SC8 Acids and Alkalis

SC8a Acids, alkalis and indicators

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L4.jpg | Describe what the main hazard symbols mean. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Describe the safety precautions that should be observed when handling different acids and alkalis. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L4.jpg | Name the ions present in all acidic and all alkaline solutions. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | State the pH values associated with acidic, alkaline and neutral solutions. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Describe the effect of acids and alkalis on common indicators. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | H Explain the link between pH and the concentration of ions in acids and alkalis. |  |  |  |

SC8b Looking at acids

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | H Describe the relationship between hydrogen ion concentration and pH. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | H Explain the difference between a dilute and concentrated solution (in terms of the amount of solute present). |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L7.jpg | H Explain the difference between strong and weak acids (in terms of the degree of dissociation of the acid molecules). |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L7.jpg | H Explain how the pH and reactivity of an acid depend on the concentration and the strength of the acid. |  |  |  |

SC8c Bases and salts

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Describe how a base reacts in a neutralisation reaction. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Describe what happens when an acid reacts with a metal oxide. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L7.jpg | Write word equations for the reactions of acids and metal oxides. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L8.jpg | Write symbol equations for the reactions of acids and metal oxides. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Explain what happens during a neutralisation reaction. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Describe the steps involved in preparing a soluble salt from an acid and an insoluble reactant. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | 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. |  |  |  |

SC8d Alkalis and balancing equations

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Recall the chemical formulae of some common compounds. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Recall and use state symbols. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L9.jpg | Balance chemical equations. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L4.jpg | Recall that alkalis are soluble bases. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Describe the reactions of alkalis with acids. |  |  |  |

SC8e Alkalis and neutralisation

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Explain what happens to the ions from acids and alkalis during neutralisation. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Explain why titration is used to prepare soluble salts. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Describe how to carry out an acid–alkali titration. |  |  |  |

SC8f Reactions of acids with metals and carbonates

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L9.jpg | H Write balanced ionic equations. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L7.jpg | Explain the general reaction between an acid and a metal to produce a salt and hydrogen. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L7.jpg | Explain the general reaction between an acid and a metal carbonate to produce a salt, water and carbon dioxide. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Describe the test for hydrogen. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L5.jpg | Describe the test for carbon dioxide. |  |  |  |

SC8g Solubility

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| Step | Learning outcome | Had a look | Nearly there | Nailed it! |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L4.jpg | Recall the general rules for the solubility of common substances in water. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Predict whether or not a precipitate will form from two solutions. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Name the precipitate formed in a reaction. |  |  |  |
| C:\Users\bhuiya_f\Downloads\Steps icons\Steps icons\Progression_icon_L6.jpg | Describe how to prepare a pure, dry sample of an insoluble salt. |  |  |  |