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C4.2 Knowledge Quiz: Extraction of Metals

Describe what the reactivity series shows.	
Write the general word equation for the reaction of a metal and acid.	
State what salt is formed when potassium reacts with nitric acid.	
State what you would observe if metals of different reactivities were added to hydrochloric acid.	
Define 'displacement reaction'	
State the products made when lead oxide reacts with carbon	
Write the word equation for the displacement reaction between copper oxide and carbon.	
When zinc oxide reacts with carbon, state what has been oxidised.	
Describe the difference between a sodium atom and a sodium ion.	
Define ionic bonding	
Describe how sodium fluoride is formed	
Describe the relationship between the group of the periodic table and the number of outer shell electrons.	
(HT only) List the ions that make up Na_2O	
(HT only) Describe what spectator ions are.	
(HT only) Write an ionic equation for the following reaction: $Zn_{(s)} + CuCl_{2(aq)} \rightarrow ZnCl_{2(aq)} + Cu_{(s)}$	
(HT only) Define oxidation in terms of electrons	
(HT only) Define reduction in terms of electrons	

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(HT only) Identify what has been reduced and what has been oxidised in this reaction: $Zn_{(s)}+CuCl_{2(aq)} \rightarrow ZnCl_{2(aq)}+Cu_{(s)}$	
(HT only) Use the following ionic equation to write two half equations. $Br_{2(s)}+2Na^{+}_{(aq)}+2I^{-}_{(aq)} \rightarrow 2Na^{+}_{(aq)}+2Br^{-}_{(aq)}+I_{2(s)}$	
(HT only) Using the half equations in the question above, identify which species are reduced and which are oxidised.	
(HT only) Write an ionic equation for the following reaction: $Fe_{(s)} + H_2SO_{4(aq)} \rightarrow FeSO_{4(aq)} + H_{2(g)}$	
(HT only) Write two half equations for the following reaction: $Fe_{(s)} + H_2SO_{4(aq)} \rightarrow FeSO_{4(aq)} + H_{2(g)}$	
(HT only) Using the half equations in the question above, identify which species are reduced and which are oxidised.	
Define electrolysis.	
List the ions present in molten sodium bromide.	
Predict the movement of ions in sodium bromide when the current is switched on in electrolysis	
Explain why electrolysis cannot be carried out with a solid ionic substance	
Describe a use of electrolysis.	
Describe a disadvantage of extraction of metals by electrolysis.	
Describe how electrolysis is used to extract aluminium from its ore.	

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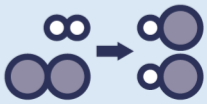
State what is produced when a positive ion is discharged at an electrode.	
State what is produced when a negative ion is discharged at an electrode.	
Describe what happens at the positive electrode when molten lithium fluoride is electrolysed.	
Describe what happens at the negative electrode when molten sodium chloride is electrolysed.	
(HT Only) Write half equations to describe the discharge of ions at each electrode when molten sodium chloride is electrolysed.	
List the ions present in the electrolytes of molten lithium fluoride.	
List the ions present in the electrolytes of aqueous lithium fluoride solution.	
If the two positive ions in solution are K^+ and H^+, which positive ion would be discharged at the cathode? Explain your answer.	
If the two negative ions in solution are OH^- and SO_4^{2-}, which negative ion would be discharged at the anode? Explain your answer.	
Predict what will be observed at the anode and cathode during the electrolysis of aqueous sodium chloride solution.	
Describe the apparatus used for electrolysis	
Describe how to test for the presence of hydrogen gas and what the positive result would be.	
Describe how to test for the presence of oxygen gas and what the positive result would be.	



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Describe how to test for the presence of chlorine gas and what the positive result would be.	
TIF - Define corrosion.	
TIF - State methods used to prevent corrosion.	
TIF - Explain how electroplating is carried out.	
(HT Only) List some disadvantages of mining and quarrying.	
(HT Only) Define bioleaching.	
(HT Only) Define phytomining.	
Describe how metals are recycled	
State two environmental benefits of recycling metals.	
Suggest how the public and businesses might be encouraged to recycle their waste metals	