

## IB Biology syllabus exam information

### Exam format

- 2 hours for the theory questions (with a 15 min break)
- 75 multiple choice questions
- Four short-answer questions
- One essay
- 22 shorter skills questions (using methodology associated with the scientific method)

### Exam topics include:

#### Chapter 1: The Science of Life

##### Vocabulary

biology, organization, cells, eukaryotic, multicellular, organ, tissue, organella, homeostasis, metabolism, development, reproduction, stimulus, response, ecology, ecosystem, evolution, natural selection, adaptation, scientific method, observation, hypothesis, prediction, experiment, control group, experimental group, independent variable, dependent variable, theory, peer review, compound light microscope, specimen, objective lens, eyepiece, light source, magnification, microscope

##### Objectives

- Define the relevance of biology to a person's daily life and to society.
- List the characteristics of living things.
- Summarize the hierarchy of organization within complex multicellular organisms.
- Distinguish between homeostasis and metabolism and between growth, development, and reproduction.
- Identify three important theories that help explain the living world.
- Challenge the main steps in the scientific method.
- Summarize how observations are used to form hypotheses.
- List the elements of a controlled experiment.
- Distinguish between observational data and data from experiments.
- Compare a scientific hypothesis with a scientific theory.
- List the functions of each of the major parts of a compound light microscope.

#### Chapter 2: Chemistry of Life

##### Vocabulary

atoms, ions, elements, mass, molar mass, percent, percent, atomic number, mass number, electron, valence, compound, chemical bond, covalent bond, ionic bond, free ions bond, energy, kinetic energy, chemical reaction, product, reactants, activation energy, catalyst, enzyme, protein, hydrolysis bond, cellular, cellular, cellular, concentration, acid, base, pH scale