

Networking

Introduction

Getting energy to the places where it is needed is not an easy task. Even the simplest projects need a lot of planning before hand and they have to be completed to a cost which has also been worked out in advance.

The person who plans and oversees the progress of a project is called the Project Manager. In this activity you will need to use some of your scientific knowledge and some project management skills.

What you need

- Chalk / masking tape
- Small bulbs in holders (5 per group)
- Bags of tokens (1 bag per group)
- Leads
- Crocodile clips
- Batteries
- Battery holders

Before you start

You will need to work in a team of three or four for this activity. Your teacher will have marked with chalk or masking tape five crosses on your desk. On each of these should be a small bulb in a holder.

Building a network

On your bench you will see 5 small light bulbs in holders. These should be located on taped crosses or chalk marks on your bench. You must not move these bulbs.

Your task is to create a power distribution network which will allow all of these bulbs to be lit up at once.

Your teacher will give you a bag of tokens which can be used to purchase leads, crocodile clips, batteries and battery holders from the supply stores which will be set up at the front of the class.

The winning team will be the team that manages to light all five bulbs at the same time for the least overall cost.

Extension tasks

- Will it be cheaper to provide each light bulb with its own power supply or will it be cheaper to use one large power supply for all of the bulbs?
- Which cable layout will use the least amount of wire?