



Unit of work
Shadows Puppets link to WW2

Year group: 6

Prior learning

Experience of axles, axle holders and wheels that are fixed or free moving.

- Basic understanding of electrical circuits, simple switches and components.
- Experience of cutting and joining techniques with a range of materials including card, plastic and wood.

Knowledge

- To be able to name understand about Da Vinci'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
- To be able to understand and use mechanical systems in products.

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
- apply their understanding of computing to program, monitor and control their product.

Significant people: Leonardo Da Vinci



Leonardo di ser Piero da Vinci, known as Leonardo da Vinci, was an Italian polymath of the Renaissance whose areas of interest included invention, drawing, painting, sculpture, architecture, science, music, mathematics, engineering, literature, anatomy, geology, astronomy, botany, paleontology, and cartography.

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].

Vocabulary and definitions

Word	Definition
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.
gears	a toothed wheel that works with others to alter the relation between the speed of a driving mechanism (such as the engine of a vehicle) and the speed of the driven parts (the wheels)
pulleys	a wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights.
cams	a projection on a rotating part in machinery, designed to make sliding contact with another part while rotating and impart reciprocal or variable motion to it.
levers	a rigid bar resting on a pivot, used to move a heavy or firmly fixed load with one end when pressure is applied to the other.
linkages	the action of linking or the state of being linked

