ATL SKILL ()

Q1

DEFINITIONS

GLOBAL CONTEXT ()

KEY CONCEPT ()

RELATED CONCEPT ()

SOLUTION

FORMATIVE ASSESSMENT

Q2

SUMMATIVE ASSESSMENT

Q3

Variable Resistance

Before You Begin

Technical Background

Variable Resistors

Potentiometer

Photoresistor

Developing Technical Skills

Circuit #11

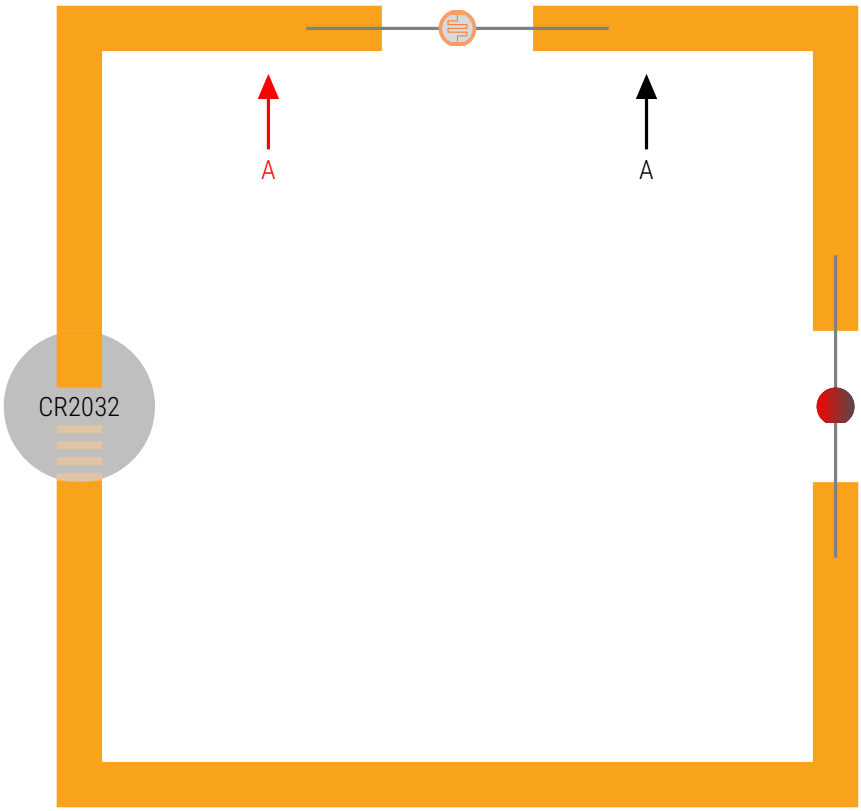
Our first circuit this lesson will use the photoresistor to provide variable resistance for the circuit.

You Will Need

(1) CR2032 Battery
(1) Photoresistor/LDR
(1) LED
(1) Roll of Copper Tape
(1) Roll of Cellophane Tape

Directions

Create the following paper circuit, then wave your hand over the LDR to observe the effects of variable resistance on the LED.



ATL SKILL (Communication Skills)
...make inferences and draw conclusions...
Q4 Use a multimeter to measure the resistance of the LDR in the above circuit as the light entering it changes. Do the results agree with your idea of how this variable resistor works? Why or why not?

Circuit #12

The following circuit will allow you to explore the behaviours of the potentiometer, particularly as you turn it in each direction.

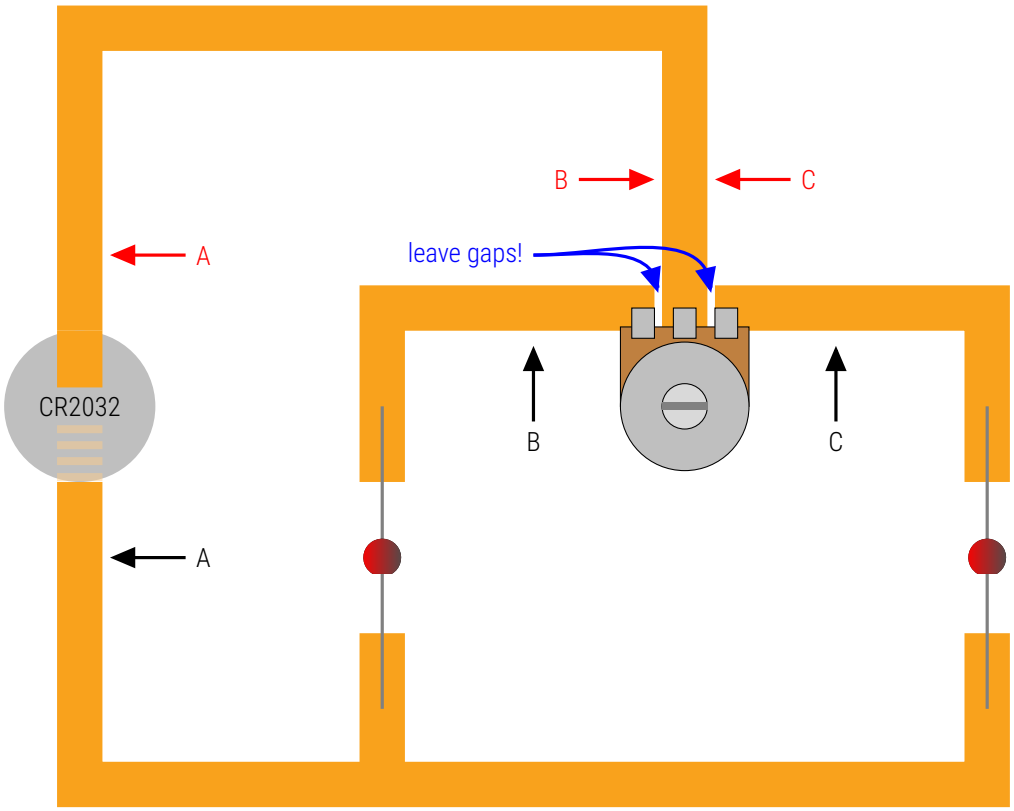
You Will Need

(1) CR2032 Battery
(1) Potentiometer
(2) LEDs
(1) Roll of Copper Tape
(1) Roll of Cellophane Tape

Directions

Create the following paper circuit and manipulate the potentiometer to observe its effects on the two LEDs.

Note: The gaps between the terminals of the potentiometer are necessary. You may need to trim your copper tape slightly if you are having trouble leaving enough space.



ATL SKILL (Communication Skills)
...make inferences and draw conclusions...
Q5 Using a multimeter to take the appropriate measurements, describe the behaviour of the potentiometer.

Reflections