

<i>Unit</i>	<i>Topic</i>	<i>Suggested Labs⁺</i>
Unit 1	Molecular Biology: Metabolism - Topic 2 (Core) & 8 (AHL)	
2.5/8.1	Enzymes and Metabolism	(Practical 3*) Investigation of a factor affecting enzyme activity.
2.8/8.2	Cell Respiration	Analysis of results from experiments using a respirometer
2.9/8.3	Photosynthesis	(Practical 4*) Separation of pigments by chromatograph.
Unit 2	Plant Biology – Topic 9 (AHL)	
9.1	Transport in the Xylem of Plants	(Practical 7*) Measurement of transpiration rates using potometers.
9.2	Transport in the Phloem of Plants	
9.3	Growth in Plants	
9.4	Reproduction in Plants	Flower dissection
Unit 3	Animal Physiology – Topic 6 (Core) & 11 (AHL)	
6.1	Digestion and Absorption	Use of dialysis tubing to model absorption
6.2	The Blood System	Heart dissection
6.4	Gas Exchange	(Practical 6*) Monitoring ventilation in humans at rest and after mild & vigorous exercise.
6.3	Defence against Infectious Disease	
11.1	Antibody Production and Vaccination	COVID case study
11.2	Movement	Chicken wing dissection
6.5	Neurons and Synapses	Neuron model kits
6.6	Hormones and Homeostasis	
11.3	Kidney and Osmoregulation	
6.6/11.4	Human reproduction	
Unit 4	Embedded Review - AHL	
7	7.1 DNA Structure & Replication; 7.2 Transcription & Gene Expression; 7.3 Translation	
10	10.1 Meiosis; 10.2 Inheritance; 10.3 Gene Pools & Speciation	
Unit 5	Option D (Human Physiology)	Parts may be embedded in Unit 3.
D.1	Human Nutrition	D.4 The Heart
D.2	Digestion – nervous and hormonal control	D.5 Hormones and Metabolism
D.3	Functions of the liver	D.6 Transport of respiratory gases

+ These are suggested labs. Additional labs may be included or substituted.

* Indicates a required lab skill that may be examinable on your official IB exam.
Practicals 1, 2 and 5 were completed in IB Biology 11. Practical 3, 4, 6 and 7 will be completed in Grade 12.

ATL – Approaches to Teaching and Learning (IB Biology Guide, pg. 4, IBO)

“The five approaches to learning (developing thinking skills, social skills, communication skills, self-management skills and research skills) along with the six approaches to teaching (teaching that is inquiry-based, conceptually focused, contextualized, collaborative, differentiated and informed by assessment) encompass the key values and principles that underpin IB pedagogy. A major aim of IB Biology is to encourage students to develop a variety of skills that will equip them to continue to be actively engaged in learning after they leave school, and to help them not only obtain university admission but also prepare for success during post-secondary education and beyond.”

TOK – Theory of Knowledge links (IB Biology Guide, pg. 16, IBO)

“In TOK, students explore ways of producing knowledge within the context of various areas of knowledge: the natural sciences, the social sciences, the arts, ethics, history, mathematics, religious knowledge systems and indigenous knowledge systems. TOK lessons can support students in their study of science, just as the study of science can support students in their TOK course. TOK provides a space for students to engage in stimulating wider discussions about questions such as what it means for a discipline to be a science, whether there should be ethical constraints on the pursuit of scientific knowledge, and how indigenous ways of knowing inform our understandings of the interconnectedness of ecological systems.”

Assessment – Everything counts, but not everything is counted.

Report card marks and predicted grades are based on your results on tests, labs and assignments; **they are not your “official” IB grade.** Completion of all assignments is key to learning the material and developing the skills required to be successful in IB Biology. The course final in May 2021 covers two years of material. Keeping a neat, organized binder and creating a home study schedule for regular, ongoing review of both past and current material is expected.

Internal Assessment - (20% of official IB grade)

1. *Investigation* – Independent student-designed scientific investigation to be assessed by the teacher and moderated by the IB. (10 hours; 6-12 pages; Gr. 12)
2. ~~*Group IV Project* – Across the Science Curriculum~~

External Assessment (Cumulative Final Exam) – May 2021 (80% of official IB grade)

1. Paper 1 – 40 multiple choice questions on core material (no calculator permitted)
2. Paper 2 – data-based questions; short answer and extended response (calculator permitted)

HL	Description	Content	Marks	Time (h)	Weight (%)
Paper 1	40 multiple choice	Core + AHL	40	1	30
Paper 2	Section A: data-based questions & short answer Section B: choose 2 of 3 extended response options (answer all parts of your selected questions)	Core + AHL	72	2 ¼	50
Paper 3	Not examinable in May 2021 session				

Academic Integrity (IB Biology Guide, pg. 4, IBO)

Academic integrity serves to promote **personal integrity**, engender respect for the integrity of others and **their work**, and ensure that all students have an **equal opportunity** to demonstrate the knowledge and skills they acquire during their studies. All coursework – including work submitted for assessment (IA, EE, Group IV, etc.) – is to be authentic, based on the student’s individual and original ideas with the ideas and work of others fully acknowledged. Assessment tasks that require teachers to provide guidance to students or that require students to work collaboratively must be completed in full compliance with the detailed guidelines provided by the IB. (This means I am limited in the amount and type of help and feedback I can give you on your Internal Assessment, written reflections, and Extended Essay.)

For further information on Academic Integrity, including Semiahmoo's policy regarding the definitions and consequences of malpractice, see the Semi IB website and the academic integrity declaration signed by you and your parents. <http://www.ibsemiahmoo.com/resources>.

Absences

Attendance is crucial for success in the IB Biology course. If you are absent for class, it is your responsibility to catch up. If you are ill on the date that a major assessment is due (e.g. formal lab, IA or EE), you may **email it to me by the deadline** and hand in a paper copy if required on the date of your return (must be identical to the emailed copy). If you are ill on the date of a unit test, please inform me **by email before or on the date** of the test. A pattern of absences on test and/or assessment due dates will be brought to the attention of the IB coordinator for possible malpractice (gaining an unfair advantage over other candidates) and a doctor's note/parent meeting may be requested. If you are feeling overwhelmed, please speak to your teachers and be proactive in getting help rather than avoiding deadlines and risking malpractice.