



Burglars beware! - KS2 Challenge Sheet

Looking after our things is very important – at home and in school. Discuss how alarms can help prevent or detect crime. Can you design, make and test a burglar alarm using series and parallel electrical circuits?



Educational objective

A practical project to build an electrical circuit which could be used as a burglar alarm. The project may be used as an introduction to the topic, or to reinforce work already done in class.

Approach

Whole class discussion about how intruders entering a building might be detected. Group activity with children working in pairs with K'NEX to construct a building and using simple electrical components to design an electrical circuit, which flashes a light and/or sounds a buzzer when an intruder is detected. If the light and buzzer are to work simultaneously, the children will have to construct a parallel circuit.

Specific skills to be developed

Manipulative, designing and making skills, social and problem solving skills.

Cross-curricular links

Science and Design & Technology

Ideas for extension activities

Draw a circuit diagram for the electrical system

Equipment we will provide:

boxes of K'NEX
battery packs
bulbs
buzzers
switches
crocodile clip wires

Subject skills / Desirable outcomes

Structures
Electricity (D&T)
Designing skills
Making skills
Control (D&T)

Life skills

Innovation skills
Problem-solving skills
Team working skills
Communication skills
A 'can-do' approach