

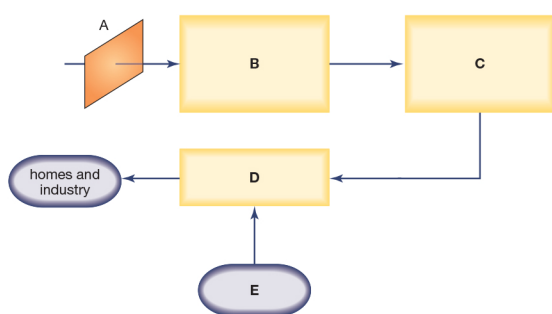


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# Using resources

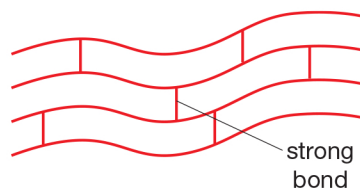
# REVIEW IT!

- 1 **a** Explain the difference between a finite and a renewable resource.
- b** Ethanol can be obtained from sugar by fermentation and from the reaction between ethene and steam. Explain which of these two processes is more sustainable.
- 2 The diagram below shows the main steps in the treatment of water to give potable water.



- 1 **a** **i** Describe what is happening at A.
- ii** State what is added at C and explain why it is added.
- iii** Explain why the water at D is not fit to drink.
- iv** Describe the process taking place at E and explain why it is important.
- b** List two ways by which potable water is obtained from seawater.
- c** Potable water is not pure water.
  - i** Outline how you could show that potable water contains dissolved impurities.
  - ii** Describe a physical test which could be used to show pure water has been made.
- d** When waste water is treated the sludge formed after settlement is digested anaerobically.
  - a** Define the term anaerobic.
  - b** List two useful products from anaerobic digestion.

- 3 **a** Explain what is meant by the following three terms when applied to the extraction of copper:
  - i** smelting
  - ii** phytomining
  - iii** bioleaching.
- b** You are given a solution of copper(II) sulfate. Give two ways you would obtain pure copper from the solution.
- 4 **a** Explain the term life cycle assessment.
- b** List the four stages in the product's lifetime that are analysed for their impact on the environment.
- 5 The diagram to the right shows the arrangement of polymer chains in a thermosetting polymer.



- 3 **a** Explain why this type of polymer does not melt.
- b** Explain why this type of polymer is a good choice for making electrical plugs.
- 6 **a** Write the chemical equation for the formation of ammonia in the Haber process.
- b** What are the conditions used in the Haber process?
- c** Explain why a high pressure is used in the Haber process.
- d** List three compounds that would be found in an NPK fertiliser.