











## SC8 Acids and Alkalis








## SC8a Acids, alkalis and indicators

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 4 <sup>th</sup>	Describe what the main hazard symbols mean.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 <sup>th</sup>	Describe the safety precautions that should be observed when handling different acids and alkalis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 4 <sup>th</sup>	Name the ions present in all acidic and all alkaline solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 <sup>th</sup>	State the pH values associated with acidic, alkaline and neutral solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 <sup>th</sup>	Describe the effect of acids and alkalis on common indicators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 <sup>th</sup>	<b>H</b> Explain the link between pH and the concentration of ions in acids and alkalis.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>






## SC8b Looking at acids

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 5 <sup>th</sup>	<b>H</b> Describe the relationship between hydrogen ion concentration and pH.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 5 <sup>th</sup>	<b>H</b> Explain the difference between a dilute and concentrated solution (in terms of the amount of solute present).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 <sup>th</sup>	<b>H</b> Explain the difference between strong and weak acids (in terms of the degree of dissociation of the acid molecules).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 <sup>th</sup>	<b>H</b> Explain how the pH and reactivity of an acid depend on the concentration and the strength of the acid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>




## SC8c Bases and salts

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 5 <sup>th</sup>	Describe how a base reacts in a neutralisation reaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	Describe what happens when an acid reacts with a metal oxide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 7 <sup>th</sup>	Write word equations for the reactions of acids and metal oxides.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 8 <sup>th</sup>	Write symbol equations for the reactions of acids and metal oxides.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	Explain what happens during a neutralisation reaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	Describe the steps involved in preparing a soluble salt from an acid and an insoluble reactant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







## SC8d Alkalis and balancing equations

Step	Learning outcome	Had a look	Nearly there	Nailed it!
 6 <sup>th</sup>	Recall the chemical formulae of some common compounds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	Recall and use state symbols.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 9 <sup>th</sup>	Balance chemical equations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 4 <sup>th</sup>	Recall that alkalis are soluble bases.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 6 <sup>th</sup>	Describe the reactions of alkalis with acids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





**SC8e Alkalis and neutralisation**

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	Explain what happens to the ions from acids and alkalis during neutralisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain why titration is used to prepare soluble salts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe how to carry out an acid–alkali titration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SC8f Reactions of acids with metals and carbonates**

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	 Write balanced ionic equations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain the general reaction between an acid and a metal to produce a salt and hydrogen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Explain the general reaction between an acid and a metal carbonate to produce a salt, water and carbon dioxide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe the test for hydrogen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe the test for carbon dioxide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SC8g Solubility**

Step	Learning outcome	Had a look	Nearly there	Nailed it!
	Recall the general rules for the solubility of common substances in water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Predict whether or not a precipitate will form from two solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Name the precipitate formed in a reaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Describe how to prepare a pure, dry sample of an insoluble salt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>