



Unit of work:
Volcano

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 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
propulsion	the action of driving or pushing forwards.
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
CAD	Computer Aided Design
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
materials	the matter from which a thing is or can be made
wheels	a circular object that revolves on an axle and is fixed below a vehicle or other object to enable it to move easily over the ground.
axels	a rod or spindle (either fixed or rotating) passing through the centre of a wheel or group of wheels.

