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| Science 9 | Unit B |
| Section 1.2 - 1.3  | 84 mins |

Unit B - Matter and Chemical Change

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| Unit Focus Questions1. How do we determine the properties pf a variety of different substances?
2. How do different substances interact?
3. What evidence can be used to indicate that an interaction between substances has occurred?

Foam in a Cup Demo* Corn syrup
 | *Tell them to leave space so that they can answer these questions at the end of the unit.*Pg. 91 |

Section 1.2 – Organizing Matter

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| Learning Outcomes* Investigate and describe properties of materials
* Describe and apply different ways of classifying materials based on their composition and properties

States of Matter1. Solid
2. Liquid
3. Gas
4. *Plasma*

Changing States1. Between Solid and Liquid

MeltingFreezing1. Between Liquid and Gas

EvaporationCondensation1. Between Solid and Gas

DepositionSublimation1. *Between Gas and Plasma*

*Ionization**Recombination*Physical Properties ActivityPhysical PropertiesWhat you can see, smell, feelPhysical ChangeThe substance does not change compositionChemical PropertiesWhat happens when the substance reactsChemical ChangeNew Substances are formedInvestigating Physical/Chemical Change | Chemical vs. Physical Properties*Find a simple lab for class*Melting Point, Boiling Point, Hardness, Malleability, Ductility, Crystal Shape, Solubility, Density, ConductivityReaction with acids, Does it burn, react with water, reaction to heatEvidence of Chemical ChangeChange in ColourChange in SmellFormation of a solid or gasRelease/Absorption of Heat Energy*DEMO: PG. 106* |

Pure Substances vs. Mixtures



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| Pure Substance – Made of only ONE kind of matterElement – Something that can’t be broken down into a simpler substanceCompound – Two or more elements combined together into ONE substanceMixture – Made of TWO or more kinds of matterSolution – Can only see ONE type of substance (See through) (Can be separated by Boiling, distillation)Mechanical Mixture – Can See at least TWO types of substancesSuspensions – Mixture that has particles floating in it, Can be separated by filteringColliod – Mixture that is cloudy but is difficult to separate | Examples: Copper, Table Salt, Distilled WaterExamples: Copper, Hydrogen, Oxygen, *ANYTHING on the periodic table*Examples: Table Salt, Pure Water, Examples: 10k Gold, Salt Water, Pasta Sauce, MilkExamples: Vinegar, Salt Water, Apple JuiceExamples: Salad Dressing, Milk, Nuts and Bolts Examples: Salad Dressing, Tomato JuiceExamples: Milk, Ketchup |