

# 5

# Structure of materials

## > 5.1 The structure of the atom

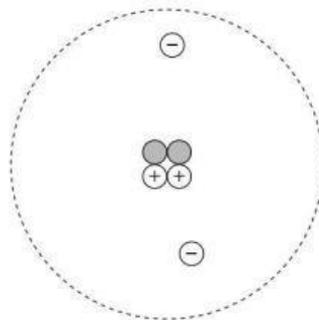
### Exercise 5.1A Labelling the structure of the atom

#### Focus

In this exercise, you will label a diagram of the structure of an atom and identify facts about the particles in an atom.

- 1 Label the diagram showing the structure of the atom.  
Use the labels given here.

proton    neutron    electron    nucleus of the atom



- 2 What is the white area inside the circle in the diagram?  
Label it.

- 3 Tick (✓) the statements that are correct.
- Electrons have less mass than protons do.
  - Protons have a negative electrical charge.
  - Electrons have a negative electrical charge.
  - Neutrons have an electrical charge.
  - Neutrons have more mass than electrons do.
  - Electrons are found in the nucleus of the atom.

## Exercise 5.1B Models of the structure of the atom

### Practice

In this exercise, you will compare models of the structure of the atom.

- 1 Draw and label **two** diagrams to show J.J. Thompson's and Rutherford's models of the structure of the atom.

- 2 Give a difference between J.J. Thompson's model and Rutherford's model of the structure of the atom.

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