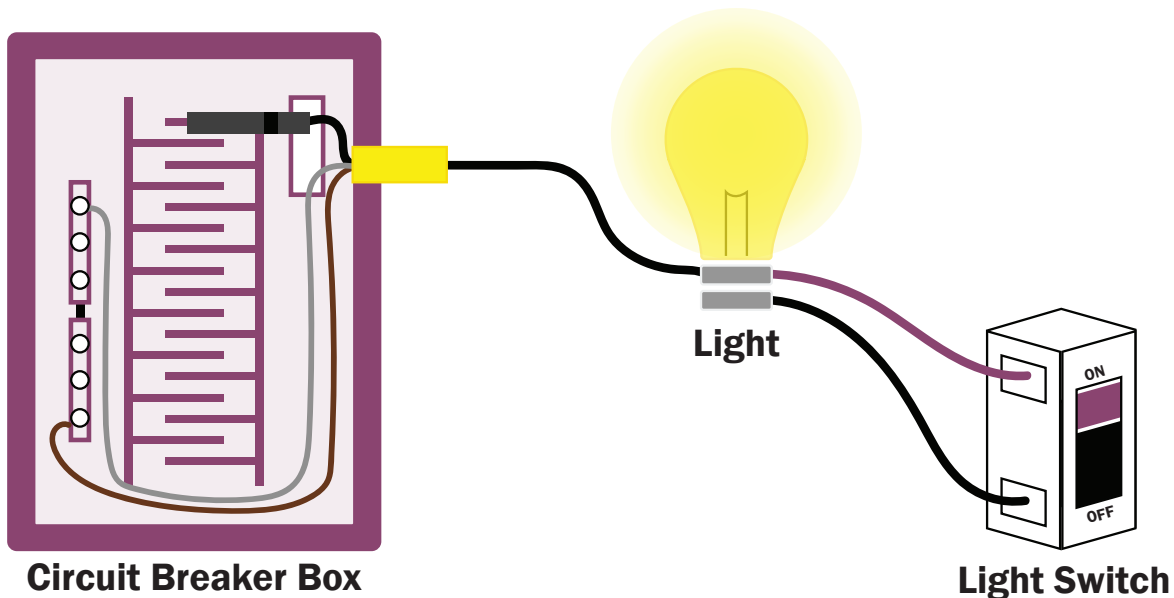


CONCEPT Basic wire connections refer to the fundamental techniques used to connect wires and components in electronic circuits, including stripping wire insulation, twisting wires together, and using crimp connectors. These techniques are essential for creating reliable connections that can handle the electrical currents and voltages in a circuit.



BACKGROUND

Soldering was developed in ancient times, initially to create jewelry and decorative objects. In the 1800s, the invention of the telegraph led to the use of soldering for electrical connections, and it became a standard technique in electronics manufacturing. Breadboards were invented in the 1970s as a tool for prototyping electronic circuits without the need for soldering. Circuit design has evolved over time, with the first circuits being simple arrangements of components for simple tasks. As technology advanced, circuit design became more complex and integrated, with the development of microprocessors, integrated circuits, and printed circuit boards.

Make sure it measures up

EXAMPLES

SOLDERING IRON: A tool used to heat up and melt solder, allowing for the joining of metal components.

SOLDER: A low-melting point metal alloy used to join two metal components together during soldering.

BREADBOARD: A tool used for prototyping electronic circuits. It has a grid of holes where wires and electronic components can be inserted and connected without soldering.

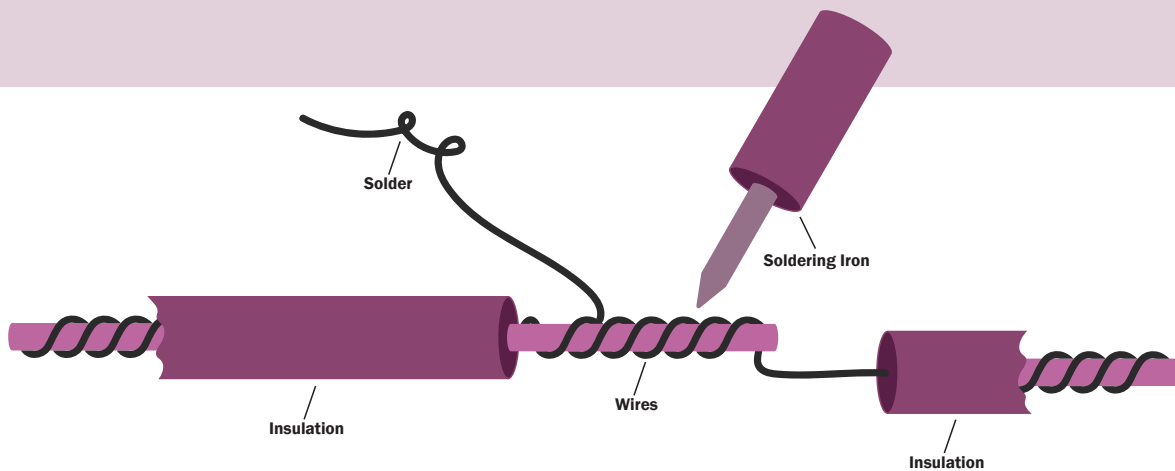
WIRE STRIPPERS: A tool used to remove the insulation from wires to expose the metal core for connection.

CRIMP CONNECTORS: A type of electrical connector that is used to connect wires together by crimping (squeezing) a metal sleeve onto the wires.

CIRCUIT DIAGRAM/SCHEMATIC: A visual representation of an electronic circuit that shows the connections between components and the flow of current through the circuit.

RESISTORS, CAPACITORS, DIODES, AND OTHER ELECTRONIC COMPONENTS: These are the individual parts that make up an electronic circuit and perform specific functions within the circuit design.

MULTIMETER: A tool used to measure electrical properties such as voltage, current, and resistance in a circuit.



APPLICATION

Robots require a range of electronic components, sensors, and control systems to function, and the process of building a robot involves many of the fundamental principles of circuit design and electronic engineering.

When building a robot, soldering is often required to create reliable connections between components. Motors, sensors, and controllers may need to be connected, and soldering provides a robust and reliable connection that can withstand the stresses of movement and vibration.



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