**AQA GCSE Chemistry, and Combined Science – Chemistry topics, Grade 8/9 Booster workbook**

***Grey shading indicates Chemistry only***

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| **Section** | **Topic** | **Page No.** | **Single science specification reference** |
| **1 Atomic structure and the periodic table** | Atoms, elements and compounds | 4 | 4.1.1.1 (but not the formulae and equation parts) |
| Mixtures | 4-5 | 4.1.1.2 |
| Compounds, formulae and equations | 5 | 4.1.1.1 (formulae and equation parts, but not half equations or ionic equations) |
| Scientific models of the atom | 6 | 4.1.1.3 |
| Sizes of atoms and molecules | 6-7 | 4.1.1.5, parts on size and scale |
| Relative masses and charges of subatomic particles | 7-8 | 4.1.1.4 and remainder of 4.1.1.5 |
| Relative atomic mass | 8 | 4.1.1.6 |
| Electronic structure | 9 | 4.1.1.7 |
| Electronic structure and the periodic table | 10 | 4.1.2.1 |
| Development of the periodic table | 10-11 | 4.1.2.2 |
| Comparing metals and non-metals | 12 | 4.1.2.3 (part) |
| Elements in group 0 | 12-13 | 4.1.2.4 (incl. reactions and atomic structure of metals/non-metals from 4.1.2.3) |
| Elements in group 1 | 13-14 | 4.1.2.5 (incl. reactions and atomic structure of metals/non-metals from 4.1.2.3) |
| Elements in group 7 | 14-15 | 4.1.2.6 (incl. reactions and atomic structure of metals/non-metals from 4.1.2.3) |
| Properties of the transition metals | 15 | 4.1.3 (Chemistry only) |
| **2 Bonding, structure, and the properties of matter** | The three states of matter | 16 | 4.2.2.1 and 4.2.2.2 |
| Ionic bonding and ionic compounds | 17 | 4.2.1.2 (part), 4.2.1.3 plus relevant ideas from 4.2.1.1 |
| Dot and cross diagrams for ionic compounds | 18 | 4.2.1.2 (dot and cross diagrams and drawing electron transfer diagrams) |
| Properties of ionic compounds | 19 | 4.2.2.3 |
| Covalent bonding in small molecules | 20 | 4.2.1.4 (part) plus relevant ideas from 4.2.1.1 |
| Dot and cross diagrams for covalent compounds | 21 | 4.2.1.4 (part) |
| Properties of small molecule compounds | 21 | 4.2.2.4 |
| Polymers | 22 | 4.2.1.4 (part) and 4.2.2.5 |
| Giant covalent structures | 22-23 | 4.2.1.4 (part) |
| Properties of giant covalent structures | 23-24 | 4.2.2.6, 4.2.3.1 and 4.2.3.2 |
| Graphene and fullerenes | 24-25 | 4.2.3.3 |
| Nanoparticles | 25-26 | 4.2.4.1 (Chemistry only) |
| Uses of nanoparticles | 26 | 4.2.4.2 (Chemistry only) |
| Metallic bonding | 27 | 4.2.1.5 plus relevant ideas from 4.2.1.1 |
| Properties of metals and alloys | 27 | 4.2.2.7 and 4.2.2.8 |
| **3 Quantitative chemistry** | Writing formulae | 28 | 4.1.1.1 (part on formulae), 4.3.1.1 (part), 4.4.2.2 (part on formulae) |
| Conservation of mass and balanced chemical equations | 28-29 | 4.3.1.1 (remainder) |
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| Using moles to balance equations | 33-34 | 4.3.2.3 |
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| Concentration of solutions | 35-36 | 4.3.2.5 |
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