Module 4: Energy

The syllabus and *Conquering Chemistry*

Module 4 of *Conquering Chemistry Preliminary Course* 4th edition deviates from the HSC syllabus in a few minor ways in that it includes:

- a brief discussion of why we need energy and where we get it from (Section 9.1)
- a short account of the composition of the fossil fuels natural gas and coal (Section 9.12) in addition to the account of crude oil in Section 9.8
- an outline of major uses of hydrocarbons (Section 9.13)
- an introduction to ΔH, the enthalpy change for a chemical reaction (Section 10.2), and a simple method of measuring it experimentally (Section 10.3)
- introduction of heat of combustion (Section 10.4)
- a brief mention of the enhanced greenhouse effect (global warming) (Section 10.9)
- a more precise of meaning of rate of reaction than is perhaps required by the syllabus (Section 10.11) and
- a more systematic introduction of the factors that affect the rates of reactions (Section 10.12)

While it may seem surprising that the enhanced greenhouse effect (global warming) was omitted from this syllabus, it needs to be remembered that until quite recently most of our politicians in the three major parties were pretending that it did not exist and maybe it is not surprising that our syllabus writers went along with that view. However now with even the most conservative politicians conceding that global warming is happening, perhaps HSC students need some information about it. There is a short introduction in *CCPC* Section 10.9 with a more extensive treatment later in this website.

As usual, you can use the *Module 4 and the New South Wales HSC syllabus* tables on pages 306–9 to check the extent to which *Conquering Chemistry* covers the syllabus and how closely it follows syllabus order.