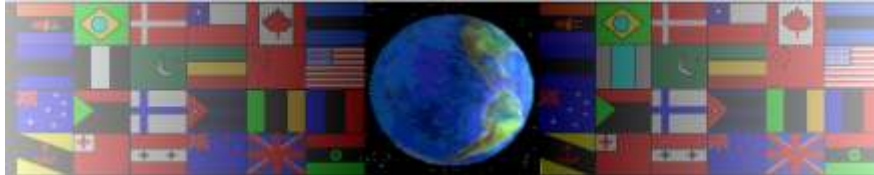


THE MAGNETIC FORCE TORCH

V.Ryan © 2000 - 2009

On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

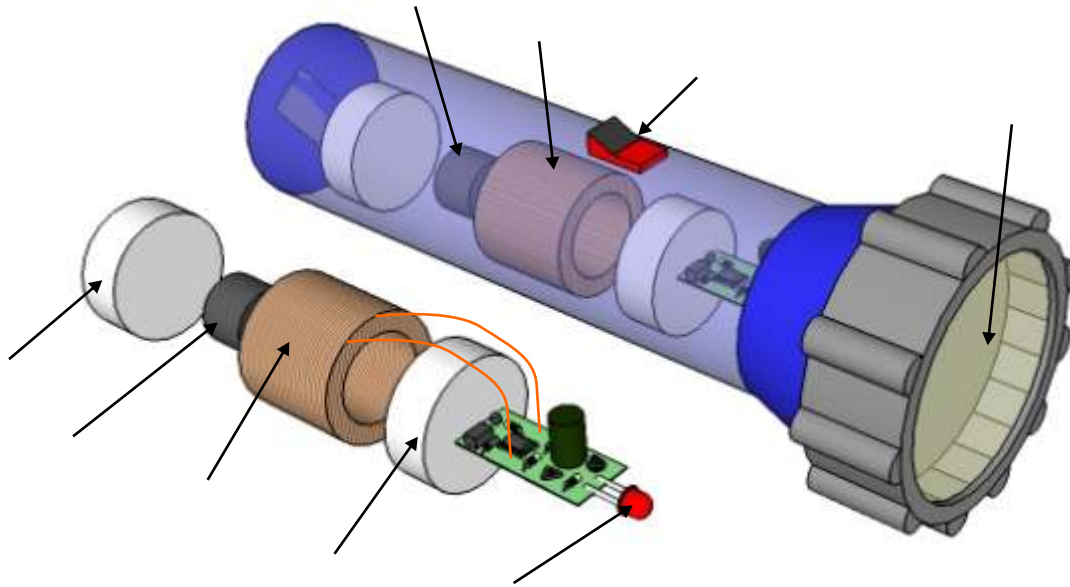
This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

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THE MAGNETIC FORCE TORCH

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1. A Magnetic Force Torch is seen below. Label the parts indicated by arrows.



2. Describe how the torch works. Include the following key aspects:

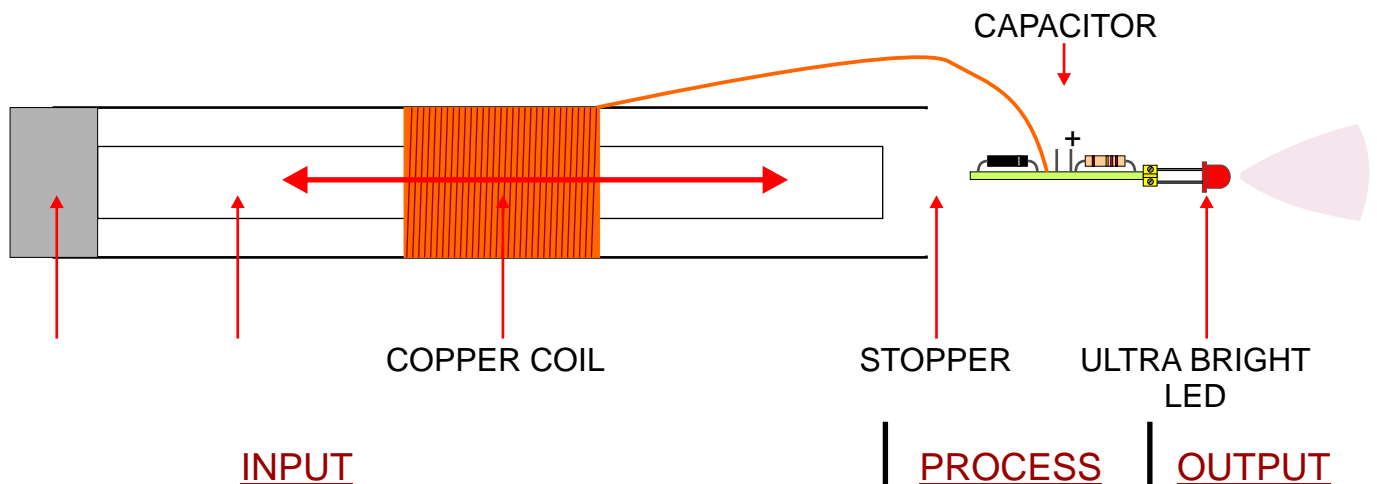
LOW POWER ULTRA BRIGHT LED

HEAVY DUTY CAPACITOR

WHY BATTERIES ARE NOT NEEDED

HIGH IMPACT POLYURETHANE CASE

3. An incomplete drawing of the internal workings of the magnetic force torch AND an incomplete systems diagram are shown below. Complete both, adding the remaining parts and text.



Movement of the magnet from side to side. The magnet moves in reciprocating motion through the copper coil producing electricity.

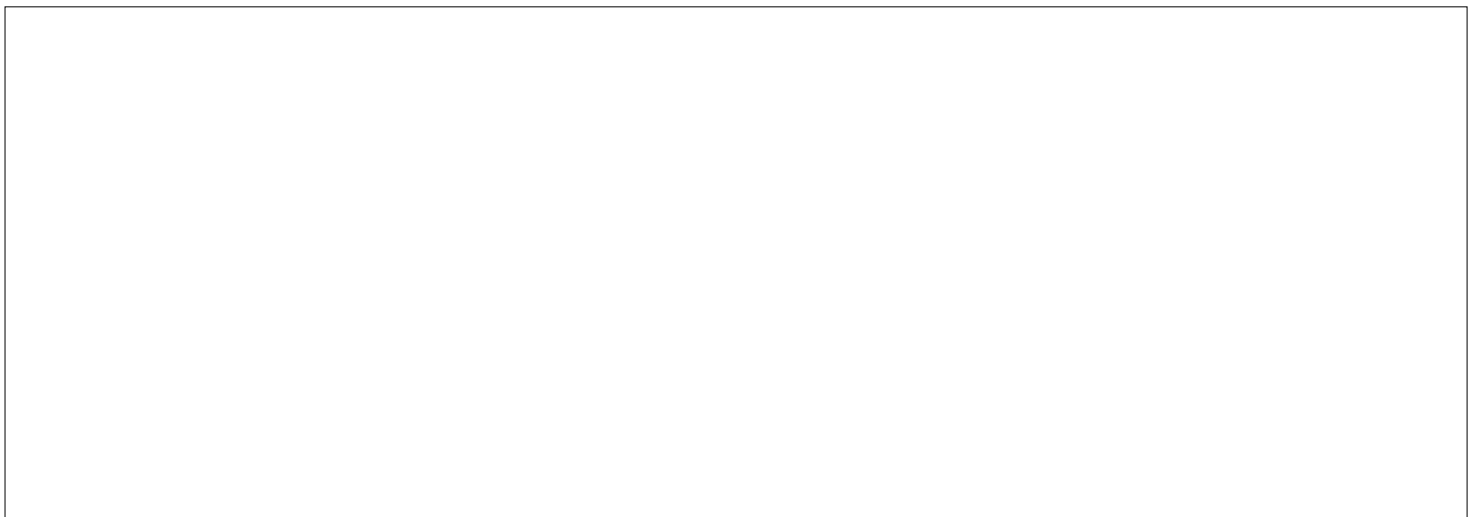
What do you think of the design of this type of torch?

The torch manufacturer has found that sales of the magnetic force torch are poor. A questionnaire has found that people like the technology/science behind the torch and the fact that it saves energy. However, most people feel that the design is too traditional. They feel that the torch should look modern and be ergonomically designed.

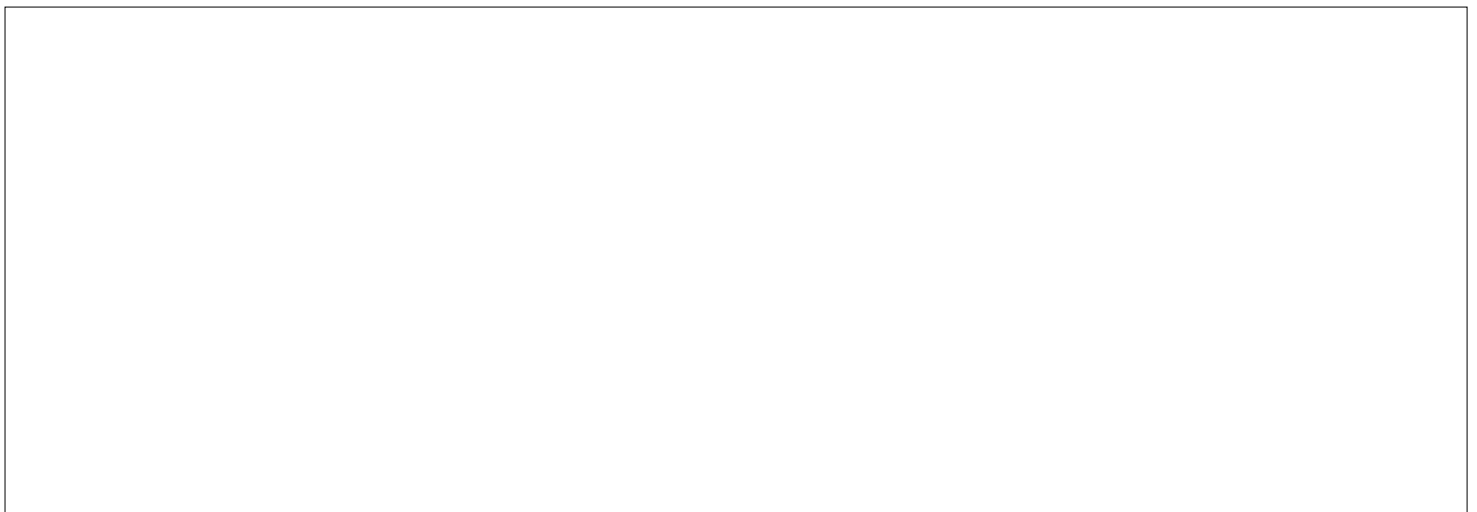
In the space below, draw new designs that will appeal to both young and old. The new torch must be ergonomically designed so that it fits the human hand comfortably.

ROUGH DESIGN

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COLOUR RENDERED DESIGN



NOTES
