

Intermediate Science 9
Unit 2: Atoms, Elements and Compounds



Terms:

Chemistry
MSDS
Luster
Reactivity
Atom
Neutron
element

Matter
Malleability
Density
Theory
Electron
Nucleus
Periodic Table

WHMIS
Electrical conductivity
Combustibility
Law
Proton
Shells/Orbits
Bohr diagram

1. Know the rules of Laboratory Safety. Page 10
2.
 - (a) What does the acronym "WHMIS" represent? P12
 - (b) What is the purpose of the WHMIS system?
 - (c) Sketch and label all eight WHMIS symbols.
3.
 - (a) What does the acronym "MSDS" represent?
 - (b) How is a MSDS sheet useful to a chemistry student?
4. Distinguish between physical and chemical properties
5. List examples of physical properties. P18
 - (i) Colour
 - (ii) Malleability
 - (iii) Electrical conductivity
 - (iv) Magnetism
 - (v) Luster
 - (vi) Density
 - (vii) Melting/boiling points
 - (viii) Texture
6. List examples chemical properties.P18
 - (i) Combustibility
 - (ii) Reactivity
7. Distinguish between a theory and a law. P25
8. Describe the contribution of various individuals (scientists) to the development of current atomic theory. Include: P25-P29
 - (i) Early Greek (Empedocles, Democritus, Aristotle)
 - (ii) Dalton
 - (iii) Thomson
 - (iv) Rutherford
 - (v) Bohr
9. Identify major changes in atomic theory up to and including the Bohr model P25-P29
10. Understand the structure of the atom.
 - a) Know the elementary particles (Electron, Proton and Neutron) and their location
 - b) In an atom the number of proton equals the number of electrons.
 - c) Determine the number of elementary particle using the atomic mass and the atomic number
 - d) Know the number of electrons in the first three shells (2, 8, and 8)
11. Distinguish among protons, neutrons, and electrons in terms of their: p28
 - (i) Charge
 - (ii) Relative mass
 - (iii) Location in the atom

12. Know the following about the Periodic table p38-59

- Dmitri Mendeleev: Father of the Table
- The horizontal rows are called periods and are labeled from 1 to 7.
- The vertical columns are called groups and are labeled from 1 to 18.
- Elements in the same group have similar chemical and physical properties.
- Columns are also grouped into families.
- Know the difference families (alkali Metals, alkaline Earth Metals, transition Metals, Halogens, Noble gases)
- Know diatomic molecules (ending in **gen**)

13. identify and write chemical symbols for common elements. Include:

- | | | | |
|-----------------|------|----------------|------|
| (i) Hydrogen | (H) | (ii) Sodium | (Na) |
| (iii) Potassium | (K) | (iv) Magnesium | (Mg) |
| (v) Calcium | (Ca) | (vi) Iron | (Fe) |
| (vii) Nickel | (Ni) | (viii) Copper | (Cu) |
| (ix) Zinc | (Zn) | (x) Carbon | (C) |
| (xi) Nitrogen | (N) | (xii) Oxygen | (O) |
| (xiii) Neon | (Ne) | (xiv) Helium | (He) |
| (xv) Chlorine | (Cl) | (xvi) Silicon | (Si) |
| (xvii) Silver | (Ag) | (xviii) Gold | (Au) |
| (xix) Mercury | (Hg) | (xx) Lead | (Pb) |

KNOW THE FOLLOWING QUESTION	
PAGE 11	1,2,3,4,5
PAGE 13	1,2
PAGE 14	1,2,
PAGE 19	1,3
PAGE 23	1,2,3,5,6,8,9,11,13
PAGE 29	2,3,4,5,6,7
PAGE 33	4,5,6,7,8,9,10,11,15,16
PAGE 34-35	1,2,3,4,6,7,8,9,10,11,12,13,14,15
PAGE 47	1,2,3,5,6,7,8,9,10,11,12
PAGE 53	1,2,3,4,5
PAGE 59	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22, 23,24,25,26

JOKE:

What happens when electrons lose their energy?

They get Bohr'ed.

