Chemistry teaching schedule - Form 5

A. Topics covered

Term	1st term*	2nd term**
Content	Laboratory safety & regulation (1 period) 6. Microscopic world 2(10 periods) 8. Chemical reactions and energy (20 periods) 9. Rate of reaction (15 periods) 10. Chemical equilibrium (15 periods) UT (4 periods)	5. Fossil fuels and carbon compounds (25 periods) 11. Chemistry of carbon compounds (31 periods) 12. Patterns in the chemical world (10 periods) UT (4 periods)

*** 61. Detecting the presence of chemical species (part 15) will be covered on the first term.**

** Holiday revision class and study group must be used in order to cover the syllabus

B. Teaching Schedule

1st term

Period	Content	Activity / Experiment	UT	Seven Learning Goals#
1	Course requirements Laboratory Safety & Regulations	Fire drill		
19	**7. Redox reactions, chemical cells and electrolysis** 32 Electrolysis **6. The Microscopic World 2** 24. Simple molecular substances with non-octet structures and shapes of simple molecules 25. Polarity of bond and molecule 26. Intermolecular forces 27. Structures and properties of molecular crystals	Expt: - Building models with different shapes - Effect of electrostatic field on polar and non-polar liquid - Chem Daily	UT (part 7) UT (part 6)	#2
20	**8. Chemical reactions and energy** 33. Energy changes in chemical reactions 34. Standard enthalpy change of reactions 35. Hess's law	Expt: - Enthalpy change of reactions - Application of Hess's Law - SBA (expt) - Chem Daily	UT (part 8) UT (QA)	#2
15	**9. Rate of reactions** 36. Rate of chemical reaction 37. Factors affecting rate of reaction 38. Molar volume of gases at r.t.p.	Expt: - SBA (expt) - Chem Daily	UT (part 9)	#2
15	**10. Chemical equilibrium** 39. Dynamic equilibrium 40. Equilibrium constant 41. The effect of changes in concentration and temperature on chemical equilibria	Expt: Demo: effect of temperature and conc. - Measure reaction rate by volume - SBA (QA) - Chem Daily	UT (part 10)	#2
Christmas Holiday				
1st examination				

2nd term

Period	Content	Activity / Experiment	UT	Seven Learning Goals#
2	Examination Review			
	Lunar New Year Holiday			
10	**5. Fossil fuels and carbon compounds** 20. Hydrocarbons from fossil fuels *(National Security Education)* *了解人類活動對生態環境的影響和責任，明白可持續發展的需 要，認同維護生態安全、資源安全、核安全和新型領域安全的必要性 (認識國家及其他地區的能源結構和相關的環境污染議題及政策，從而讓學生運用化學知識了解化學對社會、經濟、環境和科技的影響，以及認同維護國家生態安全和資源安全的必要性)*	Chem Daily Student 2-3 mins videos		#1, #2
20	**5. Fossil fuels and carbon compounds** 21. Homologous series, structural formulae and naming of carbon compounds **11. Chemistry of carbon compounds** 42. Introduction to selected homologous series **5. Fossil fuels and carbon compounds** 43. Isomerism	SBA (QA) x 2 Chem Daily		#2
	UT			
10	**5. Fossil fuels and carbon compounds** 22. Alkane and alkenes 23. Addition polymers			#2
	Easter Holiday			
30	**11. Chemistry of carbon compounds** 44. Typical reactions of various functional groups 45. Inter-conversions of carbon compounds 46. Important organic substances (pastpaper review, 4 periods)	SBA (VA) Chem Daily	UT (part 5.11)	#2
	Yearly examination			

Summer supplementary lessons

12. Patterns in the chemical world

47. Periodic variation in physical properties of the elements Li to Ar

48. Bonding, stoichiometric composition and acid-base properties of oxides of the elements Na to Cl

49. General properties of transition metals

UT (part 12)