

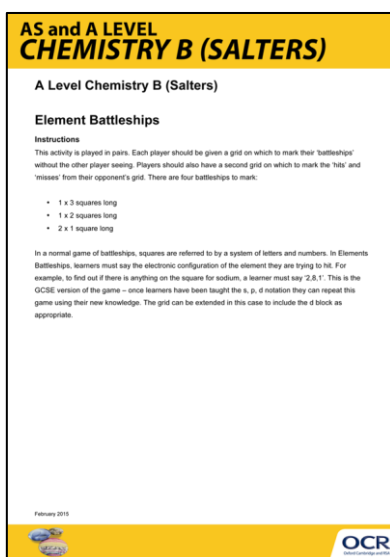
# AS LEVEL CHEMISTRY B (SALTERS)

## A Level Chemistry B (Salters)

### Element Battleships

### *Instructions and answers for teachers*

*These instructions should accompany the OCR resource 'Element Battleships' which supports OCR A Level Chemistry B.*



#### **The Activity:**

This Lesson Element could be used standalone, or in conjunction with the OCR KS4-KS5 Chemistry B Transition Guide – Atomic Structure.

This activity is designed to help learners to become more familiar with the use of notation used to depict electronic configurations at both GCSE and AS Level. The attached 'Battleship Grids' can be laminated or placed inside a plastic wallet to allow repeated use.

#### **Associated materials:**

'Element Battleships' Lesson Element learner activity sheet.



# AS LEVEL CHEMISTRY B (SALTERS)

## Instructions

Learners play in pairs. Each learner should be given a grid on which to mark their 'battleships' without the other learner seeing. They should also have a second grid on which to mark the 'hits' and 'misses' from their opponent's grid. There are four battleships to mark:

- 1 × 3 squares long
- 1 × 2 squares long
- 2 × 1 square long

In a normal game of battleships, squares are referred to by a system of letters and numbers. In Elements Battleships, learners must say the electronic configuration of the element they are trying to hit. For example, to find out if there is anything on the square for sodium, a learner must say '2,8,1'. This is the GCSE version of the game – once learners have been taught the s,p,d notation they can repeat this game using their new knowledge. The grid can be extended in this case to include the d block as appropriate.



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Your battleship grid

${}_1\text{H}$							${}_2\text{He}$
${}_3\text{Li}$	${}_4\text{Be}$	${}_5\text{B}$	${}_6\text{C}$	${}_7\text{N}$	${}_8\text{O}$	${}_9\text{F}$	${}_{10}\text{Ne}$
${}_{11}\text{Na}$	${}_{12}\text{Mg}$	${}_{13}\text{Al}$	${}_{14}\text{Si}$	${}_{15}\text{P}$	${}_{16}\text{S}$	${}_{17}\text{Cl}$	${}_{18}\text{Ar}$
${}_{19}\text{K}$	${}_{20}\text{Ca}$						

Your opponent's battleship grid

${}_1\text{H}$							${}_2\text{He}$
${}_3\text{Li}$	${}_4\text{Be}$	${}_5\text{B}$	${}_6\text{C}$	${}_7\text{N}$	${}_8\text{O}$	${}_9\text{F}$	${}_{10}\text{Ne}$
${}_{11}\text{Na}$	${}_{12}\text{Mg}$	${}_{13}\text{Al}$	${}_{14}\text{Si}$	${}_{15}\text{P}$	${}_{16}\text{S}$	${}_{17}\text{Cl}$	${}_{18}\text{Ar}$
${}_{19}\text{K}$	${}_{20}\text{Ca}$						

