

# Y13 – Carbonyl Compounds and Carboxylic acids Revision Checklist

Stick this checklist into your yellow book at the beginning of the topic. Tick off the topics as you cover them.		
In this module you are expected to be able to...	In Notes	Revised
Draw and name a range of alcohols, aldehydes, ketones and carboxylic acids in a range of different formulae		
Write balanced equations for the oxidation of alcohols suggesting a suitable oxidising agent. Explain how different conditions can result in different products including a definition of the term reflux		
Define the term carbonyl group and draw a suitable bonding diagram for the C=O bond		
Describe the reduction of carbonyl groups using NaBH <sub>4</sub> to form alcohols and the addition of nitrile groups to carbonyls including balanced symbol equations.		
Outline the mechanism for Nucleophilic Addition reactions of aldehydes and ketones with hydrides (H <sup>-</sup> ) such as NaBH <sub>4</sub> and with NaCN/H <sup>+</sup> (CN <sup>-</sup> )		
Describe the use of 2,4-dinitrophenylhydrazine (2,4-DNPH) to identify the presence of a carbonyl group in an organic compound. Describe how to perform a melting point test to distinguish between different carbonyl compounds. Explain the effect of the recrystallisation process on the melting point range observed.		
Describe the use of Tollen’s reagent (ammonical silver nitrate) to detect the presence of an aldehyde group.		
Describe the role of Tollen’s reagent as an Oxidising agent in terms of producing silver and explaining the different results observed with aldehydes and ketones.		
Explain, in terms of hydrogen bonding, the solubility of carboxylic acids.		
Predict the reaction of carboxylic acids with metals, metal oxides, metal hydroxides and alkalis.		
Predict the result of the reaction of carboxylic acids, acid anhydrides and acid chlorides with alcohols.		
State the formation of acyl chlorides, and their reaction with water.		
Predict the reaction of amines with acyl chlorides.		

## Pre-test Evaluation

I have...	
Updated my yellow book notes	
Ensured I understand all of my notes	
Looked on the open drive for additional work	
Asked my teacher for guidance	
Confidence rating	I’m doomed!    --    -    =    +    ++    I am the BOSS!