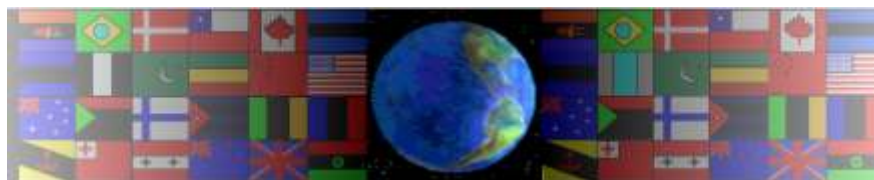


# OPERATIONAL AMPLIFIERS - COMPARATORS

V.Ryan © 2000 - 2009

On behalf of The World Association of Technology Teachers

## W.A.T.T.



World Association of Technology Teachers

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# OPERATIONAL AMPLIFIERS - COMPARATORS

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1. The 741 Operational amplifier can be used as a comparator. Describe how a comparator works with reference to  $V_{ref}$  and  $V_{in}$ , as seen on the diagram below.

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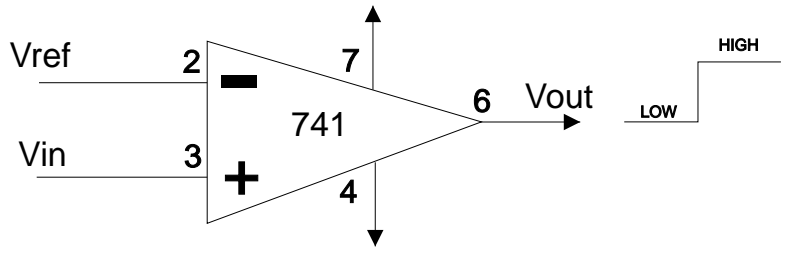
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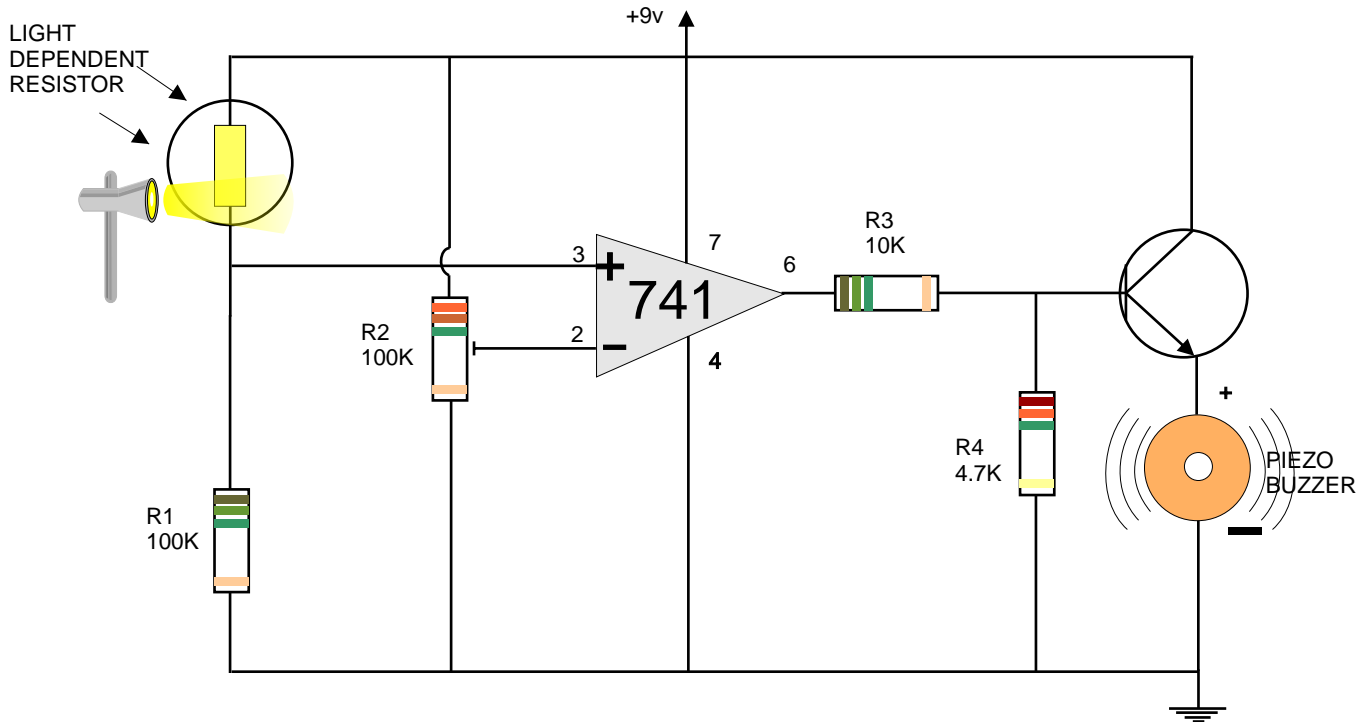
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2. The circuit below is a light activated alerter. Explain how it works. Include an explanation of the role the comparator.



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3. How could you easily convert the light activated circuit seen above to a dark activated circuit?

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4. How can the circuit be changed so that it becomes a temperature sensor?

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