



999 - KS2 Challenge Sheet

Emergency vehicles need to be seen and heard. Can you build a police car, fire engine, ambulance or helicopter. Your vehicle should have a flashing light and a siren.



Educational objective

To provide an opportunity for problem solving, decision making and cooperative learning.

Approach

Whole class discussion about features of emergency vehicles. Group activity with children working in pairs with K'NEX to construct an emergency vehicle and using simple electrical components to design an electrical circuit, which flashes a light and sounds a buzzer. 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

K'NEX wheels

figures

Subject skills / Desirable outcomes

Structures

Mechanisms

Designing skills

Making skills

Shape, space & measure

Life skills

Innovation skills

Problem-solving skills

Team working skills

Communication skills

A 'can-do' approach