CC8 Acids and Alkalis

Topic Progression Checklist

I know this → colour green	I'm not sure → colour yellow	I don't know this → colour red

Subtopics and Learning Objectives	Start	End
CC8a Acids, Alkalis and Indicators		
Describe what the main hazard symbols mean.		
Describe the safety precautions that should be observed when handling different acids and alkalis.		
Name the ions present in all acidic and all alkaline solutions.		
State the pH values associated with acidic, alkaline and neutral solutions.		
Describe the effect of acids and alkalis on common indicators.		
H Explain the link between pH and the concentration of ions in acids and alkalis.		
CC8b Looking at Acids		
H Describe the relationship between hydrogen ion concentration and pH.		
H Explain the difference between a dilute and concentrated solution (in terms of the amount of solute present).		
H Explain the difference between strong and weak acids (in terms of the degree of dissociation of the acid molecules).		
H Explain how the pH and reactivity of an acid depend on the concentration and the strength of the acid.		
CC8c Bases and Salts		
Describe how a base reacts in a neutralisation reaction.		
Describe what happens when an acid reacts with a metal oxide.		
Write word equations for the reactions of acids and metal oxides.		
Write symbol equations for the reactions of acids and metal oxides.		
Explain what happens during a neutralisation reaction.		
Describe the steps involved in preparing a soluble salt from an acid and an insoluble reactant.		
Explain why: • an excess of insoluble reactant is used when preparing a soluble salt • the excess reactant is removed when preparing a soluble salt • the remaining solution contains only a salt and water, when preparing a soluble salt from an acid and an insoluble reactant.		
CC8d Alkalis and Balancing Equations		
Recall the chemical formulae of some common compounds.		
Recall and use state symbols.		

Balance chemical equations.		
Recall that alkalis are soluble bases.		
Describe the reactions of alkalis with acids.		
CC8e Alkalis and Neutralisation		
Explain what happens to the ions from acids and alkalis during neutralisation.		
Explain why titration is used to prepare soluble salts.		
Describe how to carry out an acid–alkali titration.		
CC8f Reactions of Acids with Metals and Carbonates		
H Write balanced ionic equations.		
Explain the general reaction between an acid and a metal to produce a salt and hydrogen.		
Explain the general reaction between an acid and a metal carbonate to produce a salt, water and carbon dioxide.		
Describe the test for hydrogen.		
Describe the test for carbon dioxide.		
CC8g Solubility		
Recall the general rules for the solubility of common substances in water.		
Predict whether or not a precipitate will form from two solutions.		
Name the precipitate formed in a reaction.		
Describe how to prepare a pure, dry sample of an insoluble salt.		