

Kingsbridge Community College

Year 11 Bridging Work for A Level Chemistry (OCR Chemistry A)

PERIODIC TABLE OF THE ELEMENTS

PERIOD	1																18																					
	GROUP																																					
1	1 H HYDROGEN 1.008																															18 He HELIUM 4.003						
2	3 Li LITHIUM 6.941	4 Be BERYLLIUM 9.012																	13 B BORON 10.81	14 C CARBON 12.011	15 N NITROGEN 14.007	16 O OXYGEN 15.999	17 F FLUORINE 18.998	18 Ne NEON 20.180														
3	11 Na SODIUM 22.990	12 Mg MAGNESIUM 24.305																	13 Al ALUMINUM 26.982	14 Si SILICON 28.086	15 P PHOSPHORUS 30.974	16 S SULFUR 32.06	17 Cl CHLORINE 35.45	18 Ar ARGON 39.948														
4	19 K POTASSIUM 39.098	20 Ca CALCIUM 40.078	21 Sc SCANDIUM 44.956	22 Ti TITANIUM 47.867	23 V VANADIUM 50.942	24 Cr CHROMIUM 51.996	25 Mn MANGANESE 54.938	26 Fe IRON 55.845	27 Co COBALT 58.933	28 Ni NICKEL 58.693	29 Cu COPPER 63.546	30 Zn ZINC 65.38	31 Ga GALLIUM 69.723	32 Ge GERMANIUM 72.63	33 As ARSENIC 74.922	34 Se SELENIUM 78.96	35 Br BROMINE 79.904	36 Kr KRYPTON 83.798																				
5	37 Rb RUBIDIUM 85.468	38 Sr STRONTIUM 87.62	39 Y YTIORIUM 88.906	40 Zr ZIRCONIUM 91.224	41 Nb NIOBIUM 92.906	42 Mo MOLYBDENUM 95.94	43 Tc TECHNETIUM 98.9062	44 Ru RHODIUM 101.07	45 Rh RHODIUM 102.91	46 Pd PALLADIUM 106.42	47 Ag SILVER 107.8682	48 Cd CADMIUM 112.411	49 In INDIUM 114.818	50 Sn TIN 118.710	51 Sb ANTIMONY 121.757	52 Te TELURIUM 127.6	53 I IODINE 126.905	54 Xe XEON 131.29																				
6	55 Cs CAESIUM 132.91	56 Ba BARIUM 137.33	57-71 f SEE BELOW	72 Hf HAFNIUM 178.49	73 Ta TANTALUM 180.948	74 W WOLFRAM 183.84	75 Re RHENIUM 186.21	76 Os OSMIUM 190.23	77 Ir IRIDIUM 192.22	78 Pt PLATINUM 195.08	79 Au GOLD 196.967	80 Hg MERCURY 200.59	81 Tl THALLIUM 204.38	82 Pb LEAD 207.2	83 Bi BISMUTH 208.98	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222																				
7	87 Fr FRANCIUM 223	88 Ra RADIUM 226	89-103 f SEE BELOW	104 Rf RUFORMIUM 261	105 Db DUBNIUM 262	106 Sg SEABORGIUM 266	107 Bh BOHRIUM 264	108 Hs HASSEMIUM 277	109 Mt MEITNERIUM 268	110 Ds DAHMSIUM 271	111 Rg ROSGOLDIUM 272	112 Cn COPECHEVNIUM 285	113 Uut UNUNTRIUM 288	114 Fl FLETCHEVNIUM 289	115 Uup UNUNPENTIUM 290	116 Lv LIVERMORIUM 293	117 Uus UNUNSEPTIUM 294	118 Uuo UNOCTIUM 296																				

GUIDE

ATOMIC NUMBER

ELEMENT SYMBOL

ELEMENT NAME

ATOMIC WEIGHT

72 La LANTHANUM 138.91	73 Ce CELIUM 140.12	74 Pr PRASEODYMIUM 140.91	75 Nd NEODYMIUM 144.24	76 Pm PROMETHIUM 145	77 Sm SAMARIUM 150.35	78 Eu EUROPIUM 151.96	79 Gd GADOLINIUM 157.25	80 Tb TERBIUM 158.93	81 Dy DYSMIUM 162.50	82 Ho HOBIUM 164.93	83 Er ERBIUM 167.26	84 Tm THULMIUM 168.93	85 Yb YTERBIUM 173.05	86 Lu LUTETIUM 174.97	87 La LANTHANUM 138.91
89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROTACTINIUM 231	92 U URANIUM 238	93 Np NEPTUNIUM 237	94 Pu PLUTONIUM 244	95 Am AMERICIUM 243	96 Cm CURIUM 247	97 Bk BERKELEIUM 247	98 Cf CALIFORNIUM 251	99 Es EINSTEINIUM 252	100 Fm FERMIUM 257	101 Md MEYERHOFNIUM 288	102 No NOBELIUM 289	103 Lr LAWRENCIUM 260	87 La LANTHANUM 138.91

Name: _____

These activities have been designed to help bridge the gap between GCSE Chemistry/Combined Science (Chemistry) and AS level. This jump in demand regularly catches out students early in the course so these activities are designed to link the content studied at GCSE with some of the material you will study at A Level during your first term. Hopefully, by working through this booklet and going back over some of the most important topics e.g. atomic structure, bonding, acids, energy, balancing equations and calculations, you will start to feel confident and well prepared for the AS Chemistry course. And if you have any questions about the A Level course, or need help with any of the activities, then please do not hesitate to contact me: angela.stephenson@kingsbridgecollege.org.uk

Many thanks, Miss Stephenson.

TASK 1 - Key areas from your GCSE Science work that you will need for AS Chemistry

Before you start any of the other tasks I would suggest that you revise the following GCSE topics by making revision cards / mind maps:

- 1) Atomic structure – protons, neutrons, electrons, atomic number, mass number, isotopes
- 2) Electron arrangement – how many electrons each shell can hold
- 3) Ionic compounds – dot and cross diagrams, properties, examples
- 4) Covalent compounds – dot and cross diagrams, properties, examples of simple and giant covalent molecules
- 5) Metallic bonding – labelled diagram, properties and uses of metals
- 6) Calculations – relative atomic mass, relative molecular mass, moles, empirical formulas, atom economy, percentage yield.
- 7) Organic compounds – alkanes and alkenes
- 8) Fractional distillation and cracking.
- 9) Rates of reaction – collision theory, how to speed up reactions, catalysts
- 10) Endothermic and exothermic reactions, bond energy calculations
- 11) Periodic table – overall arrangement in groups and periods

Please use your GCSE revision guides, the CGP Head Start to A Level Chemistry pages attached, and the following websites:

www.amazing-grades.com

www.creative-chemistry.co.uk

www.chemguide.co.uk

www.s-cool.co.uk

www.bbc.co.uk/schools/gcsebitesize/chemistry

www.rsc.co.uk

<https://phet.colorado.edu>

TASK 2 – Royal Society of Chemistry: Level 1 TITRATION Screen experiment

This is a brilliant, interactive acid-base (alkali) titration for you to work through.

[Titration screen experiment \(rsc.org\)](http://www.rsc.org)

Please select **Quick Start Level 1 Titration**, or you can register with the Royal Society of Chemistry if you want to save your work and come back to it.

TASK 3 – Royal Society of Chemistry “Starter for 10” Activity Sheets

Please complete Activity 1 - Balancing Equations

TASK 4 – AS Preparation Examination Questions (Hand in the completed booklet during the first week back in September 2024)