

**PRINCIPLE-BASED SYSTEMATIZATION OF CHEMISTRY CONTENT****M. Selvaratnam***(Dept. of Chemistry, University of Peradeniya)***W. D. W. Jayatilake***(Dept. of Chemistry, University of Sri Jayewardenepura, Nugegoda)*

Some sections of basic chemistry have been analysed so as to systematically organize it. There are many didactic advantages in deleting irrelevant concepts and unnecessary terminology. It is suggested that effective systematisation of chemical knowledge requires a consistent principle-based approach, and that other criteria (e.g. historical consideration in naming and stating laws and phenomena) should not be used.

Many examples of the use of irrelevant concepts and unnecessary terminology and inconsistency have been identified by our analysis. For example, Hess' law, Kohlrausch's law, Born-Haber cycle, Dalton's law . . . all involve the same principle and best taught as examples of simple principle of additivity. Relative atomic and molecular mass is also an irrelevant concept, and Faraday's laws should have no place in a principle-based approach. Positive rays, alpha rays, beta rays are examples of unnecessary terminology and the definitions of ionisation energy and electron affinity are somewhat inconsistent.