Using electrolysis to extract metals: Worksheet 4.13

Extracting aluminium



1. The diagram shows some electrodes being used to extract aluminium from bauxite. Add labels to show:

a. the carbon cathode where aluminium forms

b. the carbon anode where oxygen forms

c. the electrolyte – aluminium oxide dissolved in molten cryolite.

1. Explain why aluminium cannot be extracted by heating its ore with carbon.

1. Why is the aluminium oxide dissolved in cryolite?

1. The carbon anodes are replaced regularly. Explain why.

1. Describe what happens to the ions as aluminium oxide is electrolysed – key words to use are *anode*, *cathode*, *electrons*, *gain*, *lose*, *ion*, *atom*.