

Periodic Table

KS3 Chemistry · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Sodium is in Group 1, Period 3. What does this tell you?

Step 1 · Group (column)

It is in the first column, with lithium and potassium: it has similar properties to them.

Step 2 · Period (row)

It is in the third row.

Step 3 · Position

It is on the left, so it is a metal.

Answer: A Group 1 metal with properties like lithium and potassium

Check: Groups go down; periods go across.

2. Now try one with the steps

Lithium, sodium and potassium all react with water. Use the data to describe the trend: lithium fizzes steadily, sodium whizzes around, potassium bursts into a lilac flame.

Step 1 · Order going down the group

Step 2 · Pattern

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. What is a vertical column in the periodic table called? [1]

2. What is a horizontal row called? [1]

3. Are most elements metals or non-metals? [1]

4. On which side of the periodic table are the non-metals? [1]
- _____
- _____
5. What is the name of Group 1? [1]
- _____
- _____
6. What is the name of Group 7? [1]
- _____
- _____
7. What is the name of Group 0? [1]
- _____
- _____
8. Why are elements in the same group put together? [1]
- _____
- _____
9. Name the gas made when any Group 1 metal reacts with water. [1]
- _____
- _____
10. Why are Group 1 metals stored under oil? [1]
- _____
- _____
11. Why are the noble gases used in light bulbs and signs? [1]
- _____
- _____
12. Does reactivity increase or decrease down Group 7? [1]
- _____
- _____
13. Group 1 melting points: lithium 181 °C, sodium 98 °C, potassium 63 °C. Predict whether rubidium melts above or below 63 °C. [1]
- _____
- _____
14. Astatine is below iodine in Group 7. Predict its state at room temperature and its colour compared with iodine. [2]
- _____
- _____

4. Before you hand it in

Mixing up groups and periods.

Groups go DOWN (columns); periods go ACROSS (rows).

"Hydrogen is a Group 1 metal."

Hydrogen is a non-metal; it is often placed on its own.

Assuming every trend goes the same way in every group.

Learn each group's trend from data.

"Noble gases have no electrons."

Say noble gases are unreactive (stretch: they have full outer shells).