

**YEAR 8**

The Periodic Table

Three parts that get harder: a warm-up, where you should be now, then a stretch. Write the letter of the right option, or a number where one is asked for. Groups go down, periods go across.

Name: _____

Date: _____

Score: _____

A. Warm-up

Elements, symbols and where metals sit.

- 1 What is an element?
- (a) A mixture of two substances
 - (b) A substance made of only one type of atom
 - (c) Any liquid
 - (d) Two atoms bonded together

- 2 What is the chemical symbol for sodium?
- (a) S
 - (b) So
 - (c) Na
 - (d) N

- 3 What is the chemical symbol for iron?
- (a) I
 - (b) Ir
 - (c) F
 - (d) Fe

- 4 Elements in the same column are in the same
- (a) group
 - (b) period
 - (c) mixture
 - (d) compound
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- 5 Most elements in the periodic table are
- (a) non-metals
 - (b) metals
 - (c) gases
 - (d) liquids
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B. Where you should be now

Each group has a family name and family behaviour.

- 6 Which group are the noble gases?
- (a) Group 1
 - (b) Group 2
 - (c) Group 0
 - (d) Group 7
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- 7 Why are the noble gases so unreactive?
- (a) They are very heavy
 - (b) They are metals
 - (c) They have no electrons
 - (d) They have a full outer shell of electrons
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- 8 Group 1 metals are called
- (a) the alkali metals
 - (b) the halogens
 - (c) the noble gases
 - (d) the transition metals
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- 9 Going down Group 1, the metals become
- (a) less reactive
 - (b) more reactive
 - (c) non-metals
 - (d) harder
-

- 10 Group 7 elements are called
- (a) the alkali metals
 - (b) the noble gases
 - (c) the halogens
 - (d) the lanthanides
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- 11 Which is a property of most metals?
- (a) They are brittle
 - (b) They have low melting points
 - (c) They are gases at room temperature
 - (d) They conduct electricity well
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C. Stretch

The pattern explains the reactions.

- 12 Going down Group 7, the halogens become
- (a) less reactive
 - (b) more reactive
 - (c) metals
 - (d) lighter
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- 13 Sodium reacts with water to produce
- (a) sodium chloride and oxygen
 - (b) sodium hydroxide and hydrogen
 - (c) sodium oxide and water
 - (d) salt and steam
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- 14 Elements in the same group react in similar ways because
- (a) they have the same mass
 - (b) they were discovered together
 - (c) they have the same number of electrons in their outer shell
 - (d) they are all metals
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- 15 Mendeleev left gaps in his periodic table because
- (a) he ran out of space
 - (b) some elements were too dangerous
 - (c) he forgot some elements
 - (d) he predicted elements that had not yet been discovered
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- 16 Which of these is a liquid at room temperature?
- (a) Bromine
 - (b) Chlorine
 - (c) Iodine
 - (d) Sodium
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