

Mapping document

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GCE Chemistry

Edexcel Advanced Subsidiary GCE in Chemistry (8CH01)

First examination 2009

Edexcel Advanced GCE in Chemistry (9CH01)

First examination 2010

Introduction 1

Mapping of the new GCE in Chemistry (8CH01/9CH01) to the current Edexcel and Nuffield specifications 2

Unit 1: The Core Principles of Chemistry 2

Unit 2: Application of Core Principles of Chemistry 4

Unit 4: General Principles of Chemistry II — Rates, Equilibria and Further Organic Chemistry 6

Unit 5: General Principles of Chemistry II — Transition Metals and Organic Nitrogen Chemistry 9

Introduction

This document contains a detailed mapping of the new GCE in Chemistry (8CH01/9CH01) to the current Edexcel and Nuffield GCE in Chemistry specifications.

If the mapping indicates *New* this means that the specification point is not specifically mentioned in either the Edexcel GCE in Chemistry (8080/9080) or the Edexcel GCE in Chemistry (Nuffield) (8086/9086) specifications. However, many of the experiments would have been done. For Nuffield some of the specification points may not be specifically mentioned in the specification, but may appear in the Nuffield coursebook. These will be labelled *See Nuffield coursebook*.

Some of the specification points in the new Edexcel GCE in Chemistry are based on fundamental GCSE Science and Additional Science knowledge, such as:

1.3a demonstrate an understanding of the terms atom, element, ion, molecule, compound, empirical and molecular formulae

These will be labelled *Fundamental GCSE*.

If a specific part of the specification point is new, but the rest is not, then this part will be indicated. For example *New (parts per million)* indicates that parts per million is new to the specification, but the rest of the specification point is not.

Mapping of the new Edexcel GCE in Chemistry (8CH01/9CH01) to the current Edexcel and Nuffield specifications

Unit 1: The Core Principles of Chemistry

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 1.3: Formulae, equations and amounts of substance		
1.3a	Fundamental GCSE	1 skills a and c
1.3b	1.2 b	1.3
1.3c	1.1 b New (parts per million (ppm))	1.4 New (parts per million (ppm))
1.3d	1.2 e	4.2
1.3e	1.2 c	1.4
1.3f	1.2 g and h	1.4
1.3g	2.2 d ii	2 skills e
1.3h	1.2 d	1.4
1.3i	1.2 c	1 skills e
1.3j	2.2d ii	1.2
1.3k	3.1B a, b and 1.2 b	1.1 and 1 skills d
Topic 1.4: Energetics		
1.4a	2.1 a	5.1
1.4b	2.1 d	2 skills e
1.4c	2.1 b	5.1, 1 skills h and 7.6
1.4d	2.1 c	5 skills a and 7.6
1.4e	2.1 f	5.2
1.4f i and ii iii	2.1 g New (plan)	5 skills c 5.2
1.4g	2.1 h and 2.2 c	7.2 and 7.6
Topic 1.5: Atomic structure and the periodic table		
1.5a	1.1 b	1 skills a
1.5b i and ii iii	1.1 e 1.1 e	1 skills a New
1.5c	New	New
1.5d	1.1 f	3.4
1.5e i ii	1.1 g 1.1 h	3.4 3.4
1.5f	New	New
1.5g	1.1 j	1 skills c
1.5h	1.1 k	New
1.5i	1.1 I	3.1
1.5j	New	3.1
1.5k	1.4 b	3.1

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 1.6: Bonding		
1.6.1a	New	3.5
1.6.1b	1.3 a	3 skills d
1.6.1c	1.3 a	3 skills d
1.6.1d	1.3 e	3.5
1.6.1e	1.3 a	3.5
1.6.1f	1.6 i and 1.4 b iii	3 skills g
1.6.1g	4.1 a, b (calculations only) and 1.1 l	16.1, 16.2 and 16.3
1.6.1h	4.1 c	16 skills b
1.6.1i	1.3 b ii	New
1.6.1j	1.3 b ii	New
1.6.1k	4.1 c	16 skills b
1.6.1l	New	New
1.6.2a	1.3 a	7.2
i	1.3 e	New
ii	New	7 skills e
1.6.2b	1.3 a	7 skills b
1.6.3a	1.3 j	3.6
1.6.3b	1.3 j	3.6
1.6.3c	1.3 j	3.6
Topic 1.7: Introductory organic chemistry		
1.7.1a	2.2 a i	2 skills a iii
1.7.1b	2.2 a ii and New (skeletal formulae)	2 skills a i and New (skeletal formulae)
1.7.1c	New	New
1.7.1d	3.1B j	New
i	New	New
ii	3.1B j	New
iii	New	New
1.7.2a	2.2 a I	8 skills a i
1.7.2b	2.2 a iii	8 skills a ii
1.7.2c	2.2 e	8.2
1.7.2d	New	New
1.7.2e	2.2 b i and 5.3 b i	8 skills b and New (mechanism)
1.7.3a	2.2 a i	8 skills a i
1.7.3b	2.2 a iv	8 skills a ii
1.7.3c	New	New
1.7.3d i	2.2 b ii	8 skills b
ii	2.2 b ii	New
iii	2.2 b ii	8 skills b
1.7.3e	5.3 b iii	New
1.7.3f	2.2 b ii and New (product of test)	New
1.7.3g	2.2 e ii	8 skills b
1.7.3h	New	New

Unit 2: Application of Core Principles of Chemistry

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 2.3: Shapes of molecules and ions		
2.3a	1.3 i	7 skills d
2.3b	1.3 h	7 skills d
2.3c	1.3 i	7 skills d
2.3d	1.3 i	7 skills d
2.3e	New	New
Topic 2.4: Intermediate bonding and bond polarity		
2.4a	1.3 b i	7 skills f
2.4b	1.3 b i	7 skills g
2.4c	1.3 c	New
2.4d	New	9.2
Topic 2.5: Intermolecular forces		
2.5a	1.3 d	9.1, 9.2 and 9.3
2.5b	1.3 f	9.1
2.5c	New	New
2.5d	New	New
Topic 2.6: Redox		
2.6a i	1.5 a	6 skills a
ii	1.5 c	New
iii	1.5 f	6 skills a
iv	1.5 f	6 skills a
2.6b	1.5 d	New
Topic 2.7: The periodic table — groups 2 and 7		
2.7.1a	1.6 c	3 skills g
2.7.1b	1.6.e	New
2.7.1c	1.6 f	New
2.7.1d	1.6 h	New
2.7.1e	1.6 i	4.4
2.7.1f	1.6 b	3.3
2.7.1g i	1.6 i	4.4
ii	1.6 b	3.3
iii	1.2 f	4.1
2.7.1h	3.1B h and i	New
2.7.2a	1.7 a	6.3
2.7.2b i	1.7 g, 1.6 d and e	6.3
ii	1.7 f and 1.7 g	6.8
2.7.2c	5.1 b	6.8
2.7.2d i	1.7 b and d	6 skills b
ii	1.7 d	6 skills b
iii	1.7 c	6 skills b
2.7.2e	New	6 skills c

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 2.8: Kinetics		
2.8a	2.3 a	Fundamental GCSE
2.8b	2.3 b	7 skills j
2.8c	2.3 c	7 skills j
2.8d	2.3 d	7 skills l
2.8e	2.3 e	7 skills k
2.8f	New	New
Topic 2.9: Chemical equilibria		
2.9a	2.4 a	7 skills m
2.9b	2.4 b	7 skills m
2.9c	New	New
Topic 2.10: Organic chemistry		
2.10.1a	2.2 b iv	2 skills a
2.10.1b	2.2 b iv	2 skills a
2.10.1c i	2.1 c	2 skills d
ii	New	2 skills d
iii	2.1 b iv	10.2
iv	2.1 b iv	2 skills d
2.10.1d	5.5 b iii	2.2
2.10.2a	2.2 b iii	10 skills a
2.10.2b	2.2 c	10 skills c
2.10.2c	2.2 b iv	10.2
2.10.2d i	2 b iii	10.2
ii	2 b iii	10.2
iii	New	10.2
iv	2 b iii	10.2
2.10.2e	2.b iii	10.2
2.10.2f	New	10.3
Topic 2.11: Mechanisms		
2.11a	2.2 a v	10 skills e
2.11b	2.2 a v and 5.3 b	10 skills e
2.11c	2.2 a v	10 skills e
2.11d	New	New
2.11e	2.2 c	10 skills c
2.11f	5.3 b v	New
2.11g	New	New
Topic 2.12: Mass spectra and IR		
2.12a	1.1 a iii and 5.5 a iii a	10.1 and 20.3
2.12b	5.5 a iii b	20.3 and 21.2
2.12c	New	New
2.12d	New	New

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 2.13: Green chemistry		
2.13a	New	New
2.13b	New	New
2.13c	New	New
2.13d	New	New
2.13e	New	New
2.13f	New	New

Unit 4: General Principles of Chemistry II – Rates, Equilibria and Further Organic Chemistry

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 4.3: How fast? – rates		
4.3a	5.4 a, b and j	11 skills a
4.3b	5.4 h	11.2
4.3c	5.4 i	11.2
4.3d	5.4 i	11.2
4.3e	5.4 c	11.2
4.3f i	5.4 j	11 skills c
ii	5.4 b	11 skills c
iii	5.4 c	11 skills c
iv	5.4 e and f	11 skills c
v	5.4 d	11 skills c
4.3g	5.4 d	11.4
4.3h	4.5 b iv. 5.3 b v and 5.4 f	11.3
4.3i	5.3 b v and 5.4 f	11.3 and New (addition to carbonyl compounds)
4.3j	5.3 b v and 5.4 f	11.3
Topic 4.4: How far? – entropy		
4.4a	New	13 skills a
4.4b	New	13 skills a
4.4c	New	13 skills c
4.4d	New	13 skills c
4.4e	New	13 skills c
4.4f	New	13 skills a
4.4g	New	See Nuffield coursebook
4.4h	New	13 skills b
4.4i	New	13 skills d
4.4j	New	13 skills e
4.4k	New	13 skills f

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
4.4l	2.3 f	New
4.4m	New	13 skills d and 14 skills e
4.4n	4.1 e	New
4.4o	4.1 e	New
4.4p	New	13 skills f
Topic 4.5: Equilibria		
4.5a	2.4 a	7 skills m
4.5b	New	New
4.5c	4.3 b	14 skills c
4.5d	4.3 a and b	14 skills c
4.5e	4.3 b and c	14 skills b and c
4.5f	New	New
4.5g	New	New
4.5h	4.3 f and New (entropy)	14 skills n
Topic 4.6: Application of rates and equilibrium		
4.6a	2.3 a, 4.3 d and f	New
4.6b	2.4 d	New
4.6c	New	New
4.6d	2.3 f and 2.4 d	14.4
Topic 4.7: Acid/base equilibria		
4.7a	New	New
4.7b	4.4 a	14.6
4.7c	4.4 a	14.6
4.7d	4.4 b, d and e	14.6
4.7e	4.4 c and d	14 skills g
4.7f	4.4 f	New
4.7g	4.4 g	14 skills g
4.7h	4.4 g	14 skills g
4.7i	4.4 i and 4.4 j	14 skills h
4.7j	4.4 k	14 skills h
4.7k	4.4 l	14.8
4.7l	4.4 j	New
4.7m	New	New
Topic 4.8: Further organic chemistry		
4.8.1a	4.5 a ii, iii and iv	18 skills b
4.8.1b	4.5 a v	18.2
4.8.1c	4.5 a vi	18 skills c
4.8.1d	5.3 b v and vi	New
4.8.2a	4.5 a i	15 skills a
4.8.2b	New	15 skills b

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
4.8.2c i	4.5 b iv	15 skills b
ii	4.5 b iv	New
iii	4.5 b iv and 5.3 b vi	New
iv	4.5 b iv	15 skills b
v	4.5 b iv	New
4.8.3a	4.5 a i	15 skills a
4.8.3b	New	15 skills c
4.8.3c	2.2 b iv and 5.4 b vii	2 skills l and New (hydrolysis of nitriles)
4.8.3d	4.5 b ii	New
4.8.4a	4.5 a i	15 skills a
4.8.4b	4.5 b v	15 skills d
ii	4.5 b v	New
iii	4.5 b v	New
iv	4.5 b v	New
4.8.4c i	4.5 b iii	15 skills d
ii	4.5 b iii	15 skills d
iii	New	New
4.8.4d	4.5 b ii	18 skills e and f
Topic 4.9: Spectroscopy and chromatography		
4.9a i	5.5 a iii b	21.2
ii	New to Edexcel	New to Nuffield
iii	5.5 a iii c	21.3
iv	5.3 b i	8 skills a
4.9b i	5.5 a iii c	21.3
ii	New	New
iii	5.5 a iii c	21.3
iv	New	New
4.9c	5.5 a iii b	11.2
4.9d	5.5 a iii a	21.1
4.9e	New	New



Unit 5: General Principles of Chemistry II — Transition Metals and Organic Nitrogen Chemistry

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
Topic 5.3: Redox and the chemistry of transition metals		
5.3.1a	1.5 a and 1.5 d	17 skills a
5.3.1b	5.1 a	New
5.3.1c	5.1 c	17 skills a
5.3.1d	5.1 d	17 skills d and g
5.3.1e	New	17 skills f
5.3.1f	5.1 d	17 skills h
5.3.1g	5.1 d	17 skills d
5.3.1h	5.1 b	19 skills d and 6.8
5.3.1i	3.1B h and 3.1B i	New
5.3.1j	New	New
5.3.1k	New	New
5.3.2a	5.2 b	19 skills a
5.3.2b	5.2 a	3 skills c
5.3.2c	1.1 g	3 skills b
5.3.2d	5.2 a	19 skills b
5.3.2e	5.2 d	19 skills e
5.3.2f i	5.2 c ii	19 skills b
ii	5.2 d	19 skills b
iii	5.2 d	19 skills b
iv	5.2 e	19.2
v	New	19.1
vi	5.1 e	New
5.3.2g i	5.2 e	19.2
ii	5.2 c ii	19.1
iii	5.2 c i	19.2
5.3.2h	5.2 i	19 skills g
5.3.2i	New	New
5.3.2j	5.2 f	New
5.3.2k	5.2 f	New
5.3.2l	New	New
Topic 5.4: Further organic chemistry		
5.4.1a	5.3 a	12.1
5.4.1b i	New	12 skills a
ii	5.3 a i and New (fuming sulphuric acid)	12 skills a and New (acylation)
iii	5.3 a	12 skills a
5.4.1c	5.3 b iv	New

New Edexcel (8CH01/9CH01)	Current Edexcel (8080/9080)	Current Nuffield (8086/9086)
5.4.1d	5.3 a i	12 skills a
5.4.1e	5.3 a iii	12 skills b
5.4.2a	4.5 a i	18.1 and 18.3
5.4.2b i	New	18 skills a
ii	New	18 skills a
iii	4.5 a vi	18 skills a
iv	New	18 skills a
v	4.5 a vi	18 skills a
5.4.2c	5.3 a iv	New
5.4.2d	5.3 a v	New
5.4.2e	4.5 b iv	New
5.4.2f i	4.5 b vi	18.5
ii	New	18.5
5.4.2g	2.4 e ii and 4.5 b vi	18.5
5.4.2h	New	18.5
5.4.2i i	4.5 b ix	18 skills d and New (zwitterions)
ii	New	18 skills d
iii	4.5 a vi	18 skills d
iv	New	18 skills d
v	New	18 skills d
5.4.3a	New	New
5.4.3b	New	New
5.4.3c	1.2 a and 5.5 a	20 skills a
5.4.3d i - iv	5.5 b i, ii and iii	20 skills b
v	New	New
5.4.3e	New	New
5.4.3f	5.5 b iii	See Nuffield coursebook

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