



IB Diploma Programme Grade Descriptors

Computer Science

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The attached document describes the expectations of achievement within the computer science subjects for candidates at each grade. The descriptors are given in the form of levels of performance that candidates should be able to demonstrate, and show those aspects of academic achievement that the senior examining team are evaluating when determining grades for examination papers and for internally assessed work. The descriptors are written in a generalized form that makes them equally applicable to both the higher level and the standard level subjects.

For each grade, the performance of a typical candidate is given. In reality, few candidates will fall consistently into one grade level or another, and most will display some of the characteristics of more than one grade. Examiners look to place candidates in the grade that broadly matches their performance, allowing for some compensation across the different aspects. This is done by reviewing the work of many candidates on each examination component, for each examination session.

It is hoped that teachers will find these descriptors useful both in guiding their candidates prior to assessment, and also in preparing predicted grades for their candidates.

Computer Science Grade Descriptors

Note: statements in *italics* refer to the program dossier component.

Grade 7 Excellent performance

Near perfect recall of technical knowledge with few gaps. Excellent comprehension, application and analysis. Able to synthesize topics, and discuss and select data structures as appropriate. Able to interpret and construct fairly complex algorithms, and produce workable and mostly efficient solutions. *Able to analyse a problem; plan, implement and test a solution effectively. Able to thoroughly evaluate a solution.*

Grade 6 Very good performance

Very good recall of technical knowledge with some gaps. Good comprehension, application and analysis. Able to select data structures and describe their suitability for a given task. Able to interpret and construct fairly complex algorithms with few errors and produce workable, partly efficient solutions. *Able to fully describe a problem. Good evidence of ability to plan, test and evaluate a solution to a problem.*

Grade 5 Good performance

Good recall of technical knowledge without broad gaps. Good comprehension, application and analysis. Able to comment on alternative data structures suitable for a given task. Able to interpret and construct fairly complex algorithms and produce partially workable solutions. *Able to describe a problem well. Shows some evidence of ability to plan, test **and** evaluate a solution to a problem.*

Grade 4 Satisfactory performance

Reasonable recall of technical knowledge with some broad gaps. Able to produce evidence of comprehension, application and analysis. Able to list data structures that may be suitable for a given task. Able to interpret **and** construct simple algorithms. *Able to describe a problem. Able to plan **or** test **or** evaluate a solution.*

Grade 3 Mediocre performance

Some recall of technical knowledge but with evident broad gaps. A little analysis and application. Some general knowledge of data structures. Able to interpret **or** construct simple algorithms. *Able to outline a problem and produce a partly workable solution. Some evidence of ability to plan or test or evaluate a solution.*

Grade 2 Poor performance

Very limited recall of technical knowledge. Weak knowledge of application and analysis. Limited knowledge of data types and structures. Some evidence of being able to interpret **or** construct simple algorithms. *Able to construct simple solutions that work at least partially. Limited ability to plan, test or evaluate solutions.*

Grade 1 Very poor performance

Little or no recall of technical knowledge. Application and analysis are absent. Little or no ability at algorithm construction and interpretation. *Largely unable to construct solutions to problems. Little or no ability to plan, test or evaluate solutions.*