

C6 – electrolysis	Recall answers
1. What is electrolysis	Splitting up of a substance using electricity
2. For electrolysis to work, what must happen to the ionic substance	It must be melted (made molten) or dissolved in water
3. What is an electrolyte	A liquid that contains ions and will conduct electricity
4. Why must the ionic substance be melted or dissolved in water for electrolysis to work	So that the ions are free to move
5. Name the positive electrode	Anode
6. Name the negative electrode	Cathode
7. To which electrode do positive ions move	Cathode (-)
8. To which electrode do negative ions move	Anode (+)
9. At the electrodes, what moves	Electrons
10. In terms of electrons, what is oxidation	Loss of electrons (OIL)
11. In terms of electrons, what is reduction	Electron gain (RIG)
12. What happens at the anode	Negative ions lose electrons (are oxidised)
13. What happens at the cathode	Positive ions gain electrons (are reduced)
14. If there is a mixture of ions in the electrolyte, what will the products formed depend on	How reactive they are. The LEAST reactive normally forms at the electrode
15. Give an ionic half equation HT	$\text{Na}^+ + \text{e}^- \rightarrow \text{Na}$ (at the cathode)
16. Give an ionic half equation HT	$2\text{Cl}^- - 2\text{e}^- \rightarrow \text{Cl}_2$ (at the anode)
17. Name the main ore of aluminium and give its formula	Bauxite : aluminium oxide Al_2O_3
18. Why is bauxite dissolved in molten cryolite	To lower the melting point
19. What are the electrodes made from	Carbon (graphite)
20. Give the product formed at each electrode	Aluminium : Cathode (-) Oxygen : Anode (+)
21. Why do the positive electrodes keep having to be replaced	The oxygen reacts with carbon forming carbon dioxide and they dissolve away
22. What are the main products of electrolysis of sodium chloride solution	Hydrogen and chlorine at the electrodes AND sodium hydroxide solution
23. Identify a use for the products	a) Hydrogen used to make margarine b) Chlorine used make bleach and plastics c) Sodium hydroxide used to make soap
24. What is electroplating	Covering a metal object with another layer of a different metal
25. Why do we electroplate	Make metals look nicer To stop metals corroding
26. How do we do it	Place the metal we want to plate as the negative electrode. The positive electrode is the pure metal that you want to plate it with. AND the electrolyte must contain ions of the plating metal.