QUESTION	ANSWER

Quiz Cards: Using resources (Chemistry)

How to use the quiz cards to learn the key facts

1) Take 6 quiz cards at a time and read through them

2) Cover up the answer side of the page.

Question	Answer

3) Take the first quiz card and ask yourself the question. Either write the answer down or say it out loud.

4) Check your answer using the answer side of the card.

5) Do this question again until you get it right.

6) Repeat the process for the second question.

7) Before going onto the third question repeat question one and two.

8) When you have gone through all of the questions try and do them in a random order to really test your knowledge.

ONCE YOU HAVE LEARNT THEM ALL ….

9) Complete some exam questions to apply your knowledge.

10) Check your answer with the mark scheme and correct any errors in green pen.

11) Repeat steps 9-10 until you get the answers correct all of the time.

QUESTION	ANSWER
What do we use the Earth's resources for?	Warmth, shelter, food and transport.
What do resources provide?	Food, timber, clothing and fuels.
Why is chemistry important to agriculture and industry?	Provides new products and in sustainable development
What is sustainable development?	Development that meets the needs of current generations without compromising the ability of future generations to meet their own needs.
What should drinking water have to be safe?	Sufficiently low levels of dissolved salts and microbes.
What is portable water?	Safe drinking water Potable water is not pure water in the chemical sense because it contains dissolved substances.

QUESTION	ANSWER
What sterilising agents are used for portable water?	Chlorine, ozone or ultraviolet light.
What can we do if supplies of fresh water are limited?	Desalinate salty water or sea water
How can desalination be done?	Distillation or by processes that use membranes such as reverse osmosis.
What is a disadvantage of desalination?	Requires large amounts of energy
How do we create portable water?	• choosing an appropriate source of fresh water • passing the water through filter beds • sterilising.
In the UK **what** is the main source of water?	Rain provides water with low levels of dissolved substances (fresh water) that collects in the ground and in lakes and rivers.

QUESTION	ANSWER
What must happen to all waste water before being put into the environment?	Be treated.
What happens during sewage treatment?	• screening and grit removal • sedimentation to produce sewage sludge and effluent • anaerobic digestion of sewage sludge • aerobic biological treatment of effluent.
What must be removed from sewage and agricultural and industrial waste?	Organic matter and harmful microbes
How can we extract low grade copper ores?	Phytomining, and Bioleaching.
Why are Phytomining, and Bioleaching better than mining?	They don't need the moving and disposing of large amounts of rock
What is Phytomining?	Using plants to absorb metal compounds. The plants are harvested and then burned to produce ash that contains metal compounds.

QUESTION	ANSWER
What is Bioleaching	Using bacteria to produce leachate solutions that contain metal compounds.
How can copper be extracted from the metal compounds formed in Phytomining or Bioleaching?	Using solutions of copper compounds and then using displacement with scrap iron or by electrolysis
What are life cycle assessments?	Assess the environmental impact of products
When are life cycle assessments used?	• extracting and processing raw materials • manufacturing and packaging • use and operation during its lifetime • disposal at the end of its useful life, including transport and distribution at each stage.
What is the problem with selective LCAs?	These can be misused to reach pre-determined conclusions, eg in support of claims for advertising purposes
Why do Metals, glass, building materials, clay ceramics and most plastics pose a problem?	Much of the energy for the processes comes from limited resources. Obtaining raw materials from the Earth by quarrying and mining causes environmental impacts.

QUESTION	ANSWER
How can we help solve this problem?	Metals can be recycled by melting and recasting or reforming into different products. Some products, such as glass bottles, can be reused.
Why does reusing and recycling materials help?	Reduces the use of limited resources, use of energy sources, waste and environmental impacts