

## GCSE Twenty First Century Science Suite

Changes to the specifications as of 20 October 2017

Specification	Page	Specification row	Change
Biology B (J257)	13	Teaching and learning narrative	In 1 <sup>st</sup> paragraph, 'genetic variant/variants' has been replaced with 'alleles'
	54	Teaching and learning narrative	'People's perception ..... estimated risk.' emboldened
	59	Practical science statement	Centres must provide a written <b>practical science statement</b> detailing that..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].
	66	Head of Centre Annual Declaration	The Head of Centre is required to provide a declaration to the JCQ as part of the annual..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].

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Chemistry B (J258)	10	Teaching and learning narrative	' but these are limited because they do not represent the scale or behaviour of actual particles, they assume that particles are inelastic spheres, and they do not fully take into account the different interactions between particles' emboldened
	24	Teaching and learning narrative	last paragraph in narrative emboldened 'Scientists are developing.....large quantities of metals quickly( <i>IaS4</i> )'
	25	Teaching and learning narrative	'The equation for a reaction can.....so that processes can run as efficiently as possible.' emboldened
	44	Teaching and learning narrative	'The equation for a reaction can.....so that processes can run as efficiently as possible.' emboldened
	50	Teaching and learning narrative	Second sentence, first paragraph 'Some reactions involve a colour change or form a solid in solution; ..... using apparatus such
	52	Teaching and learning narrative	Third paragraph emboldened ' Data about yield ..... without affecting yield
	54	C6.4.6	Equation corrected to read: Atom economy = <u>mass of atoms in desired product</u> <u>x 100</u> Total mass of atoms in reactants
	62	Teaching and learning narrative	Part of fourth paragraph emboldened 'People's perception of the size of a particular risk.....from the statistically estimated risk.'

	66	Practical science statement	Centres must provide a written <b>practical science statement</b> detailing that..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].
	73	Head of Centre Annual Declaration	The Head of Centre is required to provide a declaration to the JCQ as part of the annual..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].

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Physics B (J259)	14	Teaching and learning narrative	Text emboldened
	27	P3.6.3	letter in the brackets after length of conductor changed to a lowercase 'L' and 'magnetic field strength' changed to 'magnetic flux density'
	48	Teaching and learning narrative	last paragraph, 2 <sup>nd</sup> line changed to read 'stretch a spring'
	48	P6.3.6b)	'(PAG2)' added to statement
	61	Practical science statement	Centres must provide a written <b>practical science statement</b> detailing that..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].
	68	Head of Centre Annual Declaration	The Head of Centre is required to provide a declaration to the JCQ as part of the annual..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].
	72	M4e	'P' added to Subject column and coloured purple
	76	Section (b)	'force = magnetic field strength x current x length of conductor (P3.6.3)' changed to 'force = magnetic flux density x current x length of conductor (P3.6.3)'

Specification Combined Science B (J260)	Page	Specification row	Change
	17	Teaching and learning narrative	1 <sup>st</sup> paragraph changed to read 'Comparing the genomes of individuals with or without a disease can help to identify alleles associated with the disease. Once identified, we can test for these alleles in adults, children, foetuses and embryos, to investigate their risk of developing certain diseases. We can also assess the risk of adults passing these alleles to their offspring (including the identification of 'carriers' of recessive alleles). Genetic testing can also help doctors to prescribe the correct drugs to a patient ('personalised medicine'), by testing for alleles that affect how drugs will work in their body.'
	30	Teaching and learning narrative	1 <sup>st</sup> paragraph 'chemical' changed to 'substance'
	32	B4.1.5a	'(PAGB4)' added to the end of the statement
	32	Teaching and learning narrative	2 <sup>nd</sup> paragraph, 'genes from one organism can be added to another because all organisms use the same genetic code.' deleted

	49	Teaching and learning narrative	' but these are limited because they do not represent the scale or behaviour of actual particles, they assume that particles are inelastic spheres, and they do not fully take into account the different interactions between particles' emboldened 2 <sup>nd</sup> sentence, model inserted after particle
	57	Teaching and learning narrative	2 <sup>nd</sup> paragraph, 4 <sup>th</sup> sentence changed to read 'Metals, such as Group 1 elements, lose electrons from the outer shells .....with a positive charge.' 5 <sup>th</sup> sentence should read 'Non-metals, such as Group 7
	62	Teaching and learning narrative	last paragraph in narrative emboldened 'Scientists are developing.....large quantities of metals quickly (laS4)'
	63	Teaching and learning narrative	last part of second paragraph ' The addition or removal of electrons.....half equations' emboldened
	83	Teaching and learning narrative	second sentence, first paragraph 'Some reactions involve a colour change or form a solid in solution; ..... using apparatus such as a colorimeter.' emboldened
	85	Teaching and learning narrative	third paragraph ' Data about yield ..... without affecting yield.' emboldened
	90	Teaching and learning narrative	last paragraph 'Refraction of light ..... a change in direction.' emboldened
	103	Linked learning opportunities, Practical work	3 <sup>rd</sup> bullet point deleted
	104	P3.5.3	'(I)' after size of current replaced with (I) and maths reference 'M3b' deleted
	104	P3.5.3	'magnetic field strength' changed to 'magnetic flux density'
	108	P4.2.10	'Interpret enclosed areas in velocity-time graphs' emboldened
	111	Teaching and learning narrative	'momentum' emboldened
	120	Teaching and learning narrative	Changed to read 'Different substances require different amounts of energy per kilogram to change the state of the substance – this is called the specific latent heat of the substance.'
	123	Teaching and learning narrative	final paragraph changed to read 'When.....or stretch a spring .....removed.'
	131	Teaching and learning narrative	fourth paragraph 'People's perception ..... estimated risk.' emboldened
	151	M4e	'P' added to Subject column
	139	Practical science statement	Centres must provide a written <b>practical science statement</b> detailing that..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].

	146	Head of Centre Annual Declaration	The Head of Centre is required to provide a declaration to the JCQ as part of the annual..... malpractice and/or maladministration [under General Condition A8 ( <i>Malpractice and maladministration</i> )].
	156	Section (b)	'force = magnetic field strength x current x length of conductor (P3.5.3)' changed to 'force = magnetic flux density x current x length of conductor (P3.5.3)'