

Subject	Year	Term
Science	7	2
Topic		
7C2 Atoms, elements and mixtures		
Content (Intent)		
Prior Learning (Topic) KS1 curriculum - everyday materials, KS2 – uses of everyday materials, states of matter, properties and changes of materials. KS3 - 7C1 Physical changes and the particle model • Atoms, elements and molecules – To be able to identify atoms, molecules and elements from diagrams and formulae. • Pure substances and mixtures -What is a pure substance? How to identify a pure substance • Combining Elements – To be able to identify elements and compounds/ To describe what a compound is made up of/ To explain the test for oxygen • Conservation of mass– To describe how to identify chemical reactions/ To explain the term conservation of mass/ To link changes of state to changes in mass • What is a mixture? – Understand different separation techniques. Be able to apply different separation techniques to different examples of mixtures • Diffusion – Understand how particles can spread in liquids and gases. i.e. differences in concentrations of particles lead to diffusion. • Dissolving – Understand how solid particles can spread out in a liquid. Learn the meaning of the words solute, solvent and solution. • Solvents and solutes – Understand different solvents and solutes are better at dissolving than others.....AND how this can help everyday life. • Separating mixtures - Know how to separate two liquids in a mixture. Understand the terms immiscible and miscible. • Evaporation and filtration – Know how to separate an insoluble solid from a liquid. Know how to separate a soluble solid from a liquid. • Distillation – Know how to separate two liquids in a mixture. • Chromatography – Understand the term chromatography and how it works. Be able to interpret chromatographs to identify unknown substances Know some applications of chromatography		
Future Learning (Topic) C10 Using resources (lessons 1 and 4), C1 Atomic structure and the periodic table, C2 Bonding, structure and properties of matter and C4 Chemical changes. C8 Chemical analysis		
How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)	
Demos Conservation of mass Diffusion of a deodorant spray Distilling ink and water Practical work Combining Copper sulphate and sodium hydroxide Dissolving salt and sand Evaporating different types of water Distillation of sandy/salty water	- 2 x standard homeworks (Level given. Written feedback. Response expected.) -1 x end of topic test (Level given. Verbal feedback to class and individuals.) OPTIONAL. Describe the terms solute, solvent and solution. Written feedback given.	

Filtering and evaporating sandy water Chromatography using pens Written Define the words solute, solvent and solution. Plan an experiment to identify a pure substance.	Written plan for identifying a pure substance. Oral or written feedback given.
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How can parents help at home?

Look at the topic specific resources on the VLE
 Use appropriate youtube channels: cognito, primrosekitten, khan academy, freesciencelessons, BBC bitesize.
 Take an interest! Ask your children what they have learnt and be curious about their learning.

Helpful further reading/discussion

Reading	Vocabulary Lists	Careers Links
The Disappearing Spoon...and other true tales from the Periodic Table (Paperback) by Sam Kean Ingredients: The Strange Chemistry of Plants, Poisons and Processed Foods (Paperback) by George Zaidan	Solvent Solute Solution Diffusion Pure Mixture Distillation Boiling point Evaporation Condensation Chromatography Filtration Dissolving	Pharmacist Environmental scientist