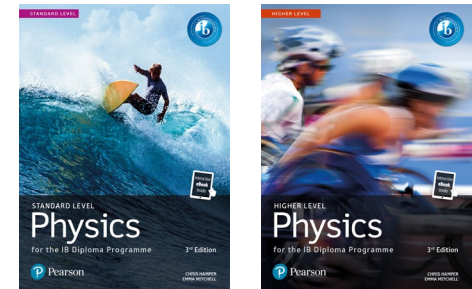


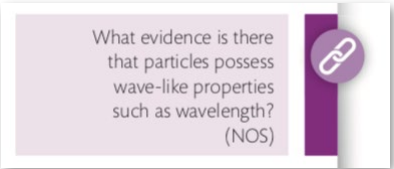
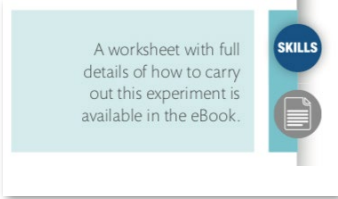

# Get ready to teach the new Subject Guide with Pearson Physics for the IB Diploma Programme

Find out everything you need to know about the changes to the syllabus and get ready to teach the new course with our Student Books, developed in cooperation with the IB, and supported by expert advice from our experienced authors.



| Key changes to the IB DP Physics Subject Guide  | Putting it into practice with Pearson Physics for the IB Diploma Programme Student Books  |
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| <p>The syllabus content moves from 12 topics (eight of which were required at Standard Level) to 24 compulsory topics, 19 of which are required in full or in part at Standard Level. These 24 topics are grouped under <b>five Themes</b>:</p> <ul style="list-style-type: none"> <li>● Space, time and motion</li> <li>● The particulate nature of matter</li> <li>● Wave behaviour</li> <li>● Fields</li> <li>● Nuclear and quantum physics</li> </ul> <p>Reassuringly, you won't have to make significant changes to how you plan and teach because the important physics ideas like motion and waves are still addressed. However, students will now need to really understand these Concepts, rather than simply picking an equation and plugging in the numbers.</p> | <p>Our <b>Standard Level and Higher Level Student Books</b> are structured to match the new Subject Guide, something that's been checked and <b>approved by the IB</b>. This means that it couldn't be easier to find what you're looking for from the syllabus. We've also included handy overviews of the syllabus content covered at the start of each section.</p> <p>Our Introduction includes the Aims, the Nature of Physics, the Nature of Science, Approaches to Learning, Physics Inquiry and the IB Learner Profile, and how teachers can plan for these.</p> <p>The <b>conceptual approach</b> of the books means you're free to design your own route through the course, with topics linked to help you join everything up and to increase your students' depth of understanding.</p> <p><b>Author tip!</b> Hear more detail about how the books have been put together in cooperation with the IB from our expert authors in an <a href="#">on-demand webinar &gt;</a></p> |

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| <p>The <b>removal of the HL Options</b> is the main contributor to a reduction in the content of the course. However, you will note that some topics from each of the former Options are now included in the main syllabus.</p> <p>Students no longer pick HL options. All HL students cover the same content. This is to ensure consistency in the content covered.</p>   | <p>We've got <b>separate Standard Level and Higher Level resources</b> to offer you maximum flexibility with your teaching. All of our student books take the same approach, across all subjects, making things simple and consistent for students who are taking more than one Science.</p> <p><b>Author tip!</b> <a href="#">Get guidance on teaching Standard Level and Higher Level students in the same classroom in our video explainer &gt;</a></p> <div data-bbox="1682 268 2119 379" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p style="text-align: center; margin: 0;"><b>HL</b></p> <p style="margin: 0;"><b>Diffraction of light at a single slit</b></p> <p style="font-size: small; margin: 0;">When light passes through a narrow slit, it diffracts, forming a series of bright and dark bands, as shown in Figure 21.</p> </div> |
| <p><b>The Nature of Science (NOS)</b> continues to be an important thread that runs through the course. Some references are made to NOS in the syllabus, but mostly, you are encouraged to provide your own examples, including drawing on topical developments.</p>   | <p><b>Nature of Science boxes</b> are included throughout the books as related themes and questions arise to help your students understand Physics in the wider context of the science world.</p> <div data-bbox="1592 579 2119 703" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p style="text-align: center; margin: 0;"><b>Nature of Science</b></p> <p style="font-size: small; margin: 0;">Newton's three laws of motion are a set of statements, based on observation and experiment, that can be used to predict the motion of a point object from the forces acting on it.</p> </div>  |
| <p><b>Guiding Questions</b> are a new feature of the syllabus, given at the start of each sub-topic.</p> <p>These questions are purposefully open-ended, lending themselves to increasingly detailed consideration as understanding of the topic deepens.</p> <p>Guiding Questions may serve as openers for a topic, teasing out students' prior knowledge, and perhaps helping to suggest a sequence of what will be covered.</p> <p>They could also be used as a <b>tool for assessment</b>, looking for increasing depth and breadth at different stages in the learning.</p> | <p>We've included <b>Guiding Questions at the start of each chapter</b>. These set the context for the topic and how it relates to previous knowledge. They are revisited at the end of each chapter with a <b>summary checklist</b> that will come in handy for revision.</p> <p><b>Our Student Books cover ALL of the Guiding Questions from the IB's Subject Guides.</b></p> <div data-bbox="1592 770 2119 895" style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p style="text-align: center; margin: 0;"><b>Guiding Questions</b></p> <p style="font-size: small; margin: 0;">How are observations of wave behaviors at a boundary between different media explained?</p> <p style="font-size: small; margin: 0;">How is the behavior of waves passing through apertures represented?</p> </div>   |

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| <p><b>Linking Questions</b> are another important feature of the new course. They are given in many of the syllabus Understandings, where they show a link to a different but related sub-topic. The goal of Linking Questions is to help create enhanced understanding and a network of knowledge. The content of Linking Questions is often addressed elsewhere in the text as it sometimes encourages a 'revisiting' of material and sometimes a preview of upcoming material.</p> <p>Linking Questions are unlikely to be used as questions in examinations per se, but the related concepts are considered an essential part of the course</p> | <p><b>Linking Questions are highlighted throughout</b> the books to help students make connections and build a network of knowledge. They help students join up several different concepts from across chapters in one place.</p>   |
| <p>The Subject Guide includes a section titled <b>Skills in the Study of Physics</b>. This is not intended as a topic to be taught in isolation, but is more of a checklist of skills that students must acquire during the course.</p> <p>It replaces the Prescribed Practicals (or Mandatory Labs) from the 2016 curriculum.</p> <p>The Measurements and Uncertainties topic has been taken out of the main learning points, instead three categories are listed:</p> <ul style="list-style-type: none"> <li>● Experimental techniques</li> <li>● Technology</li> <li>● and Mathematics.</li> </ul>   | <p><b>Skills boxes</b> throughout the books indicate where you might be able to explore these different skills, in particular sub topics, as well as providing links to resources for carrying out particular labs.</p> <p>You and your students get comprehensive coverage of skills beyond what's in our books with downloadable <b>expanded lab skills worksheets and GeoGebra and PhET simulation PDFs</b>, as well as a <b>dedicated chapter on Skills</b>.</p> <p><b>Author tip!</b> Try out some lab skills worksheets and PhET simulation activities for free when you <a href="#">download everything you need to teach five Physics lessons &gt;</a></p>  |
| <p><b>TOK links</b> are no longer included in the syllabus to avoid the perception that the listed links are the only links students need to know. The aim is to encourage students and teachers to make their own TOK links.</p>   | <p>We've kept <b>TOK links</b> throughout the books, using questions that are designed to stimulate thought and consideration of knowledge issues as they arise in context, as well as including a <b>dedicated TOK chapter</b>.</p>    |

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| <p>All students will only sit two <b>external assessments</b>:</p> <p>Paper 1A: multiple-choice questions on the syllabus.</p> <p>Paper 1B: data-based questions.</p> <p>Paper 2: short-answer and extended-response questions on a wide range of syllabus content, skills, concepts and understandings.</p>  | <p>Our books include formative and summative assessment opportunities, with exercises throughout and <b>exam practice questions</b> at the end of each chapter, in the style of IB exam papers, in addition to real past paper questions. Answers are available in the eBook.</p> <p><b>Auto-marked quizzes</b>, with real-time results and reporting, offer practice tackling multiple-choice questions in preparation for Paper 1A.</p> <p><b>Hints for success</b> boxes throughout the books give advice from experienced IB examiners on how to approach questions, identifying common pitfalls.</p> <p>We've also included <b>worked examples</b> with solutions to help students tackle questions with confidence. <b>IB terminology is integrated</b> so that students become familiar with the language and terms that they will meet in exams.</p> <p><b>Author tip!</b> <a href="#">Get top tips for using the questions in the books in this video &gt;</a></p> <div data-bbox="1765 456 2119 560"> </div> <div data-bbox="1765 580 2119 802"> </div> |
| <p>The <b>Internal Assessment</b>, now called the <b>Scientific Investigation</b>, is an open-ended task in which the student gathers and analyses data (collaboration is possible here) in order to answer their own formulated research question (which must be individual to the student).</p> <p>The outcome of the scientific investigation is assessed through a written report of up to 3,000 words, which is now assessed based on four criteria:</p> <ul style="list-style-type: none"> <li>• Exploring and designing</li> <li>• Collecting and processing data</li> <li>• Concluding</li> <li>• Evaluating data</li> </ul> <p>Extra weighting will be given to Conclusion and Evaluation. The Communication element from the old Subject Guide is embedded in the above criteria.</p> | <p><b>Skills boxes</b> throughout the books give details of experiments which will support the skills needed for the Internal Assessment.</p> <p>The <b>Guiding Question Revisited Checklist</b> at the end of each chapter, also available to download and print from the eBook version, ensures students know what's required and supports them in achieving the new criteria.</p> <p>An <b>Internal Assessment chapter</b> offers support and guidance for the Scientific Investigation.</p> <div data-bbox="1682 932 2119 1147"> </div>   |