**Year 7 Pure Substances and Mixtures (D3)**

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| 1. I can explain the difference between a pure substance and a mixture | \* | ☺ | 😐 | ☹ |
| 1. I can describe a range of materials using their physical properties as descriptors | \*\* | ☺ | 😐 | ☹ |
| 1. I can state the properties of polymers and give examples of how they are used | Ext | ☺ | 😐 | ☹ |
| 1. I can explain how melting points and boiling points can be used to determine the purity of a substance | \*\* | ☺ | 😐 | ☹ |
| 1. I can explain how and when to use sieving to separate the substances in a mixture | \* | ☺ | 😐 | ☹ |
| 1. I can explain how and when to use filtration to separate the substances in a mixture | \* | ☺ | 😐 | ☹ |
| 1. I can explain how and when to use chromatography to separate the substances in a mixture | \* | ☺ | 😐 | ☹ |
| 1. I can explain how and when to use evaporation to separate the substances in a mixture | Ext | ☺ | 😐 | ☹ |
| 1. I can explain how and when to use distillation to separate the substances in a mixture | \* | ☺ | 😐 | ☹ |
| 1. I can state what solubility is and give examples of common solutes and solvents | \* | ☺ | 😐 | ☹ |
| 1. I can explain how the rate of dissolving can be increased | \*\* | ☺ | 😐 | ☹ |
| 1. I can describe what is happening to the particles when a solute is dissolved in a solvent | Ext | ☺ | 😐 | ☹ |
| 1. I can write a risk assessment for an experiment |  | ☺ | 😐 | ☹ |
| 1. I can explain what the independent and dependent variables are in an experiment |  | ☺ | 😐 | ☹ |
| 1. I can draw and label a diagram of experimental equipment |  | ☺ | 😐 | ☹ |
| 1. I can write a step by step method for an experiment |  | ☺ | 😐 | ☹ |
| 1. I can draw a graph of results for my experiment and know how to correctly label it |  | ☺ | 😐 | ☹ |
| 1. I can write up a conclusion for an experiment |  | ☺ | 😐 | ☹ |
| 1. I can evaluate an experiment and explain how I can improve my method for next time |  | ☺ | 😐 | ☹ |

I understand (and can spell) the keywords listed below and can use them in 1-19 above.

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| **Keywords** |
| physical change, reversible, dissolve, filter, funnel, sieve, evaporate, magnet,  particles, mixture, pure substance, melting point, boiling point,  colours, chromatography, solvent,  solution, soluble, insoluble, temperature, stirring,  equipment, fair test, measurement, diagram, heading, results table, average, graph, axes, conclusion, evaluation, improvements |
| ceramic, clay, sand, fired, glass, bricks, pottery, polymer, polymerisation, oil, fibre-glass, MDF,  evaporation, filtration, crystallisation, chromatogram, solvent, distillation, boiling point, thermometer, vapour, condensing, condenser,  solute, solubility, diffuse, particle model, collisions, kinetic energy, density, recycling,  resolution, precision, precise results, repeatability, repeatable results, hypothesis,  risk assessment, hazards, precautions, level of risk, emergency action,  variables, independent (input) variable, dependent (output) variable, control variables,  method, repeat, units, range, anomaly, anomalies, range bars, scatter graph,  line (curve) of best fit, level of confidence, inaccuracy |