

**DT**

**Making Torches**

**Year 6**

*What I should already know*

- How to create a series circuit involving a battery, bulb and switch. (See Y4 Science Electricity, Y4 DT Light up Signs)
- How to strengthen and reinforce a simple structure. (See DT Y3 Photo Frames, Y4 DT Bridges)



*Vocabulary*

Electrical Circuit	A roughly circular route that starts and finishes at the same place.
Conductor	Transmit (a form of energy such as heat or electricity).
Insulator	A substance or device which does not readily conduct electricity .
Switch	A device for making and breaking the connection in an electric circuit.
Component	A part or element of a larger whole.
Battery	A container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
Casing	A cover or shell that protects or encloses something.
3D Net	A flattened out 3D solid. When you cut out the net, fold it and glue it together you can see what the 3shape looks like.
Prototype	A first version of an object.
Cross-sectional Diagram	A diagram of a particular section of a project.

*Technical Knowledge and skills*

- Research and evaluate a range of different torches.
- Carry out research using surveys, interviews, questionnaires and web-based resources to determine the needs, wants, preferences and values of particular individuals and groups.
- Design an appropriate electrical circuit for torch.
- Work accurately and safely with a variety of tools, materials and electrical components to make a torch.
- Identify ways of improving their torch to create a finished product of a high quality .

*Sticky Knowledge*

The inventor of torches was David Missell.

How to make an electrical circuit and explain how a torch works.

Use a cross sectional diagram to demonstrate how a particular aspect of a product will be made and the materials you will use.

Use a 3D net to explain design ideas and specifications.

How to create a casing around the circuit using materials that are good insulators.