



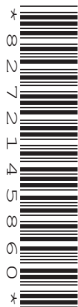
Oxford Cambridge and RSA

November 2020

**GCSE (9–1) Combined Science B
(Twenty First Century Science)**

J260 04/08

Data Sheet



INSTRUCTIONS

- Do **not** send this Data Sheet for marking. Keep it in the centre or recycle it.

INFORMATION

- This document has **4** pages.

The Periodic Table of the Elements

(1)	(2)											(3)	(4)	(5)	(6)	(7)	(0)
1	2											13	14	15	16	17	18
1	2											13	14	15	16	17	18
atomic number	atomic number											atomic number	atomic number	atomic number	atomic number	atomic number	atomic number
Symbol	Symbol											Symbol	Symbol	Symbol	Symbol	Symbol	Symbol
name	name											name	name	name	name	name	name
relative atomic mass	relative atomic mass											relative atomic mass	relative atomic mass	relative atomic mass	relative atomic mass	relative atomic mass	relative atomic mass
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
H	He	Li	Be	B	C	N	O	F	Ne	Na	Mg	Al	Si	P	S	Cl	Ar
hydrogen	helium	lithium	beryllium	boron	carbon	nitrogen	oxygen	fluorine	neon	sodium	magnesium	aluminium	silicon	phosphorus	sulfur	chlorine	argon
1.0	4.0	6.9	9.0	10.8	12.0	14.0	16.0	19.0	20.2	23.0	24.3	27.0	28.1	31.0	32.1	35.5	39.9
19	20	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
K	Ca	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te
potassium	calcium	rubidium	strontium	yttrium	zirconium	niobium	molybdenum	technetium	ruthenium	rhodium	palladium	silver	cadmium	indium	tin	antimony	tellurium
39.1	40.1	85.5	87.6	88.9	91.2	92.9	95.9	102.9	101.1	102.9	106.4	107.9	112.4	114.8	118.7	121.8	127.6
55	56	57–71	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
Cs	Ba	Lanthanoids	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
caesium	barium		lanthanum	cerium	praseodymium	neodymium	promethium	samarium	euroium	gadolinium	terbium	dysprosium	holmium	erbium	thulium	ytterbium	lutetium
132.9	137.3		138.9	140.1	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9	140.9
87	88	89–103	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Fr	Ra	Actinoids	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Mn	Nv	Db
francium	radium		actinium	thorium	protactinium	uranium	neptunium	plutonium	americium	curium	berkelium	californium	einsteinium	fermium	mendelevium	nobelium	dubnium

Equations in physics

$$(\text{final speed})^2 - (\text{initial speed})^2 = 2 \times \text{acceleration} \times \text{distance}$$

$$\text{change in internal energy} = \text{mass} \times \text{specific heat capacity} \times \text{change in temperature}$$

$$\text{energy for a change of state} = \text{mass} \times \text{specific latent heat}$$

$$\text{energy stored in a stretched spring} = \frac{1}{2} \times \text{spring constant} \times (\text{extension})^2$$

$$\begin{aligned} \text{potential difference across primary coil} \times \text{current in primary coil} = \\ \text{potential difference across secondary coil} \times \text{current in secondary coil} \end{aligned}$$

Higher tier only –

$$\text{force} = \text{magnetic flux density} \times \text{current} \times \text{length of conductor}$$

$$\text{change in momentum} = \text{resultant force} \times \text{time for which it acts}$$

**Copyright Information**

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.