

How to use this resource

Quotes from journals or books are indicated using speech marks.

Quotes of speech are shown in italics and speech marks.

[sic] – this word is used to indicate an apparent misspelling or doubtful word or phrase in the source being quoted.

Each chapter begins with a summary.

The chapters of this volume, Theoretical background, are linked to the probes published in the companion volume, Classroom resources, as follows:

Theory chapters	Probes
1	Elements, compounds and mixtures
2	Changes in chemistry; Definitions in chemistry; Acid strength; Chemical comparisons; Elements, compounds and mixtures
3	Revising acids; Revising the Periodic Table; Scaffolding explanations
4	Learning impediment diary
5	Revising acids; Scaffolding explanations; Precipitation, Elements, compounds and mixtures
6	Elements, compounds and mixtures; Mass and dissolving; Definitions in chemistry; Revising the Periodic Table; Iron - a metal; Precipitation; Chemical stability; Stability and reactivity; Changes in chemistry
7	The melting temperature of carbon; An analogy for the atom; Ionisation energy; Chemical comparisons
8	Iron - a metal; Ionic bonding; Precipitation; Spot the bonding; Interactions
9	Word equations; Types of chemical reaction; Precipitation; Hydrogen fluoride; Reaction mechanisms
10	Hydrogen fluoride

All the probes mentioned in this publication are shown in bold and can be found in the companion volume *Chemical misconceptions, prevention, diagnosis and cure – Volume 2, Classroom resources*.