Science Summary Brochure

www.gcse-science.com
WELCOME TO GCSE SCIENCES 2011

Enjoy the freedom and excitement of teaching science qualifications that help you inspire students of all abilities.

OCR invites you to join us on a voyage of discovery with our GCSE Science qualifications that aim to help you to engage and motivate a new generation of young scientists. We have a wide range of GCSE science specifications to meet the needs of you and your students while providing an ideal foundation for students to progress to more advanced studies and science related careers.

A FEW GOOD REASONS TO WORK WITH OCR

- You can enjoy the **freedom and excitement** of teaching science qualifications which have been developed to help you inspire students of all abilities.
- We've built specifications **with you in mind**, using a clear and easy-to-understand format, making them straightforward for you to deliver.
- Our **clear and sensible assessment** approach means that exam papers and requirements are clearly presented and sensibly structured for you and your students.
- **Pathways for choice** – we have the broadest range of science qualifications and our GCSEs provide an ideal foundation for students to progress to more advanced studies and science-related careers.
- **Working in partnership to support you** – together with teachers we’ve developed a range of practical help and support to save you time. We provide everything you need to teach our specifications with confidence and ensure your students get as much as possible from our qualifications.
- **A personal service** – as well as providing you with lots of support resources, we’re also here to help you with specialist advice, guidance and support for those times when you simply need a more individual service.

THOUSANDS OF TEACHERS ALREADY UNLEASH THE JOY OF SCIENCE WITH OCR

www.gcse-science.com
TWENTY FIRST CENTURY SCIENCE SUITE – SCIENCE TODAY FOR SCIENTISTS TOMORROW

Explore the Science that underpins day-to-day life. Enthuse and motivate students using a mix of teaching strategies.

- All students study the content of GCSE Science which helps them to appreciate what science can tell them about themselves, the environment, and the Universe.

The suite consists of five specifications:
- GCSE Science A
- GCSE Additional Science A
- GCSE Biology A
- GCSE Chemistry A
- GCSE Physics A

Our Twenty First Century Science suite:
- introduces the relevance of science through practical application before exploring the scientific principles underneath
- is engaging to study and motivating for you to teach
- students engage with the course by making sense of the science they come across in everyday life
- well regarded and proven concept led teaching approach to science
- is an ideal foundation for students to progress to more-advanced studies and science-related careers
TWENTY FIRST CENTURY SCIENCE SUITE

GCSE SCIENCE A

GCSE Science A has an emphasis on scientific literacy – the knowledge and understanding that students need to recognise the impact of science and technology on everyday life.

Using Unit A161 from Biology A, A171 from Chemistry A and Unit A181 from Physics A (separate science papers).

ASSESSMENT – J241 GCSE SCIENCE A

Three written exams, assessed externally by OCR, each of which:
• is offered in Foundation and Higher tiers
• uses both objective style and free response questions (there is no choice of questions)
• assesses the quality of written communication.

A controlled assessment unit:
• comprises Practical Investigation from a choice set by OCR
• is assessed by teachers, internally standardised and then moderated externally by OCR
• assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A161: Biology A</td>
<td>B1, B2 and B3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A171: Chemistry A</td>
<td>C1, C2 and C3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A181: Physics A</td>
<td>P1, P2 and P3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A144: Science A</td>
<td>Controlled assessment set by OCR</td>
<td>25 % of the total GCSE</td>
<td>Approximately 6-7 hours; 64 marks</td>
</tr>
</tbody>
</table>
TWENTY FIRST CENTURY SCIENCE SUITE
GCSE ADDITIONAL SCIENCE A

GCSE Additional Science A uses different contexts to relate science concepts to their applications. Focusing on scientific explanations and models, it gives students an insight into how scientists help develop our understanding of ourselves and the world we live in.

GCSE Additional Science A provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

Using Unit A162 from Biology A, A172 from Chemistry A and Unit A182 from Physics A (separate science papers).

UNIT.A162 (BIOLOGY A)
Module B4: The processes of life
• Chemical reactions in living things
• How do plants make food?
• How do living organisms obtain energy?

Module B5: Growth and development
• How do organisms develop?
• How does an organism produce new cells?
• How do genes control growth & development in a cell?

Module B6: Brain and mind
• How do animals respond to changes?
• Passing information through the nervous system
• Can reflex responses be learned?
• How do humans develop complex behaviour?

UNIT.A172 (CHEMISTRY A)
Module C4: Chemical patterns
• What are the patterns in the properties of elements?
• How do chemists explain the patterns?
• The properties of Group 1 and Group 7 elements

Module C5: Chemicals of the natural environment
• Chemicals that make up the atmosphere
• What reactions happen in the hydrosphere?
• Chemicals that make up the lithosphere
• Extracting useful metals from minerals

Module C6 – Chemical synthesis
• Chemicals and why we need them
• Planning, carrying out and controlling a chemical synthesis

UNIT.A182 (PHYSICS A)
Module P4: Explaining motion
• How can we describe motion?
• What are forces?
• Connection between forces and motion
• Describing motion as energy changes

Module P5: Electric circuits
• Electric current – a flow of what?
• What determines the current in circuits?
• Series and parallel circuits
• How is mains electricity produced?
• Electric motors

Module P6: Radioactive materials
• Why are some materials radioactive?
• Handling and using radioactive materials safely

ASSESSMENT – J242 GCSE ADDITIONAL SCIENCE A

Three written exams, assessed externally by OCR, each of which:
• is offered in Foundation and Higher Tiers
• uses both objective style and free response questions (there is no choice of questions)
• assesses the quality of written communication.

A controlled assessment unit:
• comprises Practical Investigation from a choice set by OCR
• is assessed by teachers, internally standardised and then moderated externally by OCR
• assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A162: Biology A</td>
<td>B4, B5 and B6</td>
<td>25 %</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A172: Chemistry A</td>
<td>C4, C5 and C6</td>
<td>25 %</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A182: Physics A</td>
<td>P4, P5 and P6</td>
<td>25 %</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A154: Additional Science A</td>
<td>Controlled assessment set by OCR</td>
<td>25 %</td>
<td>Approximately 4.5-6 hours; 64 marks</td>
</tr>
</tbody>
</table>
GCSE Biology A provides the opportunity to further develop understanding of scientific explanations, how science works, and aspects of biology relevant to careers in science.

GCSE Biology A provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

UNIT A161 (MODULES B1, B2 AND B3)
Module B1: You and your genes
• What are genes?
• Why are families alike but not identical?
• How can genetic information be used?
• How is a clone made?

Module B2: Keeping healthy
• How do our bodies resist infection?
• Vaccines and antibiotics
• What increases risks of heart disease?
• How do our bodies control water balance?

Module B3: Life on Earth
• Systems in balance
• How has life on Earth evolved?
• The importance of biodiversity

UNIT A162 (MODULES B4, B5 AND B6)
Module B4: The processes of life
• Chemical reactions in living things
• How do plants make food?
• How do living organisms obtain energy?

Module B5: Growth and development
• How do organisms develop?
• How does an organism produce new cells?
• How do genes control growth & development in a cell?

Module B6: Brain and mind
• How do animals respond to changes?
• Passing information through the nervous system
• Can reflex responses be learned?
• How do humans develop complex behaviour?

UNIT A163 (MODULE B7)
Module B7: Further biology
• Peak performance – movement and exercise
• Peak performance – circulation
• Peak performance – energy balance
• What can we learn from natural ecosystems?
• New technologies

UNIT A164 (CONTROLLED ASSESSMENT)
This controlled assessment unit:
• comprises a Practical Investigation from a choice set by OCR
• is assessed by teachers, internally standardised and then externally moderated by OCR
• assesses the quality of written communication.

ASSESSMENT – GCSE BIOLOGY A J243
One internally assessed unit (controlled assessment) plus three written exams, assessed externally by OCR, each of which:
• is offered in Foundation and Higher tiers
• uses both objective style and free response questions (there is no choice of questions)
• assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A161</td>
<td>B1, B2 and B3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A162</td>
<td>B4, B5 and B6</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A163</td>
<td>B7</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A164</td>
<td>Controlled assessment set by OCR</td>
<td>25 % of the total GCSE</td>
<td>Approximately 4.5-6 hours; 64 marks</td>
</tr>
</tbody>
</table>
TWENTY FIRST CENTURY SCIENCE SUITE

GCSE CHEMISTRY A

GCSE Chemistry A provides the opportunity to further develop understanding of scientific explanations, how science works and aspects of chemistry relevant to careers in science.

GCSE Chemistry A provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

UNIT A171 (MODULES C1, C2 AND C3)

Module C1: Air quality
- Chemicals and pollutants in the air
- What produces air pollutants?
- How can we improve air quality?

Module C2: Material choices
- Measuring the properties of materials
- The importance of crude oil
- The molecular structure of materials
- What is nanotechnology?

Module C3: Chemicals in our lives: risks and benefits
- UK minerals and their effect on our economy
- The importance of salt
- Making chemicals & why we need to
- Using chemicals safely & sustainably

UNIT A172 (MODULES C4, C5 AND C6)

Module C4: Chemical patterns
- What are the patterns in the properties of elements?
- How do chemists explain the patterns?
- The properties of Group 1 and Group 7 elements

Module C5: Chemicals of the natural environment
- Chemicals that make up the atmosphere
- What reactions happen in the hydrosphere?
- Chemicals that make up the lithosphere
- Extracting useful metals from minerals

Module C6: Chemical synthesis
- Chemicals and why we need them
- Planning, carrying out and controlling a chemical synthesis

UNIT A173 (MODULE C7)

Module C7: Further chemistry
- Green chemistry
- Alcohols, carboxylic acids and esters
- Energy changes in chemistry
- Reversible reactions and equilibria
- Analysis

UNIT A174 (CONTROLLED ASSESSMENT)

This controlled assessment unit:
- comprises a Practical Investigation from a choice set by OCR
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

ASSESSMENT – GCSE CHEMISTRY A J244

One internally assessed unit (controlled assessment) plus three written exams, assessed externally by OCR, each of which:
- is offered in Foundation and Higher tiers
- uses both objective style and free response questions (there is no choice of questions)
- assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A171</td>
<td>C1, C2 and C3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A172</td>
<td>C4, C5 and C6</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A173</td>
<td>C7</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper; 60 marks</td>
</tr>
<tr>
<td>A174</td>
<td>Controlled assessment set by OCR</td>
<td>25 % of the total GCSE</td>
<td>Approximately 4.5-6 hours; 64 marks</td>
</tr>
</tbody>
</table>
TWENTY FIRST CENTURY SCIENCE SUITE

GCSE PHYSICS A

GCSE Physics A provides the opportunity to further develop understanding of scientific explanations and how science works and aspects of physics relevant to careers in science.

GCSE Physics A provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

UNIT A181 (MODULES P1, P2 AND P3)
Module P1: The Earth in the Universe
- The place of the Earth in the Universe
- What do we know about the Earth?

Module P2: Radiation and life
- Types of electromagnetic radiation
- Which radiation harms living tissue and why?
- The evidence for global warming
- Uses of EM waves in communication

Module P3: Sustainable energy
- How much energy do we use?
- How can electricity be generated?
- Which energy sources should we choose?

UNIT A182 (MODULES P4, P5 AND P6)
Module P4: Explaining motion
- How can we describe motion?
- What are forces?
- Connection between forces and motion
- Describing motion as energy changes

Module P5: Electric circuits
- Electric current – a flow of what?
- What determines the current in circuits?
- Series and parallel circuits
- How is mains electricity produced?
- Electric motors

Module P6: Radioactive materials
- Why are some materials radioactive?
- Handling and using radioactive materials safely

UNIT A183 (MODULE P7)
Module P7: Further Physics – studying the Universe
- Naked eye astronomy
- Light telescopes and images
- Mapping the Universe
- The sun, the stars and their surroundings
- The astronomy community

UNIT A184 (CONTROLLED ASSESSMENT)
This controlled assessment unit:
- comprises a Practical Investigation from a choice set by OCR
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

ASSESSMENT – GCSE PHYSICS A J245

One internally assessed unit (controlled assessment) plus three written exams, assessed externally by OCR, each of which:
- is offered in Foundation and Higher tiers
- uses both objective style and free response questions (there is no choice of questions)
- assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A181</td>
<td>P1, P2 and P3</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper: 60 marks</td>
</tr>
<tr>
<td>A182</td>
<td>P4, P5 and P6</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper: 60 marks</td>
</tr>
<tr>
<td>A183</td>
<td>P7</td>
<td>25 % of the total GCSE</td>
<td>1 hour written paper: 60 marks</td>
</tr>
<tr>
<td>A184</td>
<td>Controlled assessment set by OCR</td>
<td>25 % of the total GCSE</td>
<td>Approximately 4.5-6 hours; 64 marks</td>
</tr>
</tbody>
</table>
## TWENTY FIRST CENTURY SCIENCE SUITE – OVERVIEW OF CHANGES

<table>
<thead>
<tr>
<th>WHAT STAYS THE SAME?</th>
<th>WHAT CHANGES?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRUCTURE</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Biology A, Chemistry A & Physics A  
  - Four units, comprising three externally assessed units and one internally assessed unit.  
  - Externally assessed units are tiered – Foundation and Higher Tier. | Science A and Additional Science A reduced from five to four units, comprising three externally assessed units and one internally assessed unit.  
  - Unit weightings have been altered – all four units have equal weightings of 25%.  
  - Controlled assessment replaces coursework.  
  - No ‘Ideas in Context’ paper, and no pre-release material for externally assessed units. |

<table>
<thead>
<tr>
<th>CONTENT</th>
<th></th>
</tr>
</thead>
</table>
| Biology A, Chemistry A & Physics A  
  - Content is divided into seven modules.  
  - Modules B7, C7 and P7 are equivalent in length to any three modules from B1-B6, C1-C6 and P1-P6 respectively.  
  - The original modules  
    - B1, B2, B3, B5 and B6  
    - C1, C2, C4, C5, C6 and C7  
    - P1, P2, P4, P5 and P7  
  - Module B7, ‘Further biology’, significantly updated and includes aspects of the original modules B4 and B7.  
  - New module C3 ‘Chemicals in our lives’, replaces ‘Food Matters’.  
  - Module P3, ‘Radioactive materials’ is reorganised, some content retained in new P3 ‘Sustainable energy’ and the rest transferred to the new P6 ‘Radioactive materials’.  
  - Parts of the original P6, ‘The wave model of radiation’ are transferred to the updated P2, ‘Radiation and life’. |

| Science A  
  Content is divided into 9 modules, comprising Biology modules B1-B3, Chemistry modules C1-C3 and Physics modules P1-P3. |               |

| Additional Science A  
  Content is divided into 9 modules, comprising Biology modules B4-B6, Chemistry modules C4-C6 and Physics modules P4-P6. |               |

<table>
<thead>
<tr>
<th>ASSESSMENT</th>
<th></th>
</tr>
</thead>
</table>
| In Science A the internally assessed unit is based on a Case Study and Practical Data Analysis for Science. In Additional Science, Biology, Chemistry and Physics, the internally assessed unit is based on a Practical Investigation.  
  - Modules are externally assessed within written examination papers.  
  - Ideas about Science (How Science Works) are written into the specification content. | There will be a choice of controlled assessment tasks set by OCR, each valid for entry in a single examination series.  
  - New terminal and re-sit rules apply to all science GCSEs.  
  - The controlled assessment for Biology, Chemistry and Physics will be based on a Practical Investigation only; there will be no option to complete a Practical Data Analysis and Case Study.  
  - Controlled assessment is worth 25%, and will be simpler to mark and administer.  
  - Ideas about Science are associated with all units, and taught and assessed within contexts spanning the three modules in the unit (rather than within tight contexts in specific specification statements).  
  - Externally assessed papers are each 1 hour long, with a total of 60 marks divided equally between objective and free-response style questions. |
GATEWAY SCIENCE SUITE – SCIENCE IN ACTION

Understand the questions that science can answer. Unpick the scientific concepts and investigate their familiar applications through active learning.

The suite consists of:
• GCSE Science B
• GCSE Additional Science B
• GCSE Biology B
• GCSE Chemistry B
• GCSE Physics B

Our Gateway Science Suite:
• encourages active learning through practical work for students to gain scientific knowledge, understanding and skills
• identifies links to scientific ideas and their implications for society
• develop a critical approach to scientific evidence and methods
• acquire and apply skills, knowledge and understanding of how science works and its essential role in society.
GCSE SCIENCE B

GCSE Science B identifies the activities and experiences students will come across in everyday life, and links these to scientific ideas and their implications for society. It provides the opportunity to acquire the scientific skills, knowledge and understanding necessary for life as a citizen.

UNIT B711 (MODULES B1, C1 AND P1)

Module B1: Understanding Organisms
- Fitness and health
- Human health and diet
- Staying healthy
- The nervous system
- Drugs and you
- Staying in balance
- Controlling plant growth
- Variation and inheritance

Module C1: Carbon Chemistry
- Making crude oil useful
- Using carbon fuels
- Clean air
- Making polymers
- Designer polymers
- Cooking and food additives
- Smells
- Paints and pigments

Module P1: Energy For The Home
- Heating houses
- Keeping homes warm
- A spectrum of waves
- Light and lasers
- Cooking and communicating using waves
- Data transmission
- Wireless signals
- Stable Earth

UNIT B712 (MODULES B2, C2 AND P2)

Module B2: Understanding Our Environment
- Classification
- Energy flow
- Recycling
- Interdependence
- Adaptations
- Natural selection
- Population and pollution
- Sustainability

Module C2: Chemical Resources
- The structure of the Earth
- Construction materials
- Metals and alloys
- Making cars
- Manufacturing chemicals:– making ammonia
- Acids and bases
- Fertilisers and crop yields
- Chemicals from the sea: the chemistry of sodium chloride

Module P2: Living For The Future (Energy Resources)
- Collecting energy from the Sun
- Generating electricity
- Global warming
- Fuels for power
- Nuclear radiations
- Exploring our Solar System
- Threats to Earth
- The Big Bang

UNIT B713 (CONTROLLED ASSESSMENT)

This controlled assessment unit:
- comprises one assessment task, split into three parts
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

ASSESSMENT – GCSE SCIENCE B J261

One internally assessed unit (controlled assessment) plus two written exams, each of which:
- is offered in Foundation and Higher Tiers
- uses structured questions (there is no choice of questions)
- assesses the quality of written communication.

Unit B712 also includes a 10 mark data response section which assesses AO3 (analyse and evaluate evidence, make reasoned judgements and draw conclusions based on evidence).

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B711</td>
<td>B1, C1 and P1</td>
<td>35% of the total GCSE</td>
<td>1 hour 15 minutes written paper; 75 marks</td>
</tr>
<tr>
<td>B712</td>
<td>B2, C2 and P2</td>
<td>40% of the total GCSE</td>
<td>1 hour 30 minutes written paper; 85 marks</td>
</tr>
<tr>
<td>B713</td>
<td>Controlled assessment set by OCR</td>
<td>25% of the total GCSE</td>
<td>Approximately 6 hours; 48 marks</td>
</tr>
</tbody>
</table>
GCSE ADDITIONAL SCIENCE B

GCSE Additional Science B develops the scientific skills, knowledge and understanding acquired from GCSE Science B. It provides opportunities to develop scientific explanations and theories and to develop a critical approach to scientific evidence and methods. GCSE Additional Science B provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

UNIT B721 (MODULES B3, C3 AND P3)

Module B3: Living And Growing
- Molecules of life
- Proteins and mutations
- Respiration
- Cell division
- The circulatory system
- Growth and development
- New genes for old
- Cloning

Module C3: Chemical Economics
- Rate of reaction (1)
- Rate of reaction (2)
- Rate of reaction (3)
- Reacting masses
- Percentage yield and atom economy
- Energy
- Batch or continuous?
- Allotropes of carbon and nanotechnology

Module P3: Forces For Transport
- Speed
- Changing speed
- Forces and motion
- Work and power
- Energy on the move
- Crumple zones
- Falling safely
- The energy of games and theme rides

UNIT B722 (MODULES B4, C4, AND P4)

Module B4: It’s A Green World
- Ecology in the local environment
- Photosynthesis
- Leaves and photosynthesis
- Diffusion and osmosis
- Transport in plants
- Plants need minerals
- Decay
- Farming

Module C4: The Periodic Table
- Atomic structure
- Ionic bonding
- The Periodic Table and covalent bonding
- The Group 1 elements
- The Group 7 elements
- Transition elements
- Metal structure and properties
- Purifying and testing water

Module P4: Radiation For Life
- What is radioactivity?
- Uses of radioisotopes
- Treatment
- Fission and fusion
- Sparks
- Uses of electrostatics
- Safe electricals
- Ultrasound

UNIT B723 (CONTROLLED ASSESSMENT)

This controlled assessment unit:
- comprises one assessment task, split into three parts
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

ASSESSMENT – GCSE ADDITIONAL SCIENCE B J262

One internally assessed unit (controlled assessment) plus two written exams, each of which:
- is offered in Foundation and Higher Tiers
- uses structured questions (there is no choice of questions)
- assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B721</td>
<td>B3, C3 and P3</td>
<td>35% of the total GCSE</td>
<td>1 hour 15 minutes written paper; 75 marks</td>
</tr>
<tr>
<td>B722</td>
<td>B4, C4 and P4</td>
<td>40% of the total GCSE</td>
<td>1 hour 30 minutes written paper; 85 marks</td>
</tr>
<tr>
<td>B723</td>
<td>Controlled assessment set by OCR</td>
<td>25% of the total GCSE</td>
<td>Approximately 7 hours; 48 marks</td>
</tr>
</tbody>
</table>

Unit B722 also includes a 10 mark data response section which assesses AO3 (analyse and evaluate evidence, make reasoned judgements and draw conclusions based on evidence).
GCSE Biology B aims to give students opportunities to:

- develop their interest in, and enthusiasm for, biology
- develop a critical approach to scientific evidence and methods
- acquire and apply skills, knowledge and understanding of how science works and its essential role in society
- acquire scientific skills, knowledge and understanding necessary for progression to further learning.

GCSE Biology B provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

### ASSESSMENT – GCSE BIOLOGY B J263

One internally assessed unit (controlled assessment) plus two written exams assessed by OCR, each of which:

- is offered in Foundation and Higher Tiers
- uses structured questions (there is no choice of questions)
- assesses the quality of written communication.

Unit B732 also includes a 10 mark data response section which assesses AO3 (analyse and evaluate evidence, make reasoned judgements and draw conclusions based on evidence).

<table>
<thead>
<tr>
<th>UNIT</th>
<th>MODULES TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B731</td>
<td>B1, B2 and B3</td>
<td>35% of the total GCSE</td>
<td>1 hour 15 minutes written paper; <strong>75 marks</strong></td>
</tr>
<tr>
<td>B732</td>
<td>B4, B5 and B6</td>
<td>40% of the total GCSE</td>
<td>1 hour 30 minutes written paper; <strong>85 marks</strong></td>
</tr>
<tr>
<td>B733</td>
<td>Controlled assessment set by OCR</td>
<td>25% of the total GCSE</td>
<td>Approximately 7 hours; <strong>48 marks</strong></td>
</tr>
</tbody>
</table>
GCSE Chemistry B aims to give students opportunities to:

- develop their interest in, and enthusiasm for, chemistry
- develop a critical approach to scientific evidence and methods
- acquire and apply skills, knowledge and understanding of how science works and its essential role in society
- acquire scientific skills, knowledge and understanding necessary for progression to further learning.

GCSE Chemistry B provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

**UNIT B741 (MODULES C1, C2 AND C3)**

**Module C1: Carbon Chemistry**
- Making crude oil useful
- Using carbon fuels
- Clean air
- Making polymers

**Module C2: Chemical Resources**
- The structure of the Earth
- Construction materials
- Metals and alloys
- Making cars
- Manufacturing chemicals: – making ammonia
- Acids and bases
- Fertilisers and crop yields
- Chemicals from the sea: the chemistry of sodium chloride

**Module C3: Chemical Economics**
- Rate of reaction (1)
- Rate of reaction (2)
- Rate of reaction (3)
- Reacting masses
- Percentage yield and atom economy
- Energy
- Batch or continuous?
- Allotropes of carbon and nanochemistry

**UNIT B742 (MODULES C4, C5 AND C6)**

**Module C4: The Periodic Table**
- Atomic structure
- Ionic bonding
- The Periodic Table and covalent bonding
- The Group 1 elements

**Module C5: How Much? (Quantitative Analysis)**
- Moles and molar mass
- Percentage composition and empirical formula
- Quantitative analysis
- Titrations
- Gas volumes
- Equilibria
- Strong and weak acids
- Ionic equations and precipitation

**Module C6: Chemistry Out There**
- Electrolysis
- Energy transfers – fuel cells
- Redox reactions
- Alcohols
- Depletion of the ozone layer
- Hardness of water
- Natural fats and oils
- Detergents

**UNIT B743 (CONTROLLED ASSESSMENT)**

This controlled assessment unit:
- comprises one assessment task, split into three parts
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

**ASSESSMENT – GCSE CHEMISTRY B J264**

One internally assessed unit (controlled assessment) plus two written exams assessed by OCR, each of which:
- is offered in Foundation and Higher Tiers
- uses structured questions (there is no choice of questions)
- assesses the quality of written communication.

**UNIT | MODULES TESTED | WEIGHTING | ASSESSMENT & DURATION**
--- | --- | --- | ---
B741 | C1, C2 and C3 | 35% of the total GCSE | 1 hour 15 minutes written paper; 75 marks
B742 | C4, C5 and C6 | 40% of the total GCSE | 1 hour 30 minutes written paper; 85 marks
B743 | Controlled assessment set by OCR | 25% of the total GCSE | Approximately 7 hours; 48 marks

Unit B742 also includes a 10 mark data response section which assesses AO3 (analyse and evaluate evidence, make reasoned judgements and draw conclusions based on evidence).
GCSE Physics B aims to give students opportunities to:

- develop their interest in, and enthusiasm for, physics
- develop a critical approach to scientific evidence and methods
- acquire and apply skills, knowledge and understanding of how science works and its essential role in society
- acquire scientific skills, knowledge and understanding necessary for progression to further learning.

GCSE Physics B provides distinctive and relevant experience for students who wish to progress to Level 3 qualifications.

**UNIT B751 (MODULES P1, P2 AND P3)**

**Module P1: Energy For The Home**
- Heating houses
- Keeping homes warm
- A spectrum of waves
- Light and lasers

**Module P2: Living For The Future (Energy Resources)**
- Collecting energy from the Sun
- Generating electricity
- Global warming
- Fuels for power

**Module P3: Forces For Transport**
- Speed
- Changing speed
- Forces and motion
- Work and power

**UNIT B752 (MODULES P4, P5 AND P6)**

**Module P4: Radiation For Life**
- Cooking and communicating using waves
- Data transmission
- Wireless signals
- Stable Earth

**Module P5: Space For Reflection**
- Nuclear radiations
- Exploring our Solar System
- Threats to Earth
- The Big Bang

**Module P6: Electricity For Gadgets**
- Energy on the move
- Crumple zones
- Falling safely
- The energy of games and theme rides

**UNIT B753 (CONTROLLED ASSESSMENT)**

This controlled assessment unit:
- comprises one assessment task, split into three parts
- is assessed by teachers, internally standardised and then externally moderated by OCR
- assesses the quality of written communication.

**ASSESSMENT – GCSE PHYSICS B J265**

One internally assessed unit (controlled assessment) plus two written exams assessed by OCR, each of which:
- is offered in Foundation and Higher tiers
- uses structured questions (there is no choice of questions)
- assesses the quality of written communication.

**UNIT** | **MODULES TESTED** | **WEIGHTING** | **ASSESSMENT & DURATION**
--- | --- | --- | ---
B751 | P1, P2 and P3 | 35% of the total GCSE | 1 hour 15 minutes written paper; 75 marks
B752 | P4, P5 and P6 | 40% of the total GCSE | 1 hour 30 minutes written paper; 85 marks
B753 | Controlled assessment set by OCR | 25% of the total GCSE | Approximately 7 hours; 48 marks
# Gateway Science Suite – Overview of Changes

## What Stays the Same?

**Structure**
- For all GCSEs in the Gateway Science Suite:
  - Three units, comprising two externally assessed units and one internally assessed unit.
  - Externally assessed units are tiered – Foundation and Higher Tier.

**Content**
- The original modules are retained and updated.
  - Biology B, Chemistry B & Physics B
    - Content is divided into 6 modules, B1 – B6, C1 – C6 and P1 – P6.
  - Science B
    - Content is divided into 6 modules, B1, B2, C1, C2, P1 and P2.
  - Additional Science B
    - Content is divided into 6 modules, B3, B4, C3, C4, P3 and P4.

## What Changes?

**Structure**
- Unit weightings have been altered – Unit 1 now 35%, Unit 2 now 40% (this Unit makes re-sits easier to manage as it alone meets the terminal rule).
- The higher weighting on Unit 2 papers is due to an additional data response section linked to the Unit 2 modules.
- Controlled assessment replaces coursework, now 25% weighting.
- Additional item addressing How Science Works.

**Content**
- Some content has been moved between modules to meet the revised subject criteria from Ofqual.
  - Module C3 has become C4 and vice versa.
  - Content and terminology have been updated and some content statements replaced in all specifications.
  - Additional exemplification has been added to many of the criteria statements.

**Assessment**
- Modules are externally assessed within two units, in sections.
  - Papers include structured questions and objective questions.
  - New terminal and re-sit rules apply to science GCSEs.
  - The internally assessed unit is based on a single investigative task divided into three parts. (The science style of controlled assessment can no longer be used for separate sciences).
  - There will be a choice of controlled assessment tasks, set by OCR, and valid for entry in one year only.
  - Unit 1 paper is 1 hour 15 minutes long, with a total of 75 marks. Unit 2 paper is 1 hour 30 minutes long, with a total of 85 marks including a 10 mark data response section.
  - How Science Works will be assessed in all units.
  - Quality of Written Communication (QWC) will be assessed in all units.
  - Science in the news not part of controlled assessment.
This specification has been designed to provide an introduction to some of the knowledge, understanding and skills students will need in the workplace or in further education or training. It introduces students to work-related learning and motivates them to take charge of their own learning experiences.

UNIT A191 SCIENCE IN SOCIETY (TOPICS A1, A2, A3 AND A4)

**Topic A1: Sport and fitness**
- People and organisations
- Assessing fitness
- The human body
- Monitoring and improving performance

**Topic A2: Health care**
- People and organisations
- Antenatal and post-natal care
- Emergency care and GP referrals

**Topic A3: Monitoring and protecting the environment**
- People and organisations
- The need for scientific evidence
- Observation and measurement
- The use of colour in analysing soil and water

**Topic A4: Scientists protecting the public**
- People and organisations
- Colour and concentration
- Imaging
- Chromatography and electrophoresis

UNIT A192 SCIENCE OF MATERIALS AND PRODUCTION (TOPICS B1, B2, B3 AND B4)

**Topic B1: Sports equipment**
- People and organisations
- Mechanical behaviour of materials
- Thermal behaviour of materials
- Making sports equipment

**Topic B2: Stage and screen**
- People and organisations
- Managing light
- Managing sound
- Managing indoor performance venues

**Topic B3: Agriculture, biotechnology and food**
- Food industries, people and organisations
- Growing wheat for food production
- Rearing cattle for milk
- Biotechnology and food
- Instrumentation to monitor and control processes

**Topic B4: Making chemical products**
- People and organisations
- The chemical and pharmaceutical industries
- Making useful chemicals
- Formulations and effectiveness

UNIT A193 SCIENCE WORK-RELATED PORTFOLIO (CONTROLLED ASSESSMENT)

This controlled assessment unit comprises three elements:
- following a standard procedure
- testing the suitability of a material, process or device for a particular purpose
- work-related reports on the application of science by people at work in a specific context.

ASSESSMENT – GCSE ADDITIONAL APPLIED SCIENCE J251

One internally assessed unit (controlled assessment) plus two written exams assessed by OCR, each of which:
- is offered in Foundation and Higher Tiers
- uses structured questions throughout
- assesses knowledge and understanding of the specification and application of that knowledge and understanding.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TOPICS TESTED</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A191</td>
<td>A1, A2, A3 and A4</td>
<td>20 % of the total GCSE</td>
<td>1 hour written paper; 50 marks</td>
</tr>
<tr>
<td>A192</td>
<td>B1, B2, B3 and B4</td>
<td>20 % of the total GCSE</td>
<td>1 hour written paper; 50 marks</td>
</tr>
<tr>
<td>A193</td>
<td>Controlled assessment set by OCR</td>
<td>60 % of the total GCSE</td>
<td>Approximately 38 hours; 120 marks</td>
</tr>
</tbody>
</table>
APPLIED SUBJECTS

GCSE ENVIRONMENTAL & LAND-BASED SCIENCE

This specification has been designed to be assessed in an electronic or paper format.

It provides an introduction to some of the skills, knowledge and understanding students need in the workplace, set in the context of the Environmental and land-based sector. It is designed to motivate students by providing opportunities to use teaching and learning styles which allow students to take charge of their own learning, and to develop some of the practical skills relevant for work in land-based enterprises.

This specification may be taught as an additional applied science or as a stand-alone GCSE. This specification may be of particular interest to those schools in England, aspiring to include the ‘rural dimension’ in their Specialist School application.

UNIT B681 MANAGEMENT OF THE NATURAL ENVIRONMENT

- Environmental issues and their relationship of soil and its effect on the plants and animals it supports
- Human activities and energy requirements and the effects on the environment
- Traditional and alternative food production

UNIT B682 PLANT CULTIVATION AND SMALL ANIMAL CARE

- Issues relating to the care and maintenance of plants and small animals in the home, the garden and at school

OR

UNIT B683 COMMERCIAL HORTICULTURE, AGRICULTURE AND LIVESTOCK HUSBANDRY

- Issues relating to the care and maintenance of plants and livestock in a commercial environment

UNIT B684 (CONTROLLED ASSESSMENT)

This controlled assessment unit comprises of three elements. Candidates compile a portfolio of:

- Element 1: Practical scientific skills
- Element 2: Scientific investigation
- Element 3: Work-related report

ASSESSMENT – GCSE ENVIRONMENTAL AND LAND-BASED SCIENCE J271

One internally assessed unit (controlled assessment) plus two written exams designed to be computer based with paper option, each:

- is offered in Foundation and Higher Tiers
- comprises objective and longer answer questions
- assesses the quality of written communication.

<table>
<thead>
<tr>
<th>UNIT</th>
<th>WEIGHTING</th>
<th>ASSESSMENT &amp; DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B681</td>
<td>20 % of the total GCSE</td>
<td>1 hour computer-based test or written paper; 50 marks</td>
</tr>
<tr>
<td>B682</td>
<td>20 % of the total GCSE</td>
<td>1 hour computer-based test or written paper; 50 marks</td>
</tr>
<tr>
<td>B683</td>
<td>20 % of the total GCSE</td>
<td>1 hour computer-based test or written paper; 50 marks</td>
</tr>
<tr>
<td>B684</td>
<td>60 % of the total GCSE</td>
<td>Approximately 38 hours; 120 marks</td>
</tr>
</tbody>
</table>

*information correct at time of print April 2011
## ADDITIONAL APPLIED SCIENCE

### WHAT STAYS THE SAME?
- Externally assessed units are tiered – Foundation and Higher tier.
- A mandatory unit on environmental issues.

### WHAT CHANGES?
- Number of externally assessed units reduces from six to two.
- Both units are mandatory, and have mixed science content. Unit weightings have been altered – externally assessed units are weighted at 20% each. Controlled assessment replaces coursework, now 60% weighting.

### STRUCTURE
- Popular contexts from original modules AP1, AP2, AP3, AP4 and AP6 are retained and updated.

### CONTENT
- Format of examined units remains the same (structured questions).

### ASSESSMENT
- Content is organised into two new units, ‘Science in Society’ and ‘Science of Materials and Production’. Current module APS: (Communications) is removed.

### ENVIRONMENTAL & LAND-BASED SCIENCE

### WHAT STAYS THE SAME?
- Externally assessed units are tiered – Foundation and Higher tier.
- Management of the Natural Environment Unit (B681) remains largely unaltered. Some minor additions to content.

### WHAT CHANGES?
- Number of externally assessed units reduces from five to three.
- Candidates sit two externally assessed units – (one mandatory plus one choice from two optional units) and a controlled assessment unit.
- Unit weightings have been altered – externally assessed units are weighted at 20% each.
- Controlled assessment replaces coursework, now 60% weighting.

### STRUCTURE
- Controlled assessment retains three strands based upon Practical Scientific Skills, a Scientific Investigation and a Work-related Report.

### CONTENT
- Format of examined units remains the same (structured questions).

### ASSESSMENT
- New terminal and re-sit rules apply to all science GCSEs.
- There will be a choice of controlled assessment tasks set by OCR, some of which can be adapted by the Centre. Controlled assessment is worth 120 marks.
- Each examined unit is worth 50 marks and is of one hour duration.
- Quality of written communication (QWC) will be assessed in all units.
SUPPORT & TRAINING – INTRODUCING OCR

We’re a leading UK awarding body, providing an exciting range of qualifications to meet the needs of students of all ages and abilities.

We want to help you make the most of your passion for science and believe in developing specifications that help you bring it to life, engaging students to achieve more success. To help us continue to improve our qualifications and support services, we continually work in partnership with and listen to you to ensure you and your students get as much as possible from our qualifications.

We can ensure you’ll receive full support when you’re teaching our qualifications. You can choose from a useful selection of teaching materials and resources – all written for you by expert developers.
The government has now confirmed that unitised GCSEs, will be replaced by linear assessment for candidates starting a two-year course from September 2012.

The reforms are designed to:

- Ensure that GCSE examinations are taken at the end of the course by making all assessment linear
- Remove the potential for re-sitting individual units meaning examinations for Art and Design will only take place in the June series

What this means

- Candidates who start a two-year course in September 2012 will take all of their GCSE units in June 2014 at the end of their course and in the same series that they will certificate for their qualification.
- These changes will not affect any candidates on a two-year course which started in September 2011, or candidates who start a one-year course in September 2012, who will still be able to enter in a unitised way.
- They will have an impact on Year 9 candidates who started a three-year programme in September 2011. These candidates will now be required to take all of their assessment in June 2014.

Re-takes/Re-sits

The introduction of linear GCSEs will also prevent the mid-course re-sitting of units.

- Candidates who started a two-year course in September 2011 and are certificating in June 2013 will have the opportunity to re-sit a whole qualification taking all their external assessments in the same sitting; in the June 2014 series where linear assessment rules apply. They will however, be able to carry forward their most recent results used for certification from controlled assessment unit(s).
- Candidates starting a two year course in September 2012 and who are certificating in June 2014 will have the opportunity to re-sit a whole qualification in the June 2015 series where linear assessment rules apply.
- There will be additional opportunities for candidates to re-take complete English, English Language and Maths GCSEs in a November 2013 examination series, where a 40% terminal rule applies. From November 2014 the linear 100% terminal rule will apply. These subjects are seen to be the most critical GCSEs for all progression paths. There is an expected demand for an additional opportunity to re-sit exams.

For more information about the changes to GCSEs from 2012 visit www.ocr.org.uk/gcse2012
CONTROLLED ASSESSMENT FAQs

What is controlled assessment?
Controlled assessment is coursework in a supervised environment, classroom or laboratory and will be replacing traditional coursework in science GCSEs from September 2011 under different levels of control set by Ofqual. Details are provided in the specifications.

Why is controlled assessment being introduced by Ofqual?
There are a number of reasons. It gives students the opportunity to produce an original response without the drawbacks of ‘over-preparation’. It also gives greater control, while still allowing more freedom than is offered in examined units. Decide when your students do the assessment, and practical aspects can be adapted to allow the use of resources available to the centre.
Another advantage is that you can be confident that work is authentic, which will mean improved reliability and validity.

Who sets the tasks?
This is done by OCR. Each year, two or three new controlled assessment tasks will be made available from 1 June, two years ahead of the examination series for which the tasks are to be submitted. Tasks will be removed upon expiry. Guidance on how to access controlled assessment tasks from Interchange is available on the OCR website: www.ocr.org.uk
We’ve consulted with you on the range of controlled assessment tasks to ensure that there is an appropriate range for a variety of students and to help limit the resource implications of changing tasks on your department.

How will it be supervised?
Details of the supervision of the tasks is given in the specifications and in the teacher guidance for each task, and further advice is provided in a Handbook for Controlled Assessment. The final part of each task must be closely supervised, either by the class teacher or another supervisor. It’s up to you whether you wish to use your classrooms, laboratories or make other arrangements. If you choose to divide the allowed time between several sessions, you must ensure that all work is handed in at the end of each session and held securely.

How much time will controlled assessment take?
Different tasks will have different amounts of time allocated to them, and you will be informed about these by OCR. Although the time for completing the tasks will be advised, centres can decide when this time is allocated and how to split the time. For example, if four hours are advised, you may wish to have students use this as one session, or split the time up throughout several different sessions (e.g. four one-hour sessions). This allows centres to work controlled assessment around their existing timetables.

How much will controlled assessment be worth?
Controlled assessment will be 25% of the course for all specifications with the exceptions of Additional Applied Science and Environmental and Land-Based Science where it will be 60% of candidates’ final marks.

When can I do controlled assessment?
The task can be completed at any time, but you must make sure that you do the correct task for the year in which the entry is to be made. You can complete the task at any point in the academic year, provided that you meet the deadline for submission.

Can a controlled assessment task be re-taken?
No. A candidate can only have one attempt at a particular task, but OCR will provide a limited choice of tasks so that if the outcome is disappointing, the candidate may attempt another task, and the best result may then be submitted.

Can a controlled assessment unit be re-taken?
Yes. The same re-sit and terminal requirement rules apply to controlled assessment units. However, when a controlled assessment unit is re-taken in a subsequent examination series, the correct tasks must be used for that series.

Can students word process their final responses?
Yes, if facilities exist for them to do this securely. Internet access must be disconnected and work must be stored securely so that the student cannot access it between sessions. The same supervision rules apply as above.

How will controlled assessment responses be marked?
Teachers will mark it using mark schemes supplied by OCR. We will provide extensive support for the tasks. Work will then be moderated by OCR.

Can I access ongoing support?
We will provide extensive guidance on controlled assessment at all stages of the process. We will also help centres in specific tasks that are being set for a particular year.

When can I see some controlled assessment tasks?
Our draft specimen controlled assessment tasks are available online now at www.gcse-science.com
SUPPORT

SUPPORT MATERIALS & RESOURCES

SUPPORTING YOU ALL THE WAY

Our aim is to help you at every stage and we work in close consultation with teachers and other experts, to provide a practical package of high quality resources and support.

We’ve asked the real experts, teachers like you, what we could do to make your life a bit easier and have designed a support package to save you time while you prepare to stimulate student engagement.

Acting upon your feedback, our expert developers have designed an approach which includes detailed guidance on key topics, controlled assessment and curriculum planning as well as a devoted cluster support network for teachers.

Our essential FREE support includes:

MATERIALS

• Specimen assessment materials and mark schemes
• Guide to controlled assessment
• Sample controlled assessment material
• Exemplar candidate work
• Teachers’ handbook
• Sample schemes of work and lesson plans
• Lesson bundles including skill-up lessons – developed in conjunction with the Centre for Science Education
• Experiment cards
• Frequently asked questions
• Past papers.

You can access all of our support at: www.gcse-science.com

TEXTBOOKS ENDORSED BY OCR

Be the first to find out details about support from OCR and our publisher partners at www.ocr.org.uk/updates

Gateway Science and Environmental and Land-based Science

These resources will enable you to engage students in learning, while maths, ICT and practical work are embedded throughout the scheme. Controlled assessment practice and advice, along with exam-style questions and worked examples, enable your students to practise the required skills in these areas.

Order your copies at www.collinseducation.com

Twenty First Century Science and Additional Applied Science

These resources are packed with up-to-date science as well as the familiar topics you enjoy teaching. There is exam preparation at the end of every unit, guidance for answering all types of exam question, including extended writing questions, and support for controlled assessment.

Order your copies at www.oxfordsecondary.co.uk/twentyfirstcenturyscience

ORDER YOUR COPIES

ORDER YOUR COPIES

ORDER YOUR COPIES
SUPPORT SERVICES

• **Answers @ OCR** – a web based service where you can browse hot topics, FAQs or e-mail us with your questions. Available June 2011. Visit [http://answers.ocr.org.uk](http://answers.ocr.org.uk)

• **Active Results** – service to help you review the performance of individual candidates or a whole school, with a breakdown of results by question and topic.

• **Local cluster support networks** – supported by OCR, you can join our local clusters of centres who offer each other mutual support.

SCIENCE COMMUNITY

The **OCR social network** is a free platform where teachers can engage with each other – and with OCR – to share ideas and best practice, offer guidance, and access a range of support materials produced by other teachers. To sign up, go to [http://social.ocr.org.uk](http://social.ocr.org.uk)

OUR AIM IS TO ASSIST YOU HOWEVER WE CAN

As well as providing you with a wide range of support services and resources to pick and choose from, we’re also here to help you with specialist advice, guidance and support for those times when you simply need a more individual service.

HERE’S HOW TO CONTACT US FOR SPECIALIST ADVICE:

Phone: 01223 553998
Email: general.qualifications@ocr.org.uk
Online: [http://answers.ocr.org.uk](http://answers.ocr.org.uk)
Fax: 01223 552627
Post: Customer Contact Centre, OCR, Progress House, Westwood Business Park, Coventry CV4 8JQ

Don’t forget – you can download specifications and all our support materials at **[gcse-science.com](http://gcse-science.com)**
Here at OCR we are constantly looking for ways in which we can improve the support we offer to teachers. Most recently we have been considering the increasing challenges that schools face in releasing teachers for INSET, and how OCR can make its professional development programme more accessible and convenient for all by offering a number of courses online.

Our new improved programme includes:

Thousands of users have already visited our new online training site to view and download the free material that is now available. If you haven’t already, register today and take a look at the variety of support we offer, including:

**Self-managed learning** – the training you want, where and when you want it
If you want to better understand the specification or keep abreast of information about previous examinations then these are for you. Available on demand 24 hours, 7 days a week with no travel or training costs, these self-contained units allow you to manage your own learning at a pace that suits you. New content is added daily, and the site currently has free material available in over 90 subjects for teachers to download, as well as several training videos and online presentations.

**Live broadcasts** – information and training straight to your classroom
Free broadcast events streamed live over the internet focusing on improving your delivery skills and understanding of our qualifications. These interactive sessions via single presenter webinars, studio discussions and multi-site broadcasts give you the chance to hear advice and guidance from our subject specialists and senior assessors who will be taking your questions live, or pre-submitted, and providing you with an immediate response.

**Premier professional development** – inspiring and advancing your teaching
Don’t miss your opportunity to attend our range of face-to-face premier professional events giving you the opportunity to keep up to date with the latest developments in your subject area, visit subject related venues and obtain new and interesting approaches to teaching certain topic areas.
Providing professional development for teachers at a reduced cost for centres, this is your opportunity to gain new insights and ideas from leaders in their field and to interact with a large number of subject specialist teachers.

**Face-to-face** – A portfolio of more traditional INSET events
Training sessions to help you understand and manage GCSE controlled assessment, A Level coursework and to support some vocational courses, we currently have over 275 events scheduled to take place in England and Wales.

**WHAT TO DO NEXT?**
Check out our self-managed learning at [www.ocronlinetraining.org.uk](http://www.ocronlinetraining.org.uk)
For further information and to book your place on our premier professional development, face-to-face and live broadcast events visit [www.ocreventbooker.org.uk](http://www.ocreventbooker.org.uk)

**NEED MORE HELP?**
You can contact our team at [professionaldevelopment@ocr.org.uk](mailto:professionaldevelopment@ocr.org.uk)
SUPPORT

YOUR CHECKLIST

☑ Bookmark www.ocr.org.uk/gcse2012

☑ Be among the first to hear about support materials and resources as they become available. Register for email updates at www.ocr.org.uk/updates

☑ Access FREE online training and book onto courses at www.ocronlinetraining.org.uk

☑ Learn more about Active Results at www.ocr.org.uk/activeresults

☑ Join our social network community for teachers at www.social.ocr.org.uk