



Unit of work:
Head torches

Year group: 4

Prior learning

- To be able measure and cut accurately
- To be able to work with a variety of materials
- To be able evaluate products

National Curriculum:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

Knowledge

- To be able to name understand about Edison's life and link this to his impact on everyday life
- To be able to name and explain the purpose of: junior hacksaws, bench hooks, G-clamps, hand drills, drill bits, safety goggles, glue guns, batteries, lamps and wires.
- To be able to name a range of materials such as: paper straws, plywood, wooden dowel, grey board, elastic bands, cardboard and paper
- To be able to explain how to work safe using DT equipment
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in products
- Exploded diagram – a diagram of an object that shows the relationship or order of assembly of various parts. Cross section diagram – when a product is exposed by making a straight cut through it.

Skills

- To be able to design a purposeful product based on a design brief
- To be able to select from a range of tools
- To be able to cut accurately and safely
- To be able to create a mock-up and suggest improvements
- To be able to make a product based on a design brief.
- To be able to test and evaluate against the design brief

Word	Definition
torch	a portable battery-powered electric lamp
battery	a container consisting of one or more cells, in which chemical energy is converted into electricity and used as a source of power.
circuit	a complete and closed path around which a circulating electric current can flow
light bulb	a glass bulb inserted into a lamp or a socket in a ceiling, which provides light by passing an electric current through a filament or a pocket of inert gas.
voltage	an electromotive force or potential difference expressed in volt
mock-up	a model or replica of a machine or structure
current	a flow of electricity which results from the ordered directional movement of electrically charged particles
Insulator	a material or an object that does not easily allow heat, electricity, light, or sound to pass through it

Significant people: Thomas Edison



Thomas Alva Edison was an American inventor and businessman who has been described as America's greatest inventor. He developed many devices in fields such as electric power generation, mass communication, sound recording, and motion pictures.

