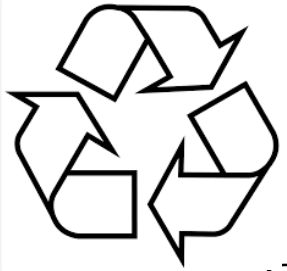
AQA C10a Using Resources
COMBINED FOUNDATION
RP – Testing and purifying water

Sustainable Development

Many of Earth's resources are **finite**. This means they will run out.
Renewable resources have an **endless supply.**
We need to use resources sustainably.
Sustainable development meets the needs of humans today, while also allowing future generations to meet their needs.
We can better use resources by **reducing** our use of them, **reusing** them, and **recycling**.



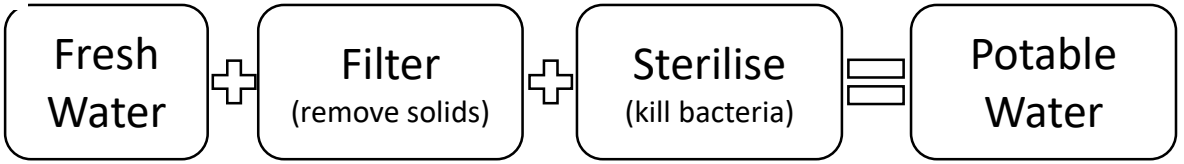
Potable Water

Potable water is safe to drink. It has low levels of dissolved salts or microbes.

We get potable water by:
- Finding a source of fresh water
- Filtering it (to remove solids)
- Sterilising it (to kill bacteria).

We can sterilise it by using chlorine, ozone or UV light.

If fresh water is not available, sea water must be used. We must remove the salt (desalination). We can do this by distillation or reverse osmosis. Both of these processes require lots of energy.



Life Cycle Assessments

LCAs assess the environmental impact of something over its whole life. They consider the impact of:
- Raw materials (extraction/processing)
- Manufacturing
- Packaging
- Use
- Disposal

LCAs are never totally **objective**. We always have to make judgements and they can be biased.

Treating Waste Water

Waste water from homes, industry and farming must be treated to remove bacteria, and harmful chemicals. Remember, this isn't making it **potable** – just making it safe to release into the environment.
Sewage treatment:
- screening and grit removal to remove large particles
- sedimentation, which produces sewage sludge and effluent (the liquid which remains on top)
- the sewage sludge is digested anaerobically by specific bacteria
- the effluent is treated with aerobic bacteria

Exam Technique

There can be lots of **evaluate** questions on this topic.

Remember that **evaluate** means use the information given in the question, and your own knowledge, to write about the evidence for and against something. You must make a **judgement** to get all the marks (try using the words "in conclusion…").