ISY | THE INTERNATIONAL SCHOOL YANGON
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Global Learners, Lifelong Service.

IB Diploma (Grades 11 & 12) Course Outline 2026-2027

Biology

Teacher(s): Mr. Mitchell Hall (mhall@isyedu.org)

Course Description (adapted from IB Subject Brief): As one of the three natural sciences in the IB Diploma Programme, biology is primarily concerned with the study of life and living systems. Biologists attempt to make sense of the world through a variety of approaches and techniques, controlled experimentation, and collaboration between scientists. At a time of global introspection on human activities and their impact on the world around us, developing and communicating a clear understanding of the living world has never been of greater importance than it is today. Through the study of DP biology, students are empowered to make sense of living systems through unifying themes. By providing opportunities for students to explore conceptual frameworks, they are better able to develop understanding and awareness of the living world around them. This is carried further through a study of interactions at different levels of biological organization, from molecules and cells to ecosystems and the biosphere. Integral to the student experience of the DP biology course is the learning that takes place through scientific inquiry. With an emphasis on experimental work, teachers provide students with opportunities to ask questions, design experiments, collect and analyse data, collaborate with peers, and reflect, evaluate and communicate their findings. DP biology enables students to constructively engage with topical scientific issues. Students examine scientific knowledge claims in a real-world context, fostering interest and curiosity. By exploring the subject, they develop understandings, skills and techniques which can be applied across their studies and beyond.

Content (Topics Covered) in IB Biology Grades 11 & 12:

GRADE 11	*GRADE 12*
• **Unity & Diversity**: Molecules, cells, organisms, ecosystems • **Form & Function:** Molecules, cells, organisms, ecosystems • **Interaction and interdependence:** molecules, Cells	• **Interaction and interdependence:** organisms, ecosystems • **Continuity & Change:** • Molecules, cells, organisms, ecosystems

Inclusive Practices: At ISY, our community celebrates the unique qualities of each student, fostering an environment where they can truly flourish. We prioritize the holistic development of every learner, supporting their emotional, social, physical, and academic growth to realize their full potential as valuable members of our compassionate global community. ISY is dedicated to providing equitable access to learning and ensuring equal opportunities for personal achievement for all students. By fostering an inclusive educational environment, we empower learners to become independent, lifelong learners who are a force for positive change in our world.

All ISY teachers use inclusive instructional strategies that are designed to meet the needs of every student. **Inclusive instructional strategies in IB Biology include:**

- *Differentiated Instruction, tailoring learning paths based on readiness, interests, and profiles;*
- *Universal Design for Learning, designing lessons with multiple representations and engagement options;*
- *Collaborative Learning, fostering group activities and peer teaching;*
- *Scaffolded Instruction, breaking down complex concepts gradually;*
- *Inquiry-Based Learning, encouraging critical thinking through open-ended questions;*
- *Varied Assessment Methods, accommodating diverse learning styles for assessments;*
- *Flexible Grouping, promoting diverse interactions;*
- *Visual Aids and Graphic Organizers, utilizing visuals to aid understanding; Technology Integration, using tech for accessibility.*

Adaptive Instructional Resources: Our focus on inclusive instructional practices to meet the needs of all students is supported by our adaptive approach to instructional resources. Teachers and students have access to multiple digital, online, and text-based resources which are continually improved and updated. Teachers select and adapt multiple resources to support or extend all students in their learning.

Adaptive Instructional Resources used in IB Biology include:

- *Textbook: Pearson Biology for the IB Diploma Programme.*
- *Oxford Biology Study Guide*
- *InThinking*
- *Kognity*
- *Interactive Simulations*
- *Databases*
- *Videos from a range of sources*

Assessment: The two most important factors in assessing academic achievement and growth are fairness and accuracy. To meet a student's needs, a teacher must have a fair and accurate picture of a student's achievement and growth. This will require a combination of exams, tests, assignments, and observations. It is also very important that our students develop an ability to develop self-assessment strategies that promote a belief in their capability, an understanding of their performance, and goal-setting for deeper learning.

The IB prescribes a combination of internal and external assessments for IB Biology as follows:

Internal Assessments	***External Assessments***
Internal Assessment (IA) *Unit Tests* *Lab Practicals* *Projects* *Reflections* *Data-related assignments* *Student-Led Seminars* *Quizzes*	*Paper 1* *(Demonstrate, understand and apply knowledge.)* *Paper 2* *(Analyze, evaluate, and synthesize knowledge.)*

Reporting: At the end of each academic quarter, students will receive a report card on their academic achievement. Quarter 1 and Quarter 3 Report Cards will be followed by Parent-Teacher Conferences. A 1-7 grading scale is used to report on academic achievement.

The following Executive Functioning Skills that Support Learning are also reported on without affecting a student's academic grade: Working Memory, Mental Flexibility, and Self-Management & Social Skills.

Organization & Communication: All students belong to a course Google Classroom. This is where students will find readings, resources, assignments, and reminders relating to what is happening in the classroom. Parents are invited to receive a Google Classroom summary of activity in all of their child's course Google Classrooms. Parents and guardians are always welcome to contact teachers with any questions or to share any information about their child's learning. Please feel free to email teachers directly or the Secondary School Office at secondaryoffice@isyedu.org.