

# Year 7: Chemical World- Mixtures

|   | Check                    | Date |
|---|--------------------------|------|
| <b>Revise assumed knowledge:</b><br><b>ST3-12MW</b><br>identifies the observable properties of solids, liquids and gases, and that changes made to materials are reversible or irreversible<br><b>ST3-13MW</b><br>describes how the properties of materials determine their use for specific purposes | <input type="checkbox"/> |      |
| <b>CW3 Mixtures, including solutions, contain a combination of pure substances that can be separated using a range of techniques. (ACSSU113)</b>  |                          |      |
| <b>TYPES OF MIXTURES</b>  |                          |      |
| <i><b>4CW3b. describe aqueous mixtures in terms of solute, solvent and solution</b></i>   | <input type="checkbox"/> |      |
| <b>Define</b> the terms pure, impure, mixtures, aqueous, solvent, solute and solution   | <input type="checkbox"/> |      |
| <b>Identify</b> the main types of mixtures (solutions, suspensions, colloids and emulsions)   | <input type="checkbox"/> |      |
| <b>Describe</b> the features of different types of mixtures providing examples of each (solution, suspension, colloids and emulsion (Oxford pg180))   | <input type="checkbox"/> |      |
| <b>Describe</b> the components of aqueous solutions using the terms solvent, solute and solution  | <input type="checkbox"/> |      |
| <b>Describe</b> aqueous solutions in terms of concentration, dilute and saturated   | <input type="checkbox"/> |      |
| <b>CODE: 7CW20 First-Hand Investigation:</b> Solutions- Salt water or sugar in water (Oxford p180)  | <input type="checkbox"/> |      |
| <b>CODE: 7CW21 First-Hand Investigation:</b> Comparing the amount of solute in 100mL of diet v's normal coke  | <input type="checkbox"/> |      |
| <i><b>4CW3a. describe the importance of water as a solvent in daily life, industries and the environment</b></i>  | <input type="checkbox"/> |      |
| <b>Identify</b> water as a universal solvent  | <input type="checkbox"/> |      |
| <b>CODE: 7CW22 First-Hand Investigation:</b> Emulsion and emulsifier- Mixing olive oil and water (Oxford p182)  |                          |      |
| <b>CODE: 7CW23 First-Hand Investigation:</b> Investigate the rate (speed) of a solute dissolving and/or the amount of solute that will dissolve (Oxford p183)   | <input type="checkbox"/> |      |
| <b>CODE: 7CW24 First-Hand Investigation:</b> Investigate water as a solvent (Oxford p184)   | <input type="checkbox"/> |      |
| <b>Describe</b> the importance of water as a solvent in <u>daily life, industries</u> and the <u>environment</u> . Provide multiple examples of each  | <input type="checkbox"/> |      |
| <b>CODE: 7CW25 First-Hand Investigation:</b> Salt or fresh water (Oxford p185)  | <input type="checkbox"/> |      |
| <b>LITERACY SET 1: COSMOS ARTICLE</b>   | <input type="checkbox"/> |      |
| <b>Assessment: Oxford online test-</b> Types of mixtures<br>Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend  | <input type="checkbox"/> |      |
| <b>SEPARATING MIXTURES</b>  |                          |      |
| <i><b>4CW3c. relate a range of techniques used to separate the components of some common mixtures to the physical principles involved in each process, including filtration, decantation, evaporation, crystallisation, chromatography and distillation</b></i>                                       | <input type="checkbox"/> |      |
| <b>Identify</b> a range of commonly used mixtures in everyday and industrial situations   | <input type="checkbox"/> |      |
| <b>Define</b> filtration, decantation, evaporation, crystallisation, chromatography and distillation  | <input type="checkbox"/> |      |
| <b>Describe</b> the physical principles by which each of the above separation techniques are used to separate a common mixture  | <input type="checkbox"/> |      |
| <b>CODE: 7CW26 First-Hand Investigation:</b> Filtration, Decantation and Evaporation  | <input type="checkbox"/> |      |
| <b>CODE: 7CW27 First-Hand Investigation:</b> Flocculation   | <input type="checkbox"/> |      |
| <b>CODE: 7CW28 First-Hand Investigation:</b> Sedimentation and flotation  | <input type="checkbox"/> |      |

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|--|--------------------------|--|
| <b>CODE 7CW29 First-Hand Investigation:</b> Evaporation and Crystallisation  | <input type="checkbox"/> |  |
| <b>CODE 7CW30 First-Hand Investigation:</b> Crystallisation  | <input type="checkbox"/> |  |
| <b>CODE: 7CW31 First-hand investigation:</b> Chromatography  | <input type="checkbox"/> |  |
| <b>LITERACY SET 2: MIXED ACTIVITIES</b>  | <input type="checkbox"/> |  |
| <b>Assessment: Oxford online test-</b> Separating Mixtures<br>Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend   | <input type="checkbox"/> |  |
| <b>SEPARATING SOLUTIONS</b>  |                          |  |
| <b><i>4CW3d. investigate the application of a physical separation technique used in everyday situations or industrial processes, e.g. water filtering, sorting waste materials, extracting pigments or oils from plants, separating blood products or cleaning up oil spills</i></b> ✨ | <input type="checkbox"/> |  |
| <b>Research</b> examples of the above separation techniques in everyday and industrial situations <i>e.g. water filtering, sorting waste materials, extracting pigments or oils from plants, separating blood products or cleaning up oil spills</i>                                   | <input type="checkbox"/> |  |
| <b><i>4CW3e. research how people in different occupations use understanding and skills from across the disciplines of science in carrying out separation techniques</i></b> ⚙️ ⚙️ ⚙️   | <input type="checkbox"/> |  |
| <b>Research</b> examples of specific occupations that require knowledge and application of separation techniques and outline the skills required from across the disciplines of science in carrying out the separation techniques  | <input type="checkbox"/> |  |
| <b>NUMERACY AND SKILLS SET</b>   | <input type="checkbox"/> |  |
| <b>Assessment: Oxford online test-</b> Separating solutions<br>Students to achieve 100% in Support and Consolidate <b>OR</b> Consolidate and Extend  | <input type="checkbox"/> |  |
| <b>Assessment:</b> MIXTURES CHAPTER TEST   | <input type="checkbox"/> |  |