

# GCSE Science at Bedford School

## Overview:

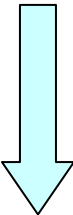
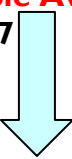
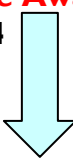
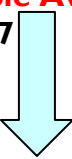
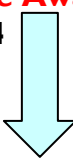
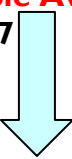
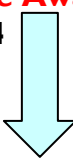
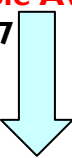
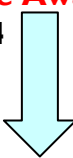
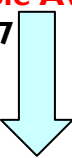
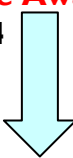
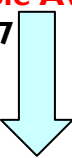
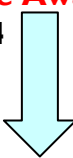
All boys must take Science up to GCSE. However, boys are directed down two different pathways depending on the effort and ability shown in tests during years 9 & 10.

All year 9 boys follow the same course. After the Year 9 Summer Exams, the classes separate into their respective courses: sets 1-4 will take the OCR Gateway Separate Sciences pathway (called 'Triple Award' and worth 3 GCSEs) whilst sets 5-7 will follow the OCR Gateway Science & Additional Science course (called 'Double Award' and worth 2 GCSEs). Both pathways will be suitable preparation for A level and IB.

It should be noted that only those boys who are more able and hard working will be suited to the Triple Award course's significantly larger syllabus content and demand; there is no provision for extra teaching time to complete this extra workload.

## Setting:

The year 9 block tests and end of the year exams will be used to reset the boys into 7 classes. The year 10 end of year exam (plus block tests) will be used to 'fine tune' the setting to allow a small number of new boys to be placed more accurately and to allow other small adjustments which the Heads of Science and Mathematics believe to be necessary (this will be done in response to test results and advice from teaching staff). Thus the setting is in the gift of the boys: the harder they work and the better their performance, the higher the set they will end up in.

| Year   | Course outline  |  | Comments   |  |  |
|--|---|--|--|--|--|
| 4 <sup>th</sup> / Yr 9<br><br>Summer Term / Term 3 of GCSE   | <b>GCSE courses start</b><br><br><b>End of Year Exam</b>  |  | All boys follow the same course content, taken from the <a href="#">Science &amp; Additional Science</a> GCSE courses.<br><br>Classes are <b>reset</b> on the basis of their performance in Biology, Chemistry and Physics & Mathematics |  |  |
| Remove / Yr 10   | <b>SUMMER HOLIDAY</b><br><table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;"> <b>Double Award</b><br/>           Sets 5-7<br/> <br/> <b>End of Year Exam</b> </td> <td style="width: 50%;"> <b>Triple Award</b><br/>           Sets 1-4<br/> <br/> <b>End of Year Exam</b> </td> </tr> </table>  |  | <b>Double Award</b><br>Sets 5-7<br><br><b>End of Year Exam</b>  | <b>Triple Award</b><br>Sets 1-4<br><br><b>End of Year Exam</b>                              | <b>Double Award</b> follow OCR Gateway <a href="#">Science &amp; Additional Science</a> course.<br><br><b>Triple Award</b> Biology, Chemistry & Physics follow <a href="#">OCR Gateway</a> Separate Sciences course. |
| <b>Double Award</b><br>Sets 5-7<br><br><b>End of Year Exam</b>                                | <b>Triple Award</b><br>Sets 1-4<br><br><b>End of Year Exam</b>   |  |  |  |  |
| January 5 <sup>th</sup> / Yr 11<br><br>Summer of Year 11   | <b>SUMMER HOLIDAY</b><br><b>MOCK EXAMS</b><br><table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 50%;"> <b>Double Award</b><br/>           Sets 5-7<br/> <br/> <b>Examination of Science &amp; Additional Science</b> </td> <td style="width: 50%;"> <b>Triple Award</b><br/>           Sets 1-4<br/> <br/> <b>Examination of Biology, Chemistry and Physics</b> </td> </tr> </table> |  | <b>Double Award</b><br>Sets 5-7<br><br><b>Examination of Science &amp; Additional Science</b>   | <b>Triple Award</b><br>Sets 1-4<br><br><b>Examination of Biology, Chemistry and Physics</b> | <b>Double Award</b> follow OCR Gateway <a href="#">Science &amp; Additional Science</a> course.<br><br><b>Triple Award</b> Biology, Chemistry & Physics follow <a href="#">OCR Gateway</a> Separate Sciences course. |
| <b>Double Award</b><br>Sets 5-7<br><br><b>Examination of Science &amp; Additional Science</b> | <b>Triple Award</b><br>Sets 1-4<br><br><b>Examination of Biology, Chemistry and Physics</b>  |  |  |  |  |

# GCSE Science at Bedford School

## Double Award (OCR Gateway Science Suite)

This will be sat by sets 5-7 in the Summer of their 5<sup>th</sup> year / year 11. Most boys will do the Higher Tiers for [Science](#) and [Additional Science](#). A small number of boys may do the Foundation Tier for Science and Additional Science where the maximum grade is C.

### Overall Structure:

2 GCSE exams will be sat in Year 11: Science B and Additional Science B. Each GCSE is made up of 2 papers plus skills assessment. The GCSE exams will be reported separately (so it is now possible to be awarded A\*A or BC etc). In addition, each exam paper will contain questions from Biology, Chemistry and Physics. However, OCR does not currently plan to provide feedback on performance in the individual modules which make up the exam paper. It is anticipated that the Double Award course will provide an adequate foundation for A level or IB.

### Science B

#### Science B Content:

Science B comprises 6 Modules; 2 from each of the Sciences:

| Subject   | Module ref | Module title                  |
|-----------|------------|-------------------------------|
| Biology   | B1         | Understanding ourselves       |
|           | B2         | Understanding our Environment |
| Chemistry | C1         | Carbon Chemistry              |
|           | C2         | Rocks & Metals                |
| Physics   | P1         | Energy for the Home           |
|           | P2         | Living for the Future         |

Students should refer to the Science Department intranet site for further details on the contents of the modules.

#### Science B Exams

| Title             | Weighting | Modules   | Duration                    | Total mark |
|-------------------|-----------|---|-----------------------------|------------|
| Unit 1            | 33%       | B1, C1, P1  | 1 hour                      | 60 marks   |
| Unit 2            | 33%       | B2, C2, P2  | 1 hour                      | 60 marks   |
| Skills Assessment | 33%       | Science in the News (20%)<br>'Can-Do' tasks (13%) | Completed during the course | 60 marks   |

### Additional Science B

#### Additional Science B Content:

Additional Science B comprises 6 Modules; 2 from each of the Sciences:

| Subject   | Module ref | Module title         |
|-----------|------------|----------------------|
| Biology   | B3         | Living & Growing     |
|           | B4         | It's a Green World   |
| Chemistry | C3         | The Periodic Table   |
|           | C4         | Chemical Economics   |
| Physics   | P3         | Forces for Transport |
|           | P4         | Radiation for Life   |

Students should refer to the Science Department intranet site for further details on the contents of the modules.

# GCSE Science at Bedford School

## Additional Science B Exams

| Title             | Weighting | Modules                 | Duration                    | Total mark |
|-------------------|-----------|-------------------------|-----------------------------|------------|
| Unit 1            | 33%       | B3, C3, P3              | 1 hour                      | 60 marks   |
| Unit 2            | 33%       | B4, C4, P4              | 1 hour                      | 60 marks   |
| Skills Assessment | 33%       | Research Topic (13%)    | Completed during the course | 60 marks   |
|                   |           | Data task (16.6%)       |                             |            |
|                   |           | Practical skills (3.4%) |                             |            |

## Triple Award (OCR Gateway Suite B)

This will be sat by sets 1-4 in the Summer of their 5<sup>th</sup> year / year 11. All boys will sit the Higher Tier exams for the Separate Sciences: [Biology B](#), [Chemistry B](#) & [Physics B](#).

### Overall Structure:

3 GCSE exams will be sat in Year 11: Biology B, Chemistry B & Physics B. Each GCSE is assessed by 2 papers plus skills assessment. The GCSE exams will be reported separately. Each exam will comprise questions taken only from Biology, or Chemistry or Physics. It is anticipated that the Triple Award course will provide a very rigorous preparation for A level or IB.

All Year 9 boys follow the same programme of study and continue to do so for the first term of Year 10. Thereafter, those doing Triple Award have to cover Modules B5, B6, C5, C6, P5, & P6 in addition to the modules covered by the Double Award classes.

### Separate Sciences / Triple Award Content:

| Subject                      | Module ref | Module title                  |
|------------------------------|------------|-------------------------------|
| <b>Biology B / Gateway</b>   | B1         | Understanding ourselves       |
|                              | B2         | Understanding our Environment |
|                              | B3         | Living & Growing              |
|                              | B4         | It's a Green World            |
|                              | B5         | The Living Body               |
|                              | B6         | Beyond the Microscope         |
| <b>Chemistry B / Gateway</b> | C1         | Carbon Chemistry              |
|                              | C2         | Rocks & Metals                |
|                              | C3         | The Periodic Table            |
|                              | C4         | Chemical Economics            |
|                              | C5         | How much?                     |
|                              | C6         | Chemistry out there           |
| <b>Physics B / Gateway</b>   | P1         | Energy for the Home           |
|                              | P2         | Living for the Future         |
|                              | P3         | Forces for Transport          |
|                              | P4         | Radiation for Life            |
|                              | P5         | Space for Reflection          |
|                              | P6         | Electricity for Gadgets       |

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## Triple Award Exams:

### OCR Gateway Biology:

| Title             | Weighting | Modules   | Duration                    | Total mark |
|-------------------|-----------|---|-----------------------------|------------|
| Unit 1            | 33%       | B1, B2, B3  | 1 hour                      | 60 marks   |
| Unit 2            | 33%       | B4, B5, B6  | 1 hour                      | 60 marks   |
| Skills Assessment | 33%       | Science in the News (20%)<br>'Can-Do' tasks (13%) | Completed during the course | 60 marks   |

### OCR Gateway Chemistry:

| Title             | Weighting | Modules  | Duration                    | Total mark |
|-------------------|-----------|--|-----------------------------|------------|
| Unit 1            | 33%       | C1, C2, C3   | 1 hour                      | 60 marks   |
| Unit 2            | 33%       | C4, C5, C6   | 1 hour                      | 60 marks   |
| Skills Assessment | 33%       | Research Topic (13%)<br>Data task (16.6%)<br>Practical skills (3.4%) | Completed during the course | 60 marks   |

### OCR Gateway Physics:

| Title             | Weighting | Modules  | Duration                    | Total mark |
|-------------------|-----------|--|-----------------------------|------------|
| Unit 1            | 33%       | P1, P2, P3   | 1 hour                      | 60 marks   |
| Unit 2            | 33%       | P4, P5, P6   | 1 hour                      | 60 marks   |
| Skills Assessment | 33%       | Research Topic (13%)<br>Data task (16.6%)<br>Practical skills (3.4%) | Completed during the course | 60 marks   |