




Particles in Physical and Chemical Changes Year 6

<p>Science Concepts</p>	<p>Nature Knowing about the natural world</p>  <p>Nature</p>	<p>Phenomenon Observing facts and events</p>  <p>Phenomenon</p>	<p>The Real World Knowing about scientists and science in our everyday lives</p>  <p>The Real World</p>
<p>National Curriculum</p>	<ul style="list-style-type: none"> • Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • Demonstrate that dissolving, mixing and changes of state are reversible changes • Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 		<ul style="list-style-type: none"> • Performing tests • Observing and measuring

Lesson	Learning Intention
1. How do particles in solids, liquids and gases behave?	<ul style="list-style-type: none"> • Draw particle diagrams to represent states of matter • Name the physical changes that convert substances between states of matter • Describe the physical properties of solids, liquids and gases
2. What do particles in pure substances and mixtures look like?	<ul style="list-style-type: none"> • Define pure, impure and mixture • Draw particle diagrams to represent pure and impure materials • Give examples of useful mixtures
3. What happens to particles during dissolving?	<ul style="list-style-type: none"> • Define solvent, solute and solution • Draw particle diagrams to represent a solution • Describe what happens to particles during dissolving
4. How can mixtures be separated?	<ul style="list-style-type: none"> • State three methods of separating mixtures • Select an appropriate separation technique for a given mixture • Plan an experiment to isolate components of a mixture
5. How can we tell a chemical reaction has taken place?	<ul style="list-style-type: none"> • Define 'chemical reaction' and 'physical process' • State the 5 indicators of a chemical reaction • Identify examples of chemical reactions and physical changes
6. What happens to particles during burning?	<ul style="list-style-type: none"> • Define the words combustion, fuel, reactant and product • Write a word equation for the combustion of common fuels • Compare different fuels using experimental data
7. Are changes reversible?	<ul style="list-style-type: none"> • Identify examples of reversible changes
8. Are changes reversible?	<ul style="list-style-type: none"> • Identify examples of reversible changes • Make observation of reversible changes • Record observations
9. Are changes reversible?	<ul style="list-style-type: none"> • Identify examples of irreversible changes
10. How do chemical changes help us?	<ul style="list-style-type: none"> • Know about the achievements of a scientist
11. How do chemical changes help us?	<ul style="list-style-type: none"> • Know about the achievements of a scientist
12. Review	<ul style="list-style-type: none"> • End of unit quiz