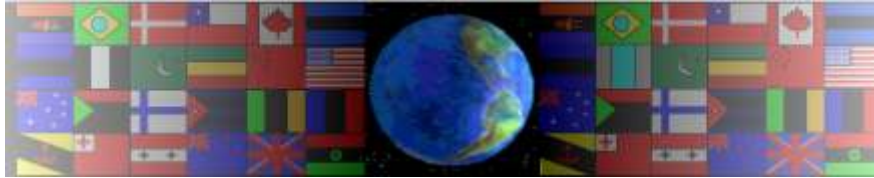


ELECTRONICS - CIRCUITS IN SERIES AND PARALLEL

V.Ryan © 2000 - 2008

On behalf of The World Association of Technology Teachers

W.A.T.T.



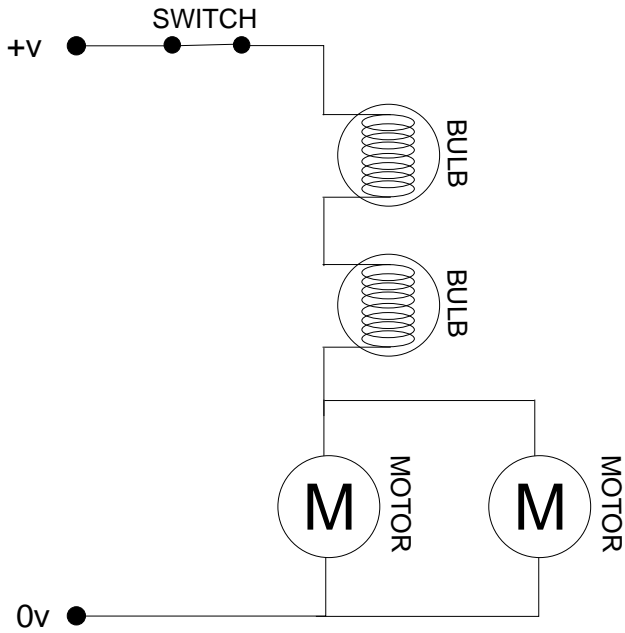
World Association of Technology Teachers

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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CIRCUITS IN SERIES AND PARALLEL

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1. The circuit seen opposite is part in series and part in parallel.

Draw a circle round the series part and label 'SERIES'.

Draw a circle round the parallel part and label 'PARALLEL'.

2. Name a piece of electronics simulation software that could be used to draw a circuit similar to the circuit shown opposite.

NAME: _____

3. What will happen to the circuit if one of the bulbs fails?

4. What will happen to the circuit if one of the motors fails?

5. In your opinion what part of the circuit is its weak point? Explain your answer.

6. Redesign the circuit shown above so that all the components are in parallel and LEDs are used in place of filament bulbs. You may need to add other components in order to protect the LEDs.