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| I:\Cross Gates Primary\Cross Gates Primary LOGO.jpg  | **DT: Torches**  | **I:\Cross Gates Primary\Cross Gates Primary LOGO.jpg** |
| **Year Group: 4** | **Subject Focus: DT** | **Term: Summer 1** |
| **Key Knowledge:*** Identify electrical products and explain why they are useful.
* Help to make a working switch.
* Identify the features of a torch and how it works.
* Describe what makes a torch successful.
* Create suitable designs that fit the success criteria and their own design criteria.
* Create a functioning torch with a switch according to their design criteria.

**Useful and Reliable Websites*** [BBC Bitesize - Design and Technology](https://www.bbc.co.uk/bitesize/subjects/zfr9wmn)
* [Primary Homework Help](http://www.primaryhomeworkhelp.co.uk/)
* [Tech Club - Making a Torch](https://www.techclub.org/projects/make-a-torch)
 | **Technical Knowledge:**This is a **series circuit**: the **battery** contains stored electricity and this is used to power the bulb. When the **switch** is turned on, the **electrical** current flows through the **conducting** material.**Facts:** * The word "torch" is commonly used in British English for what is referred to as a "flashlight" in American English.
* LED (Light Emitting Diode) torches consume less power and last much longer than traditional light bulbs.
* The first torches were made using gas or oil, which were bulky and not very safe compared to modern designs.
* The UK is home to one of the largest manufacturers of torches and lighting products in the world!
 | **Key words:**

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| **Battery: Made from two or more cells that provide electrical energy to power a circuit.** |
| **Conductor**: A material that allows electricity to flow through it, such as a metal. |
| **Design Criteria**: A set of instructions for the project. |
| **Electricity**: A type of energy that is usually invisible and can be made or stored to make things work, such as moving or heating objects. |
| **Insulator**: A material that does not let electricity flow through it, such as plastic. |
| **Series Circuit**: A closed circuit where the current flows in one path. |
| **Switch**: A part of a circuit that can open or close to allow electricity to flow or stop it from flowing, such as a light switch that turns on or off. |
| **Test**: To find out whether something works as it should. |
| **Torch**: A battery-powered light that can be carried. |
| **Wire**: A thin piece of copper that conducts electricity and connects circuit components together. |

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