**Bioleaching**

Certain bacteria can break down low grade ores to produce an acidic solution containing copper ions. The solution is called a leachate and the process is called bioleaching.

Does not need high temperatures but it produces toxic substances, including sulfuric acid which damages the environment.

**Method of extraction**

Phytomining

Plants absorb mineral ions through their roots

* Plants grown on low grade ore
* Plants absorb metal ions through their roots and concentrate these ions in their cells
* Plants are harvested and burnt
* The ash left behind contains metal compounds
* Reduces the need to obtain new ore by mining
* Conserves limited supplies of high grade ores
* Reduces the amount of rock waste that must be disposed of after traditional mining

Waste water treatment

* Screening and grit removal
* Sedimentation – to produce sewage sludge and effluent
* Anaerobic digestion of sewage sludge
* Aerobic biological treatment of effluent

**Desalination**

This is a process used to get drinking water from the sea. Distillation is used during this process so that the water is separated from the salt.

**Cleaning ground water**

Water is collected in a tank. Water is screened and coarse filtration takes place. Sedimentation then takes place. Chlorine is added to the water to destroy bacteria.

Different countries have different methods of producing potable water.

**Potable water**

This is water that is safe for humans to drink. It is not pure because it is made from more than one substance.

**Keywords**

Finite

Sustainable

Renewable

Energy

Resource

**Finite resource**

Will run out.

**C10: Using resources**

**Ambitious Vocabulary**

Finite

Sustainable

**Science**