

Phytomining: sequencing activity

Learning objectives

- 1 Sequence the processes involved in phytomining.
- 2 State an advantage and disadvantage of phytomining.

Introduction

In today's high-tech society, there is an increasing need for valuable metals to use in computers and mobile phones. When the concentration of metal ore is too low for conventional mining, then phytomining, using plants, can be used to extract the metals.

Instructions

Rewrite the following sentences in the correct order:

1. Chemical processes such as displacement or electrolysis are used to purify the metal.
2. Hyperaccumulator plants are grown in the soil containing the low grade ore.
3. The plants use the mineral to grow and store any excess in their leaves.
4. One disadvantage of phytomining is that it is a much slower process to extract a metal.
5. Soil containing low grade ore, with a low concentration of minerals (useful metal compounds) can NOT be extracted using traditional mining.
6. The plants absorb the mineral through their roots.
7. When the plants are big enough, they are harvested and burnt in air to give an ash containing impure metal.
8. One advantage of phytomining is that you can extract the metal from low grade ores, and it is cost effective to do so.

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Cut out the sentences and arrange them in the correct order:

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The plants use the mineral to grow and store any excess in their leaves.

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The plants absorb the mineral through their roots.

When the plants are big enough, they are harvested and burnt in air to give an ash containing impure metal.

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