

TRIPLE ONLY Chemistry Tick List

Target	Triple Chemistry Paper 1 Tick List			
	<u>C1 The Periodic Table</u>			
1.	<i>Describe the properties of transition metals and compare to group 1 metals</i>			
	<u>C2 Bonding</u>			
2.	<i>Define nano science, list advantages and disadvantages and give uses</i>			
3.	<i>Describe how surface area to volume ratio increases as particle size decreases</i>			
4.	<i>Convert lengths into standard form</i>			
	<u>C3 Quantitative Chemistry</u>			
5.	<i>Calculate percentage yield</i>			
6.	<i>Describe why reactions do not have 100% yield</i>			
7.	<i>Define atom economy and explain its importance</i>			
8.	<i>Calculate atom economy for a chemical reaction</i>			
	<u>C4a Chemical Changes</u>			
9.	<i>Describe what corrosion and rusting are, and how they can be prevented including when metals are galvanised and by sacrificial protection</i>			
10.	<i>Describe what an alloy is and how metals are alloyed</i>			
11.	<i>State uses of copper, aluminium, gold and iron alloys</i>			
	<u>C4c Reactions of Acids</u>			
12.	<i>Describe how to carry out a titration</i>			
13.	<i>Carry out titration calculations</i>			
14.	<i>Calculate the volume of a gas and calculate the moles or volume of a gaseous substance</i>			
	<u>C5 Energy Changes</u>			
15.	<i>Describe cells and batteries</i>			
16.	<i>Explain how potential difference can be changed in a cell</i>			
17.	<i>Interpret data on chemical cells in terms of the relative reactivity of different metals</i>			
18.	<i>Describe an electrochemical cell with half equations and ionic equations</i>			
19.	<i>Describe how a fuel cell works with half equations and ionic equations</i>			
20.	<i>Compare a fuel cell and a re-chargeable battery</i>			

Target	Triple Chemistry Paper 2 Tick List			
	<u>C6 Rates and Equilibrium</u>			
1.	<i>Describe how ammonia is produced by the Haber process</i>			
2.	<i>Describe how concentration, pressure and temperature are used to determine the optimum conditions of industrial reactions like the Haber process</i>			
3.	<i>Name the salts produced when phosphate rock is reacted with different acids</i>			
4.	<i>Compare the methods for producing fertilizers in labs and in industry</i>			
	<u>C7 Organic Chemistry</u>			
5.	<i>Draw the displayed formula for alkenes, alcohols, carboxylic acids give their general formula, and name the first four, name the functional group</i>			
6.	<i>Describe the reactions and conditions for the addition of hydrogen, water and halogens to alkenes</i>			

7.	Describe what happens when any of the first four alcohols react with sodium, burn in air, are added to water, react with an oxidising agent			
8.	Recall uses of first four alcohols			
9.	Describe what happens when any of the first four carboxylic acids react with carbonates, dissolve in water, react with alcohols			
10.	Explain why carboxylic acids are weak acids in terms of ionisation and pH			
11.	Describe what esters are and give some of their properties, draw their displayed formula			
12.	Write an equation for the productions of esters			
13.	Describe the tests for alkenes, alcohols, carboxylic acids and esters.			
<u>C7 Polymers</u>				
14.	Describe how polymers are made from alkenes by additional polymerisation			
15.	Draw diagrams to show polymerisation. Must show the monomer and the polymer repeating unit.			
16.	Describe what condensation polymerisation is and show how polymers are formed in this way			
17.	Describe how amino acids react by condensation to produce polypeptides and proteins			
18.	Describe how polysaccharides are produced from sugars			
19.	Describe what DNA is and describe its structure			
20.	Describe how to change the properties of a polymer			
21.	Explain how low density and high density poly(ethene) are both produced from ethene			
22.	Explain the difference between thermosoftening and thermosetting polymers in terms of their structures.			
23.	Describe how glass, ceramics and composites are formed and link their properties to their uses			
<u>C8 Chemical Analysis</u>				
24.	Identify the colours produced by lithium, sodium, potassium, calcium and copper compounds			
25.	Describe how to test for positive ions using sodium hydroxide, including calcium, aluminium, magnesium, copper, iron (II) and iron (III) ions. H/T write ionic equations for the reaction			
26.	Describe the test for carbonate ions			
27.	Describe the test for sulfate ions			
28.	Describe the test for Halide ions and identify the colour of the precipitate for chloride, bromide and iodide ions			
29.	Write ionic equations for the reactions of carbonates, sulfates and halides			
30.	Give advantages and disadvantages of using instrumental analysis			
31.	Describe how flame emission spectroscopy works			

	<u>C10 The Earth's Resources</u>			
32.	<i>Describe what corrosion and rusting are, and how they can be prevented including when metals are galvanised and by sacrificial protection</i>			
33.	<i>Describe what an alloy is and how metals are alloyed</i>			
34.	<i>State uses of copper, aluminium, gold and iron alloys</i>			