

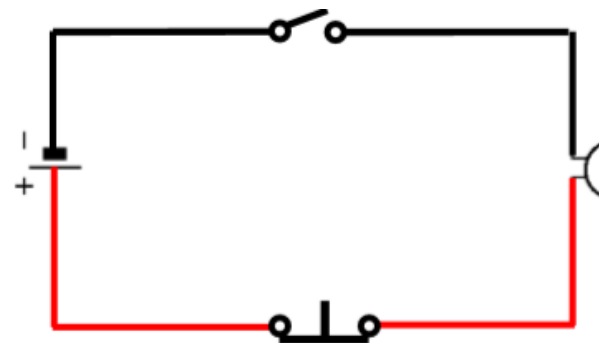


Year 6 - Autumn term Electrics - Car alarms

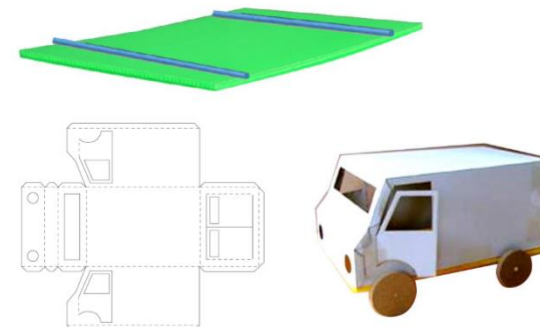
Key Vocabulary

Input	The place at which energy enters.
Output	Where the power or information leaves in the system.
Tilt Switch	Two electrical contacts and a material which acts as a conductor between the two electrical contacts.
Pendulum switch	Consisting of an object mounted so that it swings freely under the influence of gravity.
Chassis	the base frame of a car
Circuit	A closed path through which an electric current flows or may flow
Conductor	An electrical conductor is a substance in which electrical charge carriers.

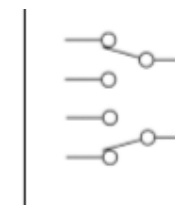
Simple circuit



Chassis



Pendulum switch



Tilt switch



Lesson sequence	
Evaluation of existing products	Discuss examples of alarm systems – where and why they are used, for example to provide information, to warn of danger or disturbance, to prevent damage, to keep things safe.
Focussed tasks	Build a working circuit using a battery, switch, such as a tilt, reed or push-to-make switch, and light or buzzer. Draw a pictorial representation of the circuit or draw a circuit diagram using correct symbols.
Design	Designing The design is for an alarm system for a specific type of vehicle, purpose and user (see the PowerPoint and worksheets for ideas and parameters).
Make	Making Circuits will need an on-off switch to activate the circuit as well as the switch that triggers the alarm
Evaluate	Ask children to compare their final product to the original design specification. • Where possible they should test their products with the intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.
Health and Safety	Remind children of the dangers of mains electricity. Explain how lithium in batteries is harmful.