

IB BIOLOGY (HL) SUBJECT BRIEF

Course description and aims:

Biology is the study of life. It is a science that deals with life and living things, examines their structure, their functions, their relations, the living and inanimate environment, their changes, and their diversity. So, biology is an endless source of areas. It is important at a time of growing pressure on the human population and the environment. Studying biology in the DP, students should become aware of how scientists work and communicate with each other. They will learn the variety of forms of scientific methods, design investigations, collect data, develop skills, analyse results, collaborate-evaluate, and communicate their findings. The Aims of the DP biology course are to enable students to:

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that characterise science and technology
3. apply and use a body of knowledge, methods and techniques that characterise science and technology
4. develop an ability to analyse, evaluate and synthesise scientific information
5. develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implications of using science and technology
9. develop an appreciation of the possibilities and limitations of science and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge

Syllabus outline and content:

Core

1. Cell biology
2. Molecular biology
3. Genetics
4. Ecology
5. Evolution and biodiversity
6. Human physiology

Additional higher level

7. Nucleic acids
8. Metabolism, cell respiration and photosynthesis
9. Plant biology
10. Genetics and evolution
11. Animal physiology

Option (choice of 1 out of 4)

1. Neurobiology and behaviour
2. Biotechnology and bioinformatics
3. Ecology and conservation
4. Human physiology

Practical scheme of work

Prescribed and other practical activities
Individual investigation
Group 4 project

Assessment Information:

External:

Paper 1

(40 multiple-choice questions (Core))

Duration: 60 min / Weighting: 20% / Marks: 40

Paper 2

(Data-based, short answer and extended response questions)

Duration: 2h 15min / Weighting: 36% / Marks: 72

Paper 3

(Data-based, short answer and extended response questions)

Duration: 1h 15min / Weighting: 24% / Marks: 45

Internal:

Individual Investigation

(Investigation and write-up of 6 to 12 pages)

Duration: 10h / Weighting: 20%

Sources: OCC IB DP Biology guide

<http://www.ibo.org/programmes/diploma-programme/curriculum/sciences/biology/>

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