APHS CURRICULUM AND ASSESSMENT PLAN

Chemistry 2021-22

Mrs S kelly
Head of Science
Skelly6nrr@nsix.org.uk

Year 7 – Assessment Plan

Please note that is your child has more than teacher for chemistry, then they may do different parts of the same topic with each teacher. E.g teacher 1 teach 5.1 matter particle model, teacher 2 teach 5.2 matter separating mixtures, A small online assessment may be done when a class has completed a section.

Term	Unit	Topics	Dates
Autumn 1	5.1 MATTER particle model	The particle model States of matter Melting and freezing Boiling More changes of state Diffusion Gas pressure Inside particles	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	5.2 MATTER separating mixtures	Pure substances and mixtures Solutions Solubility Filtration Evaporation and distillation chromatography	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	6.1 REACTIONS acids and alkalis	Chemical reaction Acid and alkalis Indicators and pH Acid strength Neutralisation Making salts	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	6.2 REACTIONS metals and non-metals	More about elements Chemical reactions of metals and non-metals Metals and acid	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022

		Metals and oxygen Metals and water Metals displacement reactions	
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	7.1 EARTH earth structure	The structure of the earth Sedimentary rock Igneous rocks Metamorphic rock The rock cycle ceramics	w/b Tue 19th Apr 2022 – Fri 27th May 2022
Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2	7.2 EARTH universe	The night sky The solar system The earth The moon and changing ideas	w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete
Assessment 6 Feedback			That lesson or subsequent lesson

Year 8 – Assessment Plan

Please note that is your child has more than one teacher for chemistry, then they may do different parts of the same topic with each teacher. E.g teacher 1 teach 5.1 matter particle model, teacher 2 teach 5.2 matter separating mixtures, A small online assessment may be done when a class has completed a section.

Term	Unit	Topics	Dates
Autumn 1	5.3 MATTER elements	Elements Atoms Compounds Chemical formula Polymers	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	542 MATTTER periodic table	The periodic table The elements of group 1 The elements of group 7 The elements of group 0	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	6.3 REACTIONS types of reactions	Atoms in chemical reactions Combustion Thermal decomposition Conservation of mass	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	6.4 REACTIONS	Exothermic and endothermic Energy level diagrams Bond energies	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	7.3 EARTH climate	Global warming The carbon cycle Climate change	w/b Tue 19th Apr 2022 – Fri 27th May 2022
Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2	7.4 EARTH earth's resources	Extracting metals Recycling	w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete

Assessment 6 Feedback	That lesson or subsequent lesson

Year 9 – Assessment Plan

Please note that we start the GCSE course in year 9, at a much slower pace to enable all pupils to understand and build a good foundation for year 10. The topics covered are the same for separate science and trilogy (double) science. Please note that some classes have 2 chemistry teachers and may do a different order.

Term	Unit	Topics	Dates
Autumn 1	Chapter 1 atomic structure	Atoms Chemical reactions separating mixtures Fractional distillation and paper chromatography	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	Chapter 1 continued	History of the atom Structure of the atom Ions atoms and isotopes Electronic structure	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	Chapter 2 the periodic table	Development of the periodic table Group 1 the alkali metals Group 7 the halogens Explaining trends The transition elements	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	Chapter 3 structure and bonding	States of matter Atoms into ions Ionic bonding Giant ionic structures	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	Chapter 3 structure and bonding continued	Covalent bonding Structure of simple molecules Giant covalent structures Fullerenes and graphene	w/b Tue 19th Apr 2022 – Fri 27th May 2022
Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson

Summer 2	Chapter 3 structure and bonding continued	Bonding in metals Giant metallic structures Nanoparticles Applications of nanoparticles	w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete
Assessment 6 Feedback			That lesson or subsequent lesson

Year 10 – Assessment Plan Separate Chemistry

Please note that some classes have 2 chemistry teachers and may do a different order. The separate only content will be in **bold.** As the separate chemists have more lessons they will go through the chapters at a different rate.

Term	Unit	Topics	Dates
Autumn 1	Chapter 4 Chemical reactions	Relative mass and moles Equations and calculations From masses to balanced equations **The yield in a chemical reaction** **Atom econcmy** Expressing concentration **Titrations** **Titration calculations** **Volume of gases**	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	Chapter 5 chemical changes	The reactivity series Displacement reactions Extracting metals Salts from metals Salts from insoluble bases Making more salts Neutralisation and the pH scale Strong and weak acids	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	Chapter 6 electrolysis Chapter 7 energy changes	Introduction to electrolysis Changes at the electrodes The extraction of aluminium Electrolysis of aqueous solutions Exothermic and endothermic reactions. Using energy transfers from reactions Reaction profiles Bond energy calculations **Chemical cells and batteries** **Fuel cells**	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson

Spring 2	Chapter 8 Rates of reaction	Rate of reaction Collision theory and surface area The effect of temperature The effect of concentration and pressure The effect of catalysts Reversible reactions Energy and reversible reactions Dynamic equilibrium Altering conditions	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	chapter 9 crude oil and fuels **Chapter 10 organic reactions**	Hydrocarbons Fractional distillation Burning hydrocarbons Cracking hydrocarbons **Reactions of the alkanes** **Alcohols**	w/b Tue 19th Apr 2022 – Fri 27th May 2022
Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2	**Chapter 10 continued** **Chapter 11 polymers**	**Carboxylic acids** **Esters** **Addition polymerisation** **Condensation polymerisation** **Natural polymers** **DNA**	w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete
Assessment 6 Feedback			That lesson or subsequent lesson

Year 11 – Assessment Plan Separate Chemistry

Term	Unit	Topics	Dates
Autumn 1	Chapter 12 chemical analysis	Pure substances and mixtures Analysing chromatograms Testing for gases **Testing for positive ions** **Testing for negative ions** **Instrumental analysis**	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	Chapter 13 the earth's atmosphere	History of our atmosphere Our evolving atmosphere Greenhouse gases Global climate change Atmospheric pollutants	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	Chapter 14 the earth's resources	Finite and renewable resources Water safe to drink Treating waste water Extracting metals from ores LCA Reduce reuse and recycle	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	**Chapter 15 using our resources**	**Rusting** **Useful alloys** **The properties of polymers** **Glass ceramics and composites** **Making ammonia** **The economics of the Haber process** **Making fertilisers in the lab** **Making fertilisers in industry**	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	Revision for exams and exams		w/b Tue 19th Apr 2022 – Fri 27th May 2022

Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2			w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete
Assessment 6 Feedback			That lesson or subsequent lesson

Year 10 – Assessment Plan Trilogy (double) Chemistry

Please note that some classes have 2 chemistry teachers and may do a different order.

Term	Unit	Topics	Dates
Autumn 1	Chapter 4 Chemical reactions	Relative mass and moles Equations and calculations From masses to balanced equations Expressing concentration	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	Chapter 5 chemical changes	The reactivity series Displacement reactions Extracting metals Salts from metals Salts from insoluble bases Making more salts Neutralisation and the pH scale Strong and weak acids	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	Chapter 6 electrolysis	Introduction to electrolysis Changes at the electrodes The extraction of aluminium Electrolysis of aqueous solutions	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	Chapter 7 energy changes	Exothermic and endothermic reactions. Using energy transfers from reactions Reaction profiles Bond energy calculations	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	Chapter 8 Rates of reaction	Rate of reaction Collision theory and surface area The effect of temperature The effect of concentration and pressure The effect of catalysts	w/b Tue 19th Apr 2022 – Fri 27th May 2022

Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2	Chapter 8 continued	Reversible reactions Energy and reversible reactions Dynamic equilibrium Altering conditions	w/b Mon 6th Jun 2022 – Fri 22nd July 2022
Assessment 6 Submission			When topic complete
Assessment 6 Feedback			That lesson or subsequent lesson

Year 11 – Assessment Plan Trilogy (double) Chemistry

Term	Unit	Topics	Dates
Autumn 1	chapter 9 crude oil and fuels	Hydrocarbons Fractional distillation Burning hydrocarbons Cracking hydrocarbons	w/b Mon 6th Sept 2021 – Wed 20th Oct 2021
Assessment 1 Submission			When topic complete
Assessment 1 Feedback			That lesson or subsequent lesson
Autumn 2	Chapter 12 chemical analysis	Pure substances and mixtures Analysing chromatograms Testing for gases	w/b Mon 1st Nov 2021 – Thurs 16th Dec 2021
Assessment 2 Submission			When topic complete
Assessment 2 Feedback			That lesson or subsequent lesson
Spring 1	Chapter 13 the earth's atmosphere	History of our atmosphere Our evolving atmosphere Greenhouse gases Global climate change Atmospheric pollutants	w/b Tue 4th Jan 2022 – Fri 11th Feb 2022
Assessment 3 Submission			When topic complete
Assessment 3 Feedback			That lesson or subsequent lesson
Spring 2	Chapter 14 the earth's resources	Finite and renewable resources Water safe to drink Treating waste water Extracting metals from ores LCA Reduce reuse and recycle	w/b Mon 21st Feb 2022 – Fri 1st Apr 2022
Assessment 4 Submission			When topic complete
Assessment 4 Feedback			That lesson or subsequent lesson
Summer 1	Revision for exams and exams		w/b Tue 19th Apr 2022 – Fri 27th May 2022
Assessment 5 Submission			When topic complete
Assessment 5 Feedback			That lesson or subsequent lesson
Summer 2			w/b Mon 6th Jun 2022 – Fri 22nd July 2022

Assessment 6 Submission	When topic complete
Assessment 6 Feedback	That lesson or subsequent lesson