Using resources

Answers

GCSE science knowledge recall

This topic online

Q	Answer	Remember
1	finite	Finite means limited; timber and cotton are renewable because they can be regrown.
2	Meeting the needs of people today without stopping future generations from meeting their own needs.	Think of it as not using up the next generation's share.
3	potable	Potable water is not pure in the chemical sense: it still has dissolved salts in it.
4	fresh water	Fresh water has low levels of dissolved salts, unlike sea water.
5	chlorine	Filtering removes solids; sterilising kills the microbes.
6	desalination	Used in dry countries with a coastline, but it needs a lot of energy.
7	reverse osmosis	Pressure pushes water through a membrane that holds the salts back.
8	screening	Large bits would damage the machinery further along.
9	sedimentation	The sludge sinks to the bottom; the liquid on top is called effluent.
10	anaerobic digestion	It produces biogas, which can be burned for energy.
11	aerobic	Aerobic means 'with air'; the bubbling keeps the bacteria supplied with oxygen.
12	phytomining	'Phyto' means plant: the plants do the mining for us.
13	bioleaching	Phytomining uses plants, bioleaching uses bacteria; both suit low-grade ores.
14	iron	Iron is more reactive than copper, so it pushes copper out of its compounds.
15	electrolysis	Copper ions are positive, so they collect as metal at the negative electrode.
16	life cycle assessment	Cradle to grave: getting materials, making it, using it and throwing it away.
17	Some effects, such as pollution, are hard to give numbers to, so people must make value judgements that can be biased.	Selective or shortened LCAs can be used to make a product look greener than it is.
18	recycling	Reusing is different: a washed milk bottle filled again is reused, not recycled.
19	It uses less energy, saves the limited supply of ore, and causes less mining damage and waste.	Any one of energy, finite ore, or less waste and quarrying.

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Q	Answer	Remember
20	water	Iron nails in dry air, or in boiled water under oil, do not rust.
21	galvanising	Even if scratched, the zinc still protects the iron because zinc is more reactive.
22	sacrificial protection	The more reactive metal is sacrificed: it gives up its electrons first.
23	tin	Bronze (copper and tin) for statues and medals; brass (copper and zinc) for door handles.
24	24	18 carat gold is 18/24, so 75% gold; the rest is often copper or silver to harden it.
25	soda-lime glass	Borosilicate glass uses boron trioxide instead and melts at a higher temperature, so it suits ovenware.
26	thermosoftening	Thermosetting polymers have cross-links between chains, so they do not melt.
27	composite	Examples: fibreglass, carbon-fibre, concrete and wood.
28	ammonia	The nitrogen comes from the air; the hydrogen usually comes from natural gas.
29	iron	Conditions to remember: iron catalyst, about 450 °C and about 200 atmospheres.
30	potassium	N is nitrogen, P is phosphorus and K is potassium (from its Latin name, kalium).

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