

Practice Questions

- Q1 Why do metal elements become less reactive with water across Period 3?
- Q2 What are the oxidation numbers of the elements from Na to S after they've been burned in oxygen?
- Q3 Describe the bonding of each of the Period 3 oxides.
- Q4 What is the trend in pH across Period 3 when the oxides dissolve?

Exam Question

- 1 Sodium, aluminium, silicon and phosphorus all form oxides when burned in oxygen.
- Write equations for the reactions of these four elements with oxygen gas. [8 marks]
 - Name the type of structure and bonding found in the oxide of each element. [8 marks]
 - What would you expect the pH of the resulting solution to be if each of these oxides were added to water? [4 marks]
 - Explain why the melting point of phosphorus(V) oxide is much lower than that of sodium oxide. [5 marks]

This section's got more trends than a school disco...

Argon's at the end of Period 3, but it's a noble (or inert) gas, so it doesn't react with anything and you can pretty much ignore it as far as trends go. If anyone asks, it's a simple monatomic gas, so obviously it's got a low melting and boiling point.

Practice Questions

- Q1 What's the trend in bond type for the chlorides as you go across Period 3?
- Q2 Why does the metallic character of the elements increase down Group 4?

Exam Question

- 1 Sodium chloride, aluminium chloride and phosphorus(V) chloride react with water.
- a) Write an equation for each reaction. [6 marks]
- b) What is the approximate pH for each of the resulting solutions? Explain your answers. [6 marks]

Silicon chips — it'll take more than vinegar to help them slide down your throat...

You know what they say — there's an exception to every rule, and these pages prove it. Take extra care when writing formulas for compounds like PbO and $SnCl_2$. Look at the oxidation states and make sure you've got the right number of oxygens or chlorines attached. If you don't, then you're just throwing marks away. And that's just plain daft.