

How does water get to be potable?

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Compare the use of plastic and paper bags in regards to the Life Cycle Assessment.

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State the advantages and disadvantages of recycling.

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In the space below describe the life cycle of a product

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### Using Resources

Define the key words below.

Keyword	Definition
Natural Resources	
Renewable resources	
Finite resources	
Sustainable development	
High Grade Ore	
Low Grade Ore	

In the space below describe with the use of diagrams how copper can be extracted through smelting, phytomining and bioleaching.

Smelting

Phytomining

Bioleaching

Define these key words:

- Sustainable development
- Finite resource
- Renewable resource

What does potable water mean?

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Where does most of the potable water come from?

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## Using resources key ideas

Describe how copper can be extracted using phytomining

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Describe how copper can be extracted using bioleaching

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Describe how copper can be extracted using smelting

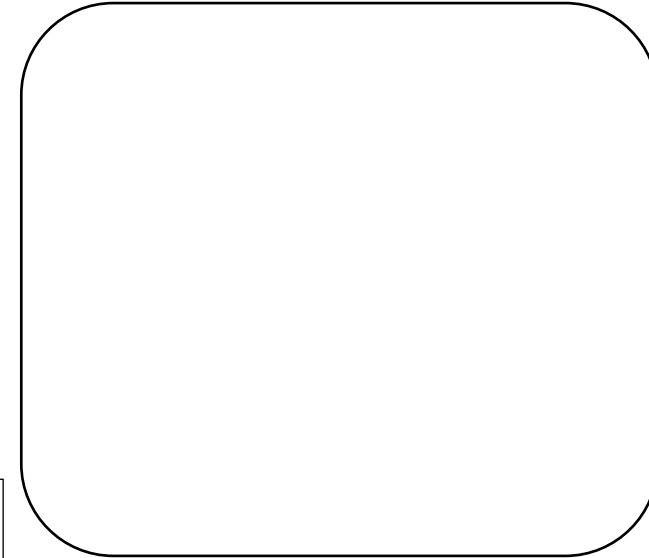
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What are the stages of a life cycle assessment (LCA)?

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Draw a diagram to show the required practical of purifying water by distillation.

*Label the condenser, thermometer, mixture, pure water*



What materials can be recycled?

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What materials can be reused?

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Summarise how waste water can be treated

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Complete the table to summarise the steps in water treatment

Step	Description
Sedimentation	
Filtering	
Adding Chlorine	

**Table 1**

	Plastic bags	Paper bags
Raw materials	Crude oil	Made from wood
Energy used to manufacture (MJ)	1.5	1.7
Mass of solid waste (g)	14	50
Mass of CO <sub>2</sub> produced (kg)	0.23	0.53
Volume of water used to manufacture (dm <sup>3</sup> )	255	4520

**Table 1** shows a life cycle assessment for plastic and paper bags. Use your knowledge and information from the table to evaluate the environmental impact of using plastic vs paper bags

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