

Year 4 DT Electrical Systems: Simple circuits and switches



Curriculum Key Question: How can I express myself?
Topic: Amazing Africa!

Term 5

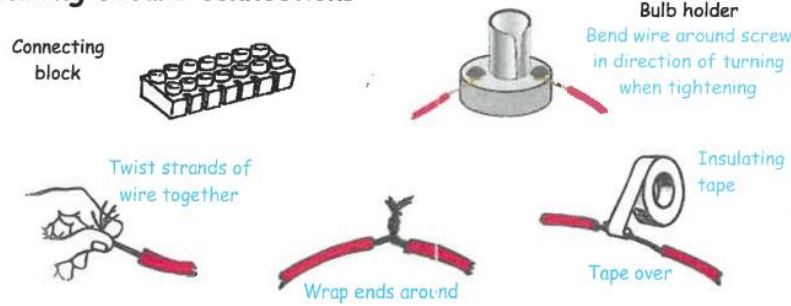
What should I already know?

- Constructed a simple series electrical circuit in science, using bulbs, switches and buzzers.
- Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue.

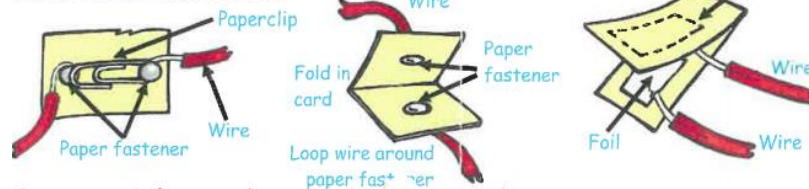
Skills I will develop:

- To develop design criteria to inform the design of products that are fit for purpose.
- Select from and use tools, equipment, components according to their functional properties and aesthetic qualities.
- To evaluate ideas and products against design criteria.
- Know and use technical vocabulary relevant to the project.
- To understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.

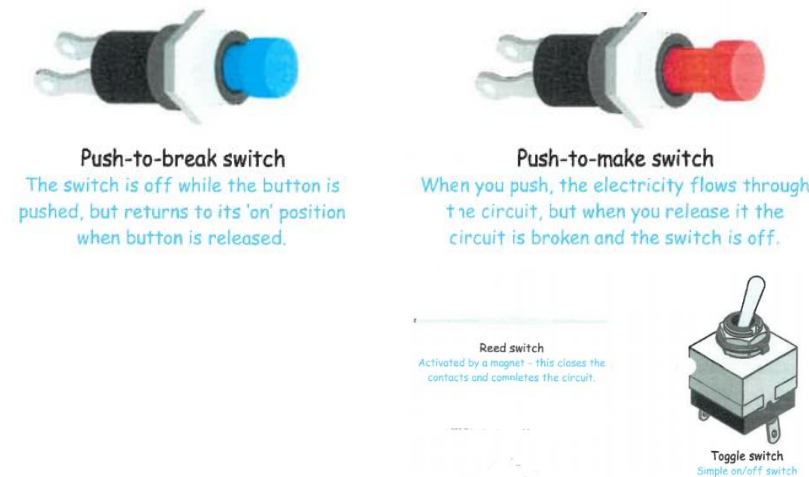
Making secure connections



Handmade switches



Commercial switches



Key Vocabulary (including definition)

Glossary

- Circuit** - path through which electricity passes.
- Conductor** - a material which allows an electric current to pass through it.
- Insulator** - a material which does not easily allow electric current to pass through it.
- Prototype** - a model made to test whether a design will work.
- Push-to-break switch** - a switch turned off by pressing it.
- Push-to-make switch** - a switch turned on by pressing it.
- Reed switch** - a switch operated by a magnet.
- Toggle switch** - a switch operated when a lever is pressed.
- System** - a set of related parts or components that together achieve a desired outcome.
- Output devices** - components that produce an outcome e.g. bulbs and buzzers.
- Input devices** - components that are used to control an electrical circuit e.g. switches.