

Science iStudy Resources and Links

- Year 11 Physics
- Year 10 and 11 Chemistry
- Year 9 Chemistry
- Year 8 Science
- Year 7 Science

Year 11 Physics

Week commencing	Lesson 1+2	Lesson 3+4
2/11/20	Particle model	Density of solids
9/11/20	Density required prac	Density of liquids
16/11/20	Internal energy	Heating and cooling substances
23/11/20	Latent heat	Multi-step energy calculations
30/11/20	Gas pressure	Pressure and volume
7/12/20	Review	Case-study; Joseph Black
14/12/20	revision	test

All lessons can be found; <https://classroom.thenational.academy/units/particle-model-of-matter-a6d5>

Test paper to be sent out from school. **Particle model of matter**

Year 10 +11 Chemistry

Week commencing	Lesson 1+2	Lesson 3+4
2/11/20	Ionic bonding introduction / further ionic bonding	Water safe to drink, waste water treatment
9/11/20	Properties of ionic compounds / Covalent bonding	Lifecycle assessment
16/11/20	Simple covalent molecules / The giant covalent structure	Revision and test (Using resources) – Using Resources
23/11/20	Giant covalent structures: graphene / Polymers	Rusting and alloys
30/11/20	Solids, Liquids and gases / Nanoparticles	Polymers and glass, ceramics and composites
7/12/20	Review (part2) / Revise all previous topics	Making ammonia and the haber process, the economics
14/12/20	Test	Making fertilisers in the lab and in industry
All lessons can be found;	https://classroom.thenational.academy/units/bonding-structure-and-the-properties-of-matter-e93f	Week 1-3: https://classroom.thenational.academy/units/using-resources-febe Week 4-7: https://classroom.thenational.academy/units/using-resources-febe

Test paper to be sent out from school. **Structure and bonding**

Year 9 Chemistry

Week commencing	Lesson 1+2	Lesson 3+4
2/11/20	Mixtures, filtration and crystallisation / Separation by distillation	Testing for negative ions
9/11/20	Separation by chromatography / Periodic table development	Revision and Test – Chemical analysis
16/11/20	Why elements react / Group 1	The Earth's atmosphere
23/11/20	Group 7 / Group 7 displacement	Greenhouse effect
30/11/20	Comparing the reactivities of group 1 and group 7 elements	Climate change
7/12/20	Transition elements	Pollutants
14/12/20	Review (part 1) Review (part 2)	Revision and test – Chemistry of the atmosphere
All lessons can be found;	https://classroom.thenational.academy/units/atomic-structure-and-periodic-table-c831	Week 1-2: https://classroom.thenational.academy/units/chemical-analysis-cf8d Week 3-7: https://classroom.thenational.academy/units/chemistry-of-the-atmosphere-522e

Test paper to be sent out from school: **Atomic structure and the periodic table**

Year 8

Week commencing	Lesson 1+2	Lesson 3+4
2/11/20	Atoms in chemical reactions: Link 1 Link 2 (H)	Rate of photosynthesis: Link for week 1-3
9/11/20	Combustion: Link 1	*TBD
16/11/20	Thermal decomposition: Link 1	Revision and test – Plants and photosynthesis
23/11/20	Conservation of mass: Link 1 Chemical formula and conservation of mass (H): Link 1	Adaptation and natural selection Link for week 4-7
30/11/20	Exothermic and endothermic reactions: Link 1 Link 2(H)	Evolution evidence
7/12/20	Energy level diagrams: Link 1 Link 2(H)	Case study of Mary Anning
14/12/20	Bond energies: Link 1 Calculating bond energies: Link 1	Biodiversity

Test paper to be sent out from school Reactions (**Types of reactions/ chemical energy**)

Year 7

Week commencing	Lesson 1+2	Lesson 3+4
2/11/20	Pure substances and mixtures: Link 1 Extension: Pure and impure substance: Link 1	Static Electricity Link for week 1-2
9/11/20	Solutions: Link 1	Electricity review, test to be sent out - Electricity
16/11/20	Solubility: Link 1 Extension: solubility and solubility practical: Link 1	Energy in food Link for week 3-7
23/11/20	Filtration: Link 1 Extension: Separating mixtures: Link 1	Renewable and non-renewable energy resource
30/11/20	Evaporation and distillation: Link 1 Extension: Rock salt, Distillation: Link 1	Power and energy
7/12/20	Chromatography: Link 1 Extension: Chromatography: Link 1	Energy stores and transfers (part 1 + 2)
14/12/20	Extra material optional: Case study of Masataka taketsuru: Link 1	Investigating energy transfers and efficiency

Test papers to be sent out by the school

(**Matter**)