

The Sciences

The Sciences: International Baccalaureate

Group 4: The Experimental Sciences

This is a new and challenging course for Bedford School. One Science is selected from Group 4 and it is possible if you wish to study one further science from Group 6, however, it is not possible to study all three sciences at IB. Each science can be studied at the higher level on 6 periods per week and standard level on 4 periods thus providing a broad understanding and appreciation of the principles of the subject.

Academic requirements

The higher level courses require at least a grade B at GCSE although for a high points score a grade A is generally needed. The higher level courses are usually studied because you might wish to continue the subject at degree level. The SL courses require a grade B at GCSE and are usually for those not wishing to take the sciences any further. What is probably just as important as GCSE grades though is the need to have very good organisational skills and a determination and ability to meet internal deadlines.

Curriculum structure

All the experimental sciences follow a common curriculum structure and end-of-course written paper assessment model.

Higher level (HL)	Teaching time	Theory	180 hours
		Practical	60 hours
	Assessment	Paper 1	20%
		Paper 2	36%
		Paper 3	20%
		Internal assessment	24%
Standard level (SL)	Teaching time	Theory	110 hours
		Practical	40 hours
	Assessment	Paper 1	20%
		Paper 2	32%
		Paper 3	24%
		Internal assessment	24%

Core material at HL and SL takes approximately 100 hours of theory teaching time and there is additional HL material which may build on the core or cover other topics of 70 hours. At both HL and SL, two options are studied and an additional 25% of teaching time is allowed for carrying out practical investigations. The balance of 10-15 hours is

taken by the Group 4 Project which is an investigation into a real-life problem carried out by all science students working in interdisciplinary teams. Assessment is by three written papers and a practical portfolio which is worth 24% of the final marks. At both levels paper 1 is multiple choice, Paper 2 consists of short answer, extended response or essay questions, both papers being on core material and paper 3 is on option material.

Further details of each course follow: remember that the final decision of which science or sciences to take must be yours; you will not be successful if you are not happy in your decisions.

Biology

Chemistry

Physics