

C3 - The Periodic Table Quiz

1. What gas is produced when group 1 metals react with water?
2. When group 1 metals react with water, an alkaline solution is produced. What ion causes the solution to be alkaline?
3. How is the reaction between potassium and water different from sodium and water?
4. Why were many scientists critical about Newland's octaves?
5. Give two ways in which Mendeleev's periodic table was better than Newland's.
6. The modern periodic table is an arrangement of the elements in terms of their atomic structures. Explain how.
7. Give 3 differences between Newlands' and today's periodic table.
8. What order is used in the modern periodic table?
9. Argon has a higher atomic mass than potassium. Why is this not a problem?
10. Why was Mendeleev able to predict the existence of undiscovered elements?
11. If you could react Francium with water, how would the reaction compare to Sodium and water? Why?

12. What is the balanced equation for group 1 metals reacting with water?

13. Why should potassium be placed before argon in the periodic table?

14. Why did scientists think Mendeleev's table was incorrect?

15. In 1890s the noble gases were discovered. Why did they easily fit into Mendeleev's periodic table?

16. Give one piece of evidence that supports the law of octaves.

17. Why do elements in the same group have similar chemical properties?

18. What happens when sodium reacts with water?

19. Which group and period does 2,8,5 belong to?

20. What are the names of groups 1, 7 and 0?

21. Which group is missing from Mendeleev's table?

22. State the physical properties of Group 1 metals.

23. State the physical properties of the transition metals.
24. State the chemical properties of the transition metals.
25. State the physical properties of the group 7 elements.
26. What do you see when chlorine is added to a bromide solution?
27. Why is bromine less reactive than chlorine?
28. Why do all group 7 elements react in a similar way with hydrogen?
29. Explain why group 0 elements are monatomic.
30. Explain why chlorine can displace iodide from sea water.
31. If aluminium ions react with chlorine, what is the formula of the product aluminium chloride?
32. What is the electron structure of chloride Cl⁻?
33. What are the similarities and differences in electron structure going from Na to Ar?
34. What are the differences and similarities in electron structures going from F to At?
35. Why could Hydrogen be placed in group 1 or 7?

36. Why are group 1 metals stored in oil?

37. Why are group elements called the Alkali metals?

38. Why are group 0 elements unreactive?