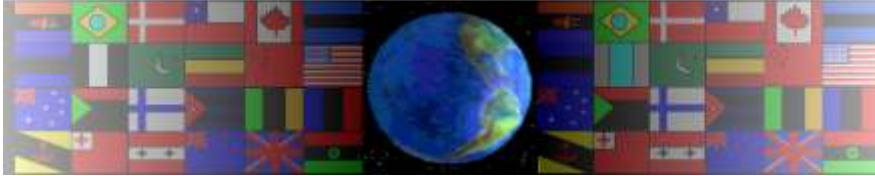


RESISTORS

V.Ryan © 2000 - 2009

On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

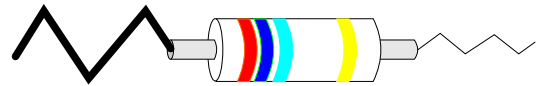
This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

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RESISTORS

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Resistors determine the flow of current in an electrical circuit. Where there is high resistance then the flow of current is small, where the resistance is low the flow of current is large. Resistance, voltage and current are connected in an electrical circuit by **Ohm's Law**.



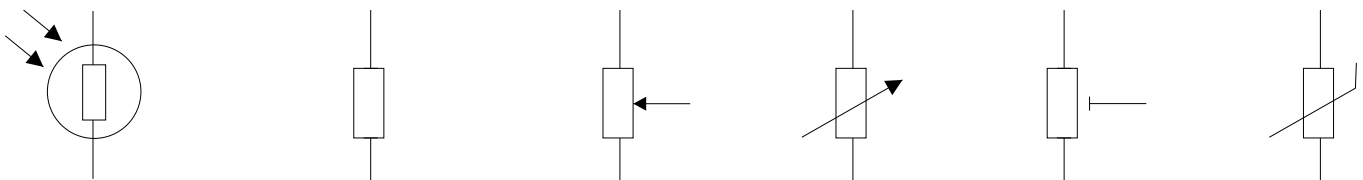
Read the passage regarding resistors. Fill the gaps using correct the words listed below.

Resistors _____ the flow of current through a _____. Resistance is measured in _____.
 When resistance is high the flow of current is _____. When resistance is low the flow of current is _____.
 Resistance, voltage and current are connected in an electrical circuit by _____.

OHMS LAW CIRCUIT LARGE OHMS (Ω) CONTROL SMALL

TYPES OF RESISTOR

A number of resistors are shown below. They include a VARIABLE RESISTOR, PRESET RESISTOR, FIXED RESISTOR, LIGHT DEPENDENT RESISTOR and a THERMISTOR. Using the guidelines above each drawing, print each correct name in BLOCK CAPITALS.



Draw an arrow from each resistor to its symbol. Please note, one of the resistors has two symbols.

Explain / describe the use of each of resistors listed below.

FIXED RESISTOR: _____

VARIABLE RESISTOR: _____

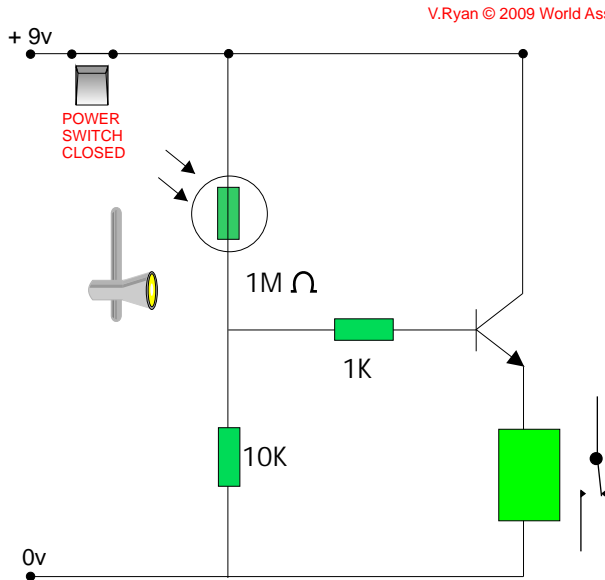
LIGHT DEPENDENT RESISTOR: _____

THERMISTOR: _____

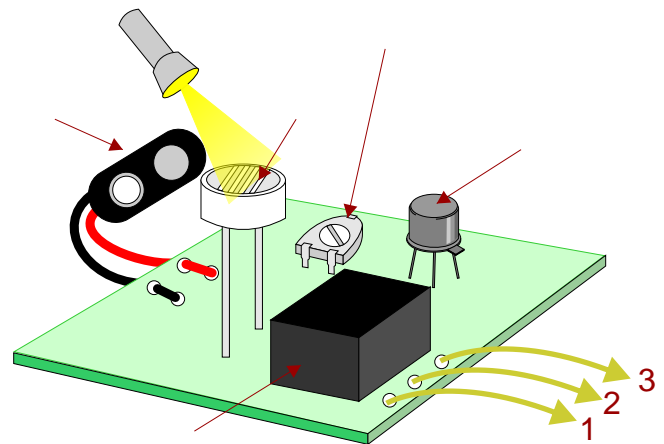
PRESET RESISTOR: _____

The circuit diagram and 3D drawing below show the same light / dark sensor circuit. Add labels to both drawings, clearly identifying each component.

CIRCUIT DIAGRAM



CIRCUIT DRAWING



FIXED RESISTOR

6V RELAY

NPN TRANSISTOR

PRESET RESISTOR

LDR

BATTERY SNAP

Why do you think a preset resistor is used on this sensor circuit?

How could a light / dark sensor be used to control a street lighting system?
