

# Electromagnets

# 3. Electromagnets

## CONCEPT 1

## TEST YOURSELF

### MAKING ELECTROMAGNETS

#### KNOW

- Q1 How is an electromagnet different from a permanent magnet?
- Q2 Describe two ways to prove that an electromagnet is indeed magnetic?

#### APPLY

- Q3 Draw an electromagnet circuit you could use to attract a steel clip. Explain how you could change this to allow you magnet to attract and lift a car?
- Q4 How would you drop the car?

#### EXTEND

- Q5 What are the main benefits of an electromagnet when compared to a permanent magnet?
- Q6 What would happen to the magnetic field lines if you increased the current to the electromagnet?
- Q7 Explain why the coils in an electromagnet are arranged in a line and not randomly placed.