

# LIGHT / DARK SENSORS

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On behalf of The World Association of Technology Teachers

## W.A.T.T.



World Association of Technology Teachers

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# LIGHT DEPENDENT RESISTORS

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1. What type of circuit normally contains an LDR?

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2. Typical LDRs in school circuits can reach 1000 000 ohms in value. What is an alternative way of expressing 1000 000 ohms?

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3. Draw the symbol for an LDR.

4. Sketch a typical LDR.

5. When it is **dark** what happens to the resistance of a typical LDR?

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6. When it is **light** what happens to the resistance of a typical LDR?

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7. When an LDR detects light or dark how long does it take for its resistance to change?

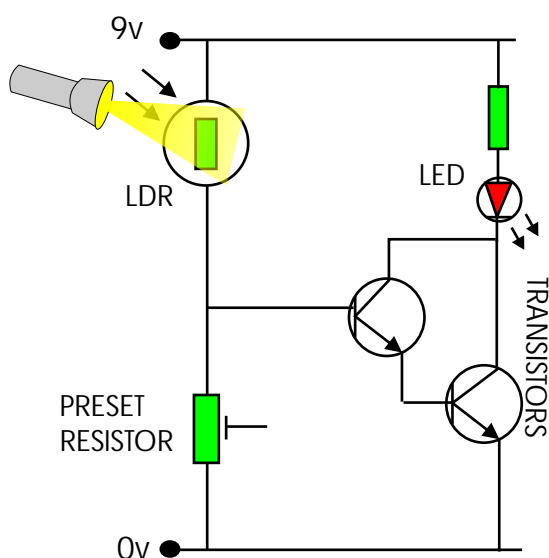
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8. Consider your answer to question 7 - in terms of electronics is this fast or slow? Explain your answer.

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9. What is the type of LDR commonly used in schools?

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10. The light sensor shown opposite includes a preset resistor. Why has it been included?

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11. Explain how the light sensor circuit works.

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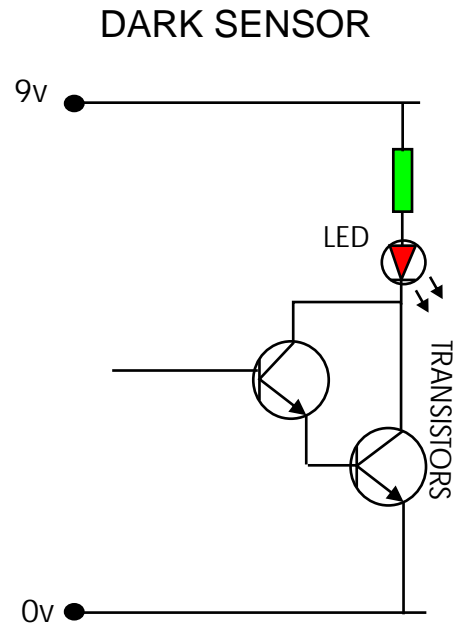
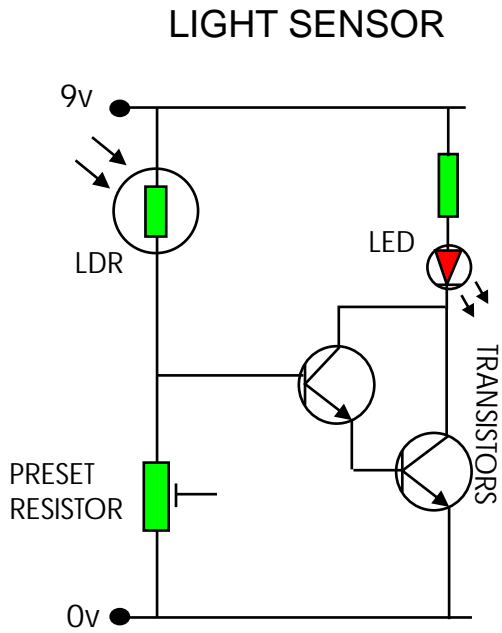
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12. A light sensor circuit is seen below. It is very similar to a dark sensor. Complete the dark sensor circuit.



13. Why is a resistor positioned in front of the LED?

14. In the space below draw a circuit that includes an LDR and explain the circuit's function.

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