

Golden Concepts

Asking scientific questions and making observations

Planning an investigation

Collecting, presenting and interpreting data

Errors and uncertainty

Science in our world

Key Vocabulary

|                 |  |
|-----------------|--|
| Solvent         | A solvent is a substance that dissolves another substance  |
| Solute          | A solute is a solid that will dissolve in a solvent  |
| Solution        | A solution is formed when a solute is dissolved in a solvent   |
| Soluble         | A substance that will dissolve   |
| Insoluble       | A substance that will not dissolve   |
| Solid           | A state of matter, the material will be a fixed shape, particles are close together in a regular pattern |
| Liquid          | A state of matter, the material can flow, the particles are in an irregular pattern                      |
| Gas             | A state of matter, the particles are spread out and will move to fill their container                    |
| Change of state | When a material changes from one state to another  |
| Particles       | Also called atoms. All materials are made from particles   |
| Filtration      | A method of separating a mixture of solids and liquid  |
| Chromatography  | A method for separating a mixture according to solubility  |
| Evaporation     | A method for separating a mixture using boiling points.  |

Particle Theory 8/9- Knowledge Organiser

States of Matter

- Students should consolidate their understanding of the three states of matter
- Students should be able to name the changes of state
- Students should begin to analyse data with a change of state.

Mixtures

- Progress should be made able to define a mixture
- Students should become more competent in differentiating between key terms element, compound, mixture, particle.

Separating a Mixture

- Experimental techniques will be used to explore the different methods for separating a mixture
- A greater depth of understanding will develop to understand the difference between a chemical reaction and a physical change

