



# KS3 Science: Chemistry

## Contents

### Contents summary

<b>Mini quizzes:</b>	<b>40</b>
<b>Super quizzes:</b>	<b>5</b>
<b>Extension quizzes:</b>	<b>4</b>
<b>Skills quizzes:</b>	<b>6</b>
<b>TOTAL</b>	<b>54</b>

### What are MyWorks quizzes?

MyWorks quizzes are short individual learning tasks that can be set as homework or as a lesson task. There are four different types of quiz in KS3 Science.

#### Mini quizzes

Mini quizzes are short, versatile quizzes suitable for most abilities. Each quiz is worth 25 marks and takes around 10 minutes to complete. They cover small, bite-sized topics equivalent to around one lesson's work, and contain recap pages to remind students of the key points if they are struggling. Each quiz matches a small section from one of the Boardworks KS3 Science PowerPoint presentations, but can also be used independently of other products.

#### Super quizzes

Super quizzes are longer tests ideal for revision or assessment at the end of a larger unit of work. They are worth 50 marks and do not contain recap pages.

#### Extension quizzes

Extension quizzes are designed to stretch more able students. They either extend a previously covered topic by asking more difficult questions, or cover a new, but related topic. Questions are often more contextualised and require a greater degree of precision in finding the correct answer. The quizzes are out of 25 marks and include recap pages to explain where students may have gone wrong.

#### Skills quizzes

Skills quizzes are designed to cover important elements of the How Science Works requirements at KS3. The quizzes focus on three key areas: practical skills, data analysis and discoveries and society. Topics covered include planning and carrying out a fair, accurate and reliable experiment, representing results, drawing conclusions and the impact of science on society. The quizzes are out of 30 marks and contain recap pages to reinforce understanding.



# KS3 Science: Chemistry

## Contents

Mini Quizzes	Quiz	Contents	Relevant Boardworks PowerPoint
	<b>Atoms and elements mini quiz</b>	<ul style="list-style-type: none"> <li>• What atoms are</li> <li>• The atoms found in the human body</li> <li>• What elements are</li> <li>• What molecules are</li> </ul>	<b>Atoms, Elements &amp; the Periodic Table</b>
	<b>Symbols for elements mini quiz</b>	<ul style="list-style-type: none"> <li>• Why symbols are used for elements</li> <li>• The correct method of writing symbols</li> <li>• Symbols of common elements</li> </ul>	<b>Atoms, Elements &amp; the Periodic Table</b>
	<b>The periodic table mini quiz</b>	<ul style="list-style-type: none"> <li>• What the periodic table is</li> <li>• How the periodic table was developed</li> <li>• How elements are arranged in the table</li> </ul>	<b>Atoms, Elements &amp; the Periodic Table</b>
	<b>State changes mini quiz</b>	<ul style="list-style-type: none"> <li>• States of matter</li> <li>• Melting and boiling points</li> <li>• Temperature scales</li> <li>• The effect of salt on the freezing point of water</li> </ul>	<b>Solids, Liquids and Gases</b>
	<b>Particles and properties mini quiz</b>	<ul style="list-style-type: none"> <li>• The particle structure of solids, liquids, and gases</li> <li>• Particle properties of solids, liquids and gases</li> <li>• Gas pressure</li> </ul>	<b>Solids, Liquids and Gases</b>
	<b>Diffusion mini quiz</b>	<ul style="list-style-type: none"> <li>• What diffusion is</li> <li>• Diffusion in solids, liquids and gases</li> <li>• Factors which affect the rate of diffusion</li> </ul>	<b>Solids, Liquids and Gases</b>
	<b>Working with chemicals mini quiz</b>	<ul style="list-style-type: none"> <li>• Safety precautions</li> <li>• Hazard symbols</li> </ul>	<b>Chemical Reactions 1</b>
	<b>Chemical reactions mini quiz</b>	<ul style="list-style-type: none"> <li>• What chemical reactions are</li> <li>• How to spot chemical reactions</li> <li>• Uses of different chemical reactions</li> </ul>	<b>Chemical Reactions 1</b>
	<b>Using chemical reactions mini quiz</b>	<ul style="list-style-type: none"> <li>• Chemical reactions related to food and cooking</li> <li>• Uses of chemical reactions in manufacturing</li> </ul>	<b>Chemical Reactions 1</b>

Mini Quizzes	<b>Quiz</b>	<b>Contents</b>	<b>Relevant Boardworks PowerPoint</b>
	<b>Word equations mini quiz</b>	<ul style="list-style-type: none"> <li>The components of a word equation</li> <li>Constructing word equations</li> </ul>	<i>Chemical Reactions 1</i>
	<b>Conservation of mass mini quiz</b>	<ul style="list-style-type: none"> <li>The conservation of mass principle</li> <li>Reactions that appear to lose or gain mass</li> <li>Mass calculations</li> </ul>	<i>Chemical Reactions 1</i>
	<b>Energy changes in reactions mini quiz</b>	<ul style="list-style-type: none"> <li>Energy changes in chemical reactions</li> <li>Exothermic reactions</li> <li>Endothermic reactions</li> </ul>	<i>Chemical Reactions 2</i>
	<b>Types of chemical reaction mini quiz</b>	<ul style="list-style-type: none"> <li>The different types of chemical reaction</li> <li>Word equations for different chemical reactions</li> </ul>	<i>Chemical Reactions 2</i>
	<b>Making gases mini quiz</b>	<ul style="list-style-type: none"> <li>Some useful gases and why they are important</li> <li>Making hydrogen, oxygen and carbon dioxide</li> <li>Testing for different gases</li> </ul>	<i>Chemical Reactions 2</i>
	<b>Combustion mini quiz</b>	<ul style="list-style-type: none"> <li>What combustion is</li> <li>The fire triangle</li> <li>Word and symbol equations for combustion</li> <li>Complete and incomplete combustion</li> <li>Fossil fuels, crude oil and fractional distillation</li> </ul>	<i>Chemical Reactions 2</i>
	<b>Elements and compounds mini quiz</b>	<ul style="list-style-type: none"> <li>The definition of element and compound</li> <li>The structure of elements and compounds</li> <li>Properties of compounds</li> </ul>	<i>Compounds</i>
	<b>Naming compounds mini quiz</b>	<ul style="list-style-type: none"> <li>Naming simple compounds</li> <li>Naming compounds that include oxygen as a third element</li> </ul>	<i>Compounds</i>
	<b>Mixtures and solutions mini quiz</b>	<ul style="list-style-type: none"> <li>What a mixture is</li> <li>Properties of a mixture</li> <li>What a solution is</li> <li>Properties of a solution</li> </ul>	<i>Mixtures and Solutions</i>

Mini Quizzes	<b>Quiz</b>	<b>Contents</b>	<b>Relevant Boardworks PowerPoint</b>
	<b>Dissolving mini quiz</b>	<ul style="list-style-type: none"> <li>• What happens when solids dissolve</li> <li>• Conservation of mass</li> <li>• Saturation and supersaturation</li> </ul>	<i>Mixtures and Solutions</i>
	<b>Separating mixtures mini quiz</b>	<ul style="list-style-type: none"> <li>• Different types of mixtures</li> <li>• Different methods of separating mixtures</li> </ul>	<i>Mixtures and Solutions</i>
	<b>What are acids and alkalis? mini quiz</b>	<ul style="list-style-type: none"> <li>• Weak and strong acids</li> <li>• Weak and strong alkalis</li> <li>• Safety precautions</li> </ul>	<i>Acids and Alkalis</i>
	<b>Indicators mini quiz</b>	<ul style="list-style-type: none"> <li>• What indicators are</li> <li>• How litmus is used</li> <li>• Making indicators from plants</li> </ul>	<i>Acids and Alkalis</i>
	<b>The pH scale mini quiz</b>	<ul style="list-style-type: none"> <li>• What the pH scale is</li> <li>• The use of universal indicator</li> <li>• The importance of soil pH</li> </ul>	<i>Acids and Alkalis</i>
	<b>Neutralization mini quiz</b>	<ul style="list-style-type: none"> <li>• Acids and alkalis</li> <li>• Neutralization reactions</li> </ul>	<i>Reactions of Acids</i>
	<b>Acids and metal oxides mini quiz</b>	<ul style="list-style-type: none"> <li>• Reactions between acids and metal oxides</li> <li>• The difference between bases and alkalis</li> <li>• Combining powers and formulae of compounds</li> </ul>	<i>Reactions of Acids</i>
	<b>Acid reactions mini quiz</b>	<ul style="list-style-type: none"> <li>• Acid and carbonate reactions</li> <li>• Acid and metal reactions</li> <li>• Dangerous reactions</li> <li>• What acid rain is</li> </ul>	<i>Reactions of Acids</i>
	<b>Using rocks mini quiz</b>	<ul style="list-style-type: none"> <li>• The structure of the Earth</li> <li>• Minerals and metals</li> <li>• Uses of limestone</li> <li>• Mining and quarrying</li> </ul>	<i>Rocks and Weathering</i>
<b>Physical weathering mini quiz</b>	<ul style="list-style-type: none"> <li>• The definition of weathering</li> <li>• Types of weathering</li> <li>• Exfoliation weathering</li> <li>• Freeze-thaw weathering</li> <li>• The particle model: expansion and contraction</li> </ul>	<i>Rocks and Weathering</i>	

Mini Quizzes	<b>Quiz</b>	<b>Contents</b>	<b>Relevant Boardworks PowerPoint</b>
	<b>Biological and chemical weathering mini quiz</b>	<ul style="list-style-type: none"> <li>• What biological weathering is</li> <li>• The causes of biological weathering</li> <li>• The different types of chemical weathering</li> </ul>	<b><i>Rocks and Weathering</i></b>
	<b>Erosion and transportation mini quiz</b>	<ul style="list-style-type: none"> <li>• Transportation of weathered rock</li> <li>• Deposition of weathered rock</li> <li>• Formation of sedimentary rock</li> </ul>	<b><i>Rocks and Weathering</i></b>
	<b>Formation of rocks mini quiz</b>	<ul style="list-style-type: none"> <li>• How different types of rock are formed</li> <li>• How fossils are formed</li> </ul>	<b><i>The Rock Cycle</i></b>
	<b>Comparing rocks mini quiz</b>	<ul style="list-style-type: none"> <li>• The properties of the different types of rocks</li> <li>• The uses of different types of rocks</li> </ul>	<b><i>The Rock Cycle</i></b>
	<b>The rock cycle mini quiz</b>	<ul style="list-style-type: none"> <li>• Events in the rock cycle</li> <li>• Identifying rock types</li> </ul>	<b><i>The Rock Cycle</i></b>
	<b>Metals, non-metals and metalloids mini quiz</b>	<ul style="list-style-type: none"> <li>• Properties of metals, non-metals and metalloids</li> <li>• Carbon structures</li> <li>• Use of semi-conductors</li> </ul>	<b><i>Metals and Non-Metals</i></b>
	<b>Using metals mini quiz</b>	<ul style="list-style-type: none"> <li>• Identifying which metals are suitable for different jobs</li> <li>• The history of metals</li> <li>• Alloys and their uses</li> </ul>	<b><i>Metals and Non-Metals</i></b>
	<b>Metals and oxygen mini quiz</b>	<ul style="list-style-type: none"> <li>• Reactions between metals and oxygen</li> <li>• Metal and oxygen word equations</li> <li>• Balancing equations</li> </ul>	<b><i>Reactivity and the Reactions of Metals</i></b>
	<b>Metals and water mini quiz</b>	<ul style="list-style-type: none"> <li>• Reactions between metals and water</li> <li>• Metal and water word equations</li> <li>• Balancing equations</li> <li>• The rusting of iron</li> </ul>	<b><i>Reactivity and the Reactions of Metals</i></b>
<b>Metals and acids mini quiz</b>	<ul style="list-style-type: none"> <li>• The reaction of metals with acid</li> <li>• The reactivity series</li> <li>• Metal salts</li> </ul>	<b><i>Reactivity and the Reactions of Metals</i></b>	

<b>Mini Quizzes</b>	<b>Quiz</b>	<b>Contents</b>	<b>Relevant Boardworks PowerPoint</b>
	<b>Reactivity and displacement mini quiz</b>	<ul style="list-style-type: none"> <li>• The reactivity series</li> <li>• Using the reactivity series to predict reactions</li> <li>• Displacement reactions</li> </ul>	<b><i>Reactivity and the Reactions of Metals</i></b>
	<b>Fossil fuels and the greenhouse effect mini quiz</b>	<ul style="list-style-type: none"> <li>• What fossil fuels are and how they are formed</li> <li>• Fractional distillation</li> <li>• The greenhouse effect</li> </ul>	<b><i>Chemistry Around Us</i></b>



<b>Super Quizzes</b>	<b>Quiz</b>	<b>Contents</b>	<b>Relevant Boardworks PowerPoint</b>
	<b>Atoms, elements and particles super quiz</b>	<ul style="list-style-type: none"> <li>• Atoms and elements</li> <li>• The periodic table</li> <li>• Solids, liquids and gases</li> <li>• Particles in action</li> </ul>	<b><i>Atoms, Elements &amp; the Periodic Table, Solids, Liquids and Gases</i></b>
	<b>Chemical reactions and substances super quiz</b>	<ul style="list-style-type: none"> <li>• Chemical reactions</li> <li>• Compounds</li> <li>• Mixtures and solutions</li> </ul>	<b><i>Chemical Reactions 1 &amp; 2, Compounds, Mixtures and Solutions</i></b>
	<b>Acids and alkalis super quiz</b>	<ul style="list-style-type: none"> <li>• Acids and alkalis</li> <li>• Indicators</li> <li>• Reactions of acids</li> </ul>	<b><i>Acids and Alkalis, Reactions of Acids</i></b>
	<b>Rocks super quiz</b>	<ul style="list-style-type: none"> <li>• Types of rock</li> <li>• The rock cycle</li> <li>• Weathering</li> </ul>	<b><i>Rocks and Weathering, The Rock Cycle</i></b>
	<b>Metals and non-metals super quiz</b>	<ul style="list-style-type: none"> <li>• Metals and non-metals</li> <li>• Using metals</li> <li>• Reactions of metals</li> <li>• The reactivity series</li> </ul>	<b><i>Metals and Non-metals, Reactivity and the Reactions of Metals</i></b>



Skills Quizzes	Quiz	Contents
	<b>Chemistry practical skills quiz 1</b>	<ul style="list-style-type: none"> <li>• Hazard symbols</li> <li>• Choosing the correct equipment</li> <li>• Basic experiment planning</li> </ul>
	<b>Chemistry practical skills quiz 2</b>	<ul style="list-style-type: none"> <li>• Independent and dependent variables</li> <li>• Planning an experiment</li> </ul>
	<b>Chemistry data analysis skills quiz</b>	<ul style="list-style-type: none"> <li>• Analysing data</li> <li>• Interpreting graphs</li> </ul>
	<b>Chemistry equations skills quiz</b>	<ul style="list-style-type: none"> <li>• Element symbols</li> <li>• Writing and balancing chemical equations</li> </ul>
	<b>Chemistry discoveries and society skills quiz 1</b>	<ul style="list-style-type: none"> <li>• Historical developments in chemistry</li> <li>• Acid rain, global warming and the environment</li> <li>• Uses of chemistry</li> </ul>
	<b>Chemistry discoveries and society skills quiz 2</b>	<ul style="list-style-type: none"> <li>• Uses of chemistry</li> <li>• Discoveries of metals</li> </ul>



<b>Extension Quizzes</b>	<b>Quiz</b>	<b>Contents</b>
	<b>Elements, compounds and mixtures extension quiz</b>	<ul style="list-style-type: none"> <li>• Definitions of elements, compounds and mixtures</li> <li>• Identifying compounds as elements, compounds or mixtures</li> <li>• Some properties of elements, compounds and mixtures</li> </ul>
	<b>Symbol equations extension quiz</b>	<ul style="list-style-type: none"> <li>• Interpreting symbols for compounds</li> <li>• Writing and understanding symbol equations for simple reactions</li> <li>• Introduction to balancing symbol equations</li> </ul>
	<b>Balancing equations extension quiz</b>	<ul style="list-style-type: none"> <li>• Balancing symbol equations</li> </ul>
<b>Alternative fuels extension quiz</b>	<ul style="list-style-type: none"> <li>• Producing and using hydrogen as a fuel</li> <li>• Producing and using ethanol as a fuel</li> </ul>	