

Seven skills to get an A* in chemistry

1. Use the periodic table as a starting point for thinking

Consult PT with most questions using general understanding of trends, understanding of fundamental particles

2. Visualise physical and chemical processes

eg visualise regions of high and low electron density, molecular processes like Brownian motion (M-B distribution), solvation of ions, hydrogen bonds

3. Switch between different representations

of substances eg names, different formulae (skeletal, structural etc), models, diagrams and apparatus

4. Manipulate mathematical equations

Rearranging equations successfully, taking account of the magnitudes of the numbers within (eg need to factor into equation change of units for cm^3/dm^3 or kJ/J), substituting correct numbers

5. Relate observable phenomena to underlying concepts

eg colour changes, melting points, distillation/recrystallisation procedure

6. Chemical common sense

General awareness of physical forms of chemical substances eg colour, state, solubility and general idea of what reacts together

7. Write explanations logically without repetition or contradiction

Focus in on the explanation needed, present answers clearly in a logical order, don't write the same explanation twice in different words or include contradictory explanations

Bullseye exercise

Below is a bullseye diagram. For each of the seven skills decide how skilled you are and shade in the appropriate number of segments of the bullseye.

