



# SC3 Atomic structure

## Personal learning checklist | 1 of 1

GCSE Edexcel Separate Sciences | Chemistry Papers 1 and 2

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Tick one box for each statement. Red: need help. Amber: partly confident.  
Green: can do independently.

| I can                                                                                             | Red                      | Amber                    | Green                    |
|---------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>Atomic models</b>                                                                              |                          |                          |                          |
| Describe how evidence changed Dalton's atomic model through the discovery of subatomic particles. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain alpha-scattering evidence for a mostly empty atom with a small dense positive nucleus.    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Compare atomic and nuclear scale and evaluate simplified atomic drawings.                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Particles and numbers</b>                                                                      |                          |                          |                          |
| Compare proton, neutron and electron locations, relative charges and masses.                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain neutral atoms and distinguish atomic number from mass number.                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Calculate proton, neutron and electron numbers from atomic notation.                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain ion formation and calculate electron counts without changing element identity.            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Isotopes</b>                                                                                   |                          |                          |                          |
| Explain isotopes using proton and neutron counts and distinguish them from ions.                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Explain similar chemical behaviour and possible physical differences between isotopes.            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Relative atomic mass</b>                                                                       |                          |                          |                          |
| Define relative atomic mass and explain why it need not be a whole number.                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Calculate weighted relative atomic masses using percentage or ratio abundances (Higher).          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Check calculated isotope averages against their masses and the more abundant isotope (Higher).    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

My next revision priority \_\_\_\_\_