

Using symbols and the periodic table

Grade 8 science (Year 9 · Class 8) · Test

Name: _____ Date: _____ Class: _____ Mark: ____ / 20

This test checks symbols, compounds, mixtures and the periodic table. Answer every question in full, show your working for calculations and use units. You have 45 minutes and the test is worth 20 marks.

Level: Grade 8 science (Year 9 · Class 8) · **Curriculum:** MS-PS1-1

Time: 45 minutes · 8 questions · Total: 20 marks · Calculator allowed

Question 1 Symbols (3 marks)

Write the chemical symbol for each element.

- Sodium (1 mark)
- Iron (1 mark)
- Potassium (1 mark)

Question 2 Using the table (3 marks)

Use the extract to answer.

- Name the element in period 3, group 2. (1 mark)
- Give the symbols of the two noble gases shown. (1 mark)
- Name the element in the same group as fluorine (F) that is in period 3. (1 mark)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar

Periods 2 and 3 for Question 2.

Question 3 Compound or mixture (2 marks)

Explain the difference between a compound and a mixture, using iron and sulfur as an example.

Question 4 Metals and non-metals (3 marks)

Compare metals and non-metals in two properties.

Question 5 Fixed ratio (3 marks)

6.0 g of magnesium burns completely with 4.0 g of oxygen to make 10.0 g of magnesium oxide.

- a. Calculate the mass of oxygen that reacts with 15.0 g of magnesium. (2 marks)
- b. Calculate the mass of magnesium oxide formed. (1 mark)

Question 6 Noble gases (2 marks)

Explain why neon is used in signs and why it does not burn.

Question 7 Spot the mistake (2 marks)

A student says: "Sodium chloride is a mixture of sodium and chlorine because it contains both." Explain the mistake.

Question 8 Predict rubidium (2 marks)

Rubidium (Rb) is in group 1 below potassium. Predict two properties of rubidium and its reactivity compared with potassium.