

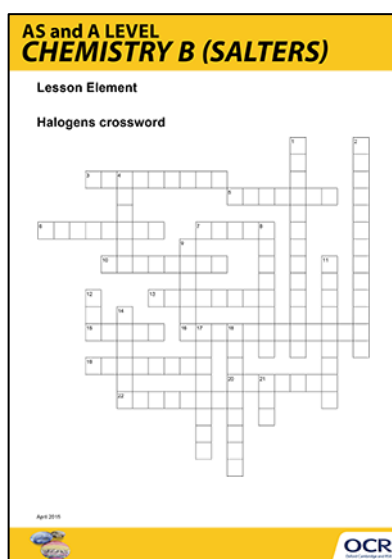
# AS LEVEL CHEMISTRY B (SALTERS)

## Lesson Element

### Halogens crossword

#### *Instructions and answers for teachers*

*These instructions should accompany the OCR resource 'Halogens crossword' activity which supports OCR AS Level Chemistry B.*



#### Introduction

At the beginning of AS Level, many learners seriously underestimate the rate at which they need to assimilate new terminology into their scientific vocabulary. This crossword is designed to practice or revise some of the key terms related to halogens and their properties and reactions, as well as some key ideas associated with this topic.

##### **The Activity:**

This crossword combines ideas from *Elements of life* and *Elements from the sea*. It could be used during teaching of *Elements from the sea* to consolidate ideas about the properties of halogens taught in this module, and to recap ideas about electronic configuration in the context of the halogens.

Once completed, learners could be asked to make their own glossary or flashcards, choosing ten of the most important words.

##### **Learning outcomes:**

This resource relates to the following specification learning outcomes:  
EL(f), EL(o), ES(h), ES(i), ES(k), ES(n)

##### **Associated materials:**

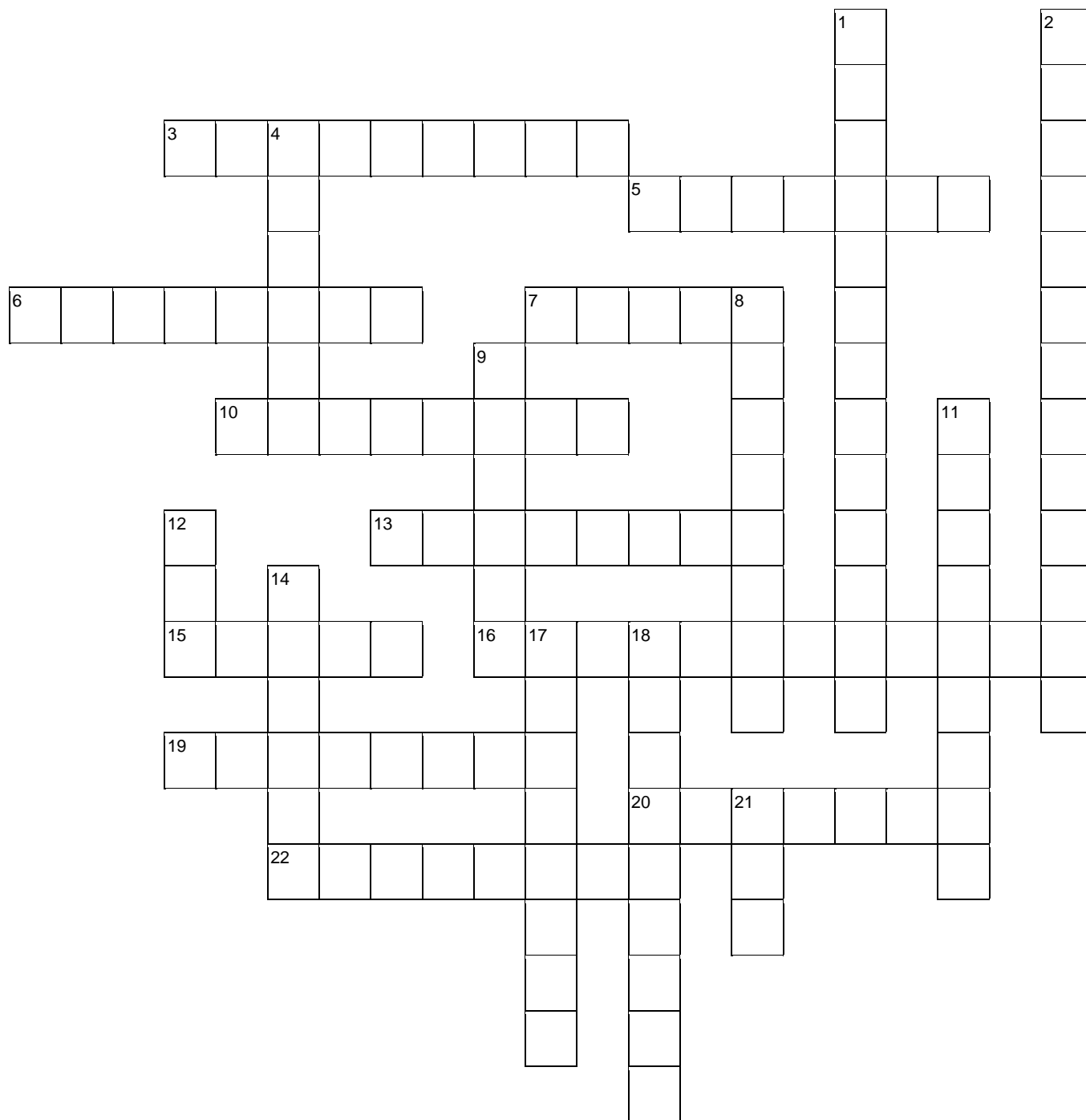
'Halogens crossword' Lesson Element learner activity sheet.

April 2015



# AS LEVEL **CHEMISTRY B (SALTERS)**

## Halogens crossword



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## Across

3. Halogens are strong \_\_\_\_\_ agents. (9)
5. The solubility of precipitates in a solution of \_\_\_\_\_ is used as the second part of the standard test for halides. (7)
6. Iodine does not oxidise bromine or \_\_\_\_\_. (8)
7. The number of electrons in the outer shell of halogens. (5)
10. Halogens are the most \_\_\_\_\_ of the non-metals. (8)
13. The halogen that is the strongest oxidising agent. (8)
15. The physical state of iodine at RTP. (5)
16. The relative oxidising strengths of the halogens can be seen in their \_\_\_\_\_ reactions with the halide ions. (12)
19. The halogens all consist of \_\_\_\_\_ molecules,  $X_2$ , containing a single covalent bond. (8)
20. The halogen that is liquid at RTP. (7)
22. The common name for the elements in Group 17. (8)

## Down

1. Because chlorine kills bacteria, small amounts of it are added to this before it enters your home. (8,5)
2. A solution of this is added to halides to identify them by the colour of the precipitate produced. (6,7)
4. Chlorine oxidises both bromine and \_\_\_\_\_. (6)
8. The outer shell of a halogen atom is just one electron short of the electronic configuration of one of these. (5,3)
9. The physical states of the halogens at RTP as you go down the group show the classic trend of gas  $\rightarrow$  \_\_\_\_\_  $\rightarrow$  solid. (6)
11. The oxidising power of the halogens \_\_\_\_\_ as you go down the group. (9)
12. The physical state of chlorine at RTP. (3)
14. The common name for a household cleaning product. It is made by mixing chlorine with sodium hydroxide. (6)
17. The boiling points of the halogens \_\_\_\_\_ as you go down the group. (8)
18. The shell of a halogen atom that gains an electron when it is reduced. (1,3-5)
21. The number of electrons gained by a halogen atom when it is ionised. (3)



# AS LEVEL CHEMISTRY B (SALTERS)

## Answers

### Across

3. oxidising
5. ammonia
6. chlorine
7. seven
10. reactive
13. fluorine
15. solid
16. displacement
19. diatomic
20. bromine
22. halogens

### Down

1. drinking water
2. silver nitrate
4. iodine
8. noble gas
9. liquid
11. decreases
12. gas
14. bleach
17. increase
18. p sub-shell
21. one



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