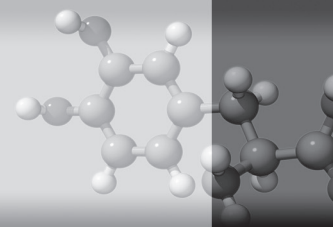
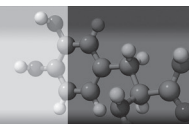


# Contents and specification coverage



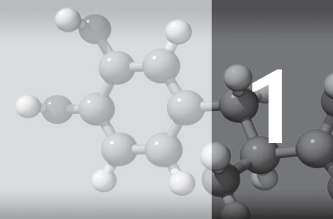
Topic		Page(s)	AQA	OCR	Edexcel	CCEA
AS Foundation chemistry	Dominoes: definitions	2–6	✓	✓	✓	✓
	Fastdraw: foundation	7–11	✓	✓	✓	✓
	Bingo: moles	12–13	✓	✓	✓	✓
	Play your cards right: structures	14–16	✓	✓	✓	✓
	Connect 4: intermolecular forces	17–21	✓	✓	✓	✓
	Matching: foundation chemistry	22–28	✓	✓	✓	✓
	Triominoes: shape of molecules	29–40	✓	✓	✓	✓
	Missing words: trends	41–42	✓	✓	✓	✓
	Crossword: group 2	43	✓	✓	✓	✓
AS Organic chemistry	Fastdraw: organic chemistry	45–49	✓	✓	✓	✓
	Dominoes: names and structures	50–54	✓	✓	✓	✓
	Triominoes: spectra	55–60	✓	✓	✓	✓
	Crossword: organic chemistry	61	✓	✓	✓	✓
	Jigsaw: reactions	62–64	✓	✓	✓	✓
	Connect 4: organic chemistry	65–70	✓	✓	✓	✓
	Triominoes: organic chemistry	71–76	✓	✓	✓	✓
AS Physical chemistry	Crossword: green chemistry	78	✓	✓	✓	
	Fastdraw: physical chemistry	79–82	✓	✓	✓	✓
	Dominoes: physical chemistry	83–86	✓	✓	✓	✓
	Connect 4: redox	87–92	✓	✓	✓	✓
	Missing words: physical chemistry	93–94	✓	✓	✓	✓
	Jigsaw: physical chemistry	95–97	✓	✓	✓	✓



Topic		Page(s)	AQA	OCR	Edexcel	CCEA
A2 Organic chemistry	Crossword: organic chemistry	99	✓	✓	✓	✓
	Fastdraw: organic chemistry	100–105	✓	✓	✓	✓
	Triominoes: spectra	106–111	✓	✓	✓	✓
	Dominoes: reactions	112–115	✓		✓	
	Triominoes: series	116–123	✓	✓	✓	✓
	Connect 4: chirality	124–128	✓	✓	✓	✓
A2 Inorganic and physical chemistry	Crossword: inorganic chemistry	130	✓	✓	✓	✓
	Fastdraw: inorganic chemistry	131–133	✓	✓	✓	✓
	Dominoes: transition metals	134–138	✓	✓	✓	✓
	Crossword: physical chemistry	139	✓	✓	✓	✓
	Missing words: Born-Haber and entropy	140–141	✓	✓	✓	
	Connect 4: periodicity	142–146	✓		✓	✓
	Jigsaw: lattice enthalpy	147–149	✓	✓	✓	✓
	Fastdraw: physical chemistry	150–153	✓	✓	✓	✓
	Jigsaw: $K_s$	154–156	✓	✓	✓	✓
	Missing words: rates, acids and equilibria	157–158	✓	✓	✓	✓
	Bingo: acids	159–160	✓	✓	✓	✓

Teacher answers	Page(s)
Missing words	161
Crosswords	161–162

## Dominoes: definitions



<b>A</b> Anion	<b>Q</b> A horizontal row of elements in the periodic table
<b>A</b> Avogadro's constant, $N_A$	<b>Q</b> The simplest whole number ratio of atoms of each element present in a compound
<b>A</b> Acid	<b>Q</b> A negatively charged ion
<b>A</b> Atomic number	<b>Q</b> The number of particles (protons and neutrons) in the nucleus of an atom
<b>A</b> Cation	<b>Q</b> The electrostatic attraction between positive metal ions and delocalised electrons
	<b>A</b> Covalent bond



<b>A</b>	Dative covalent (coordinate) bond
<b>Q</b>	A proton donor

<b>A</b>	Diproporation
<b>Q</b>	The breaking up of a chemical substance with heat into at least two chemical substances

<b>A</b>	Electronegativity
<b>Q</b>	The electrostatic attraction between oppositely charged ions

<b>A</b>	Empirical formula
<b>Q</b>	The energy required to remove one electron from each atom in 1 mole of gaseous atoms to form 1 mole of gaseous $1+$ ions

<b>A</b>	First ionisation energy
<b>Q</b>	The energy required to remove each electron in turn

<b>A</b>	Ionic bond
<b>Q</b>	A shared pair of electrons



<b>A</b>	Isotopes
<b>Q</b>	The weighted mean mass of an atom of an element compared with one-twelfth of the mass of an atom of carbon-12

<b>A</b>	Mass number
<b>Q</b>	Atoms of the same element with different numbers of neutrons and therefore different masses

<b>A</b>	Metallic bonding
<b>Q</b>	A shared pair of electrons where both electrons that are shared are from one of the bonding atoms only

<b>A</b>	Mole
<b>Q</b>	The number of particles per mole ( $6.02 \times 10^{23}$ )

<b>A</b>	Molecular formula
<b>Q</b>	The number of protons in the nucleus of an atom

<b>A</b>	Oxidation
<b>Q</b>	A positively charged ion



<b>A</b>	Period
<b>Q</b>	Compound formed when $H^+$ from an acid is replaced by a metal ion, or other positive ion

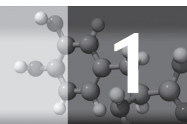
<b>A</b>	Relative atomic mass, $A_r$
<b>Q</b>	The weighted mean mass of a molecule compared with one-twelfth of the mass of an atom of carbon-12

<b>A</b>	Relative molecular mass, $M_r$
<b>Q</b>	The amount of any substance containing as many particles as there are carbon atoms in exactly 12 g of the carbon-12 isotope

<b>A</b>	Salt
<b>Q</b>	The oxidation and reduction of the same element in a redox reaction

<b>A</b>	Successive ionisation energy
<b>Q</b>	The ability of an atom to attract the bonding electrons in a covalent bond

<b>A</b>	Thermal decomposition
<b>Q</b>	The loss of electrons or increase in oxidation number



## Teacher answers

A	Molecular formula	Q	The number of protons in the nucleus of an atom
A	Atomic number	Q	The number of particles (protons and neutrons) in the nucleus of an atom
A	Mass number	Q	Atoms of the same element with different numbers of neutrons and therefore different masses
A	Isotopes	Q	The weighted mean mass of an atom of an element compared with one-twelfth of the mass of an atom of carbon-12
A	Relative atomic mass, $A_r$	Q	The weighted mean mass of a molecule compared with one-twelfth of the mass of an atom of carbon-12
A	Relative molecular mass, $M_r$	Q	The amount of any substance containing as many particles as there are carbon atoms in exactly 12 g of the carbon-12 isotope
A	Mole	Q	The number of particles per mole ( $6.02 \times 10^{23}$ )
A	Avogadro's constant, $N_A$	Q	The simplest whole number ratio of atoms of each element present in a compound
A	Empirical formula	Q	The energy required to remove one electron from each atom in 1 mole of gaseous atoms to form 1 mole of gaseous $1+$ ions
A	First ionisation energy	Q	The energy required to remove each electron in turn
A	Successive ionisation energy	Q	The ability of an atom to attract the bonding electrons in a covalent bond
A	Electronegativity	Q	The electrostatic attraction between oppositely charged ions
A	Ionic bond	Q	A shared pair of electrons
A	Covalent bond	Q	The electrostatic attraction between positive metal ions and delocalised electrons
A	Metallic bonding	Q	A shared pair of electrons where both electrons that are shared are from one of the bonding atoms only
A	Dative covalent (coordinate) bond	Q	A proton donor
A	Acid	Q	A negatively charged ion
A	Anion	Q	A horizontal row of elements in the periodic table
A	Period	Q	Compound formed when $H^+$ from an acid is replaced by a metal ion, or other positive ion
A	Salt	Q	The oxidation and reduction of the same element in a redox reaction
A	Diproporationation	Q	The breaking up of a chemical substance with heat into at least two chemical substances
A	Thermal decomposition	Q	The loss of electrons or increase in oxidation number
A	Oxidation	Q	A positively charged ion
A	Cation	Q	The actual number of atoms of each element in a molecule