Chapter 24

Radioactive decay and nuclear stability
  Know components of the nucleus in relation to nuclear decay
  Compare chemical and nuclear reactions
  Know the types of radioactive decay and characteristics of the
  particles or energy involved
  Write and balance equations for nuclear reactions
  Complete and balance a nuclear reaction with part of the
  reaction given
  Write and balance a nuclear reaction for a given nucleus and
  type of decay
  Know the meaning of the curve of stability for nuclides
  Deduce the likely type of decay that a given nuclide will
  undergo from the nuclear size and the neutron/proton (N/Z) ratio
  Predict whether a given nuclide is likely to be stable
  Write and use appropriate nuclear isotopic symbols for given
  atoms

The kinetics of nuclear change
  Know end of chapter key terms
  Deduce or calculate the half-life of a nuclide from decay rates
  Calculate an items age from nuclear activity
  Know some further applications of radioisotopes

Fission and fusion: The interconversion of mass and energy
  Calculate the mass defect and nuclear binding energy
  Describe the processes of fusion and fission
  Know by which process energy could be obtained from a given
  nuclide based on the plot of binding energy per nuclide
  Describe the physical method for obtaining useful energy from
  nuclear fission
  Describe a method by which useful energy might be obtained
  from nuclear fusion