

IB SL Biology - Syllabus 2019-2020

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Course Description/Overview: The International Baccalaureate (IB) Standard Level (SL) Biology course will allow students to acquire a body of biological facts and at the same time develop a broad, general understanding of the principles of the subject. Students will study structure and function, universality versus diversity, equilibrium within systems and evolution all within a global context. This pre-university course will expect students to apply the practical application of the concepts presented in both field and laboratory settings. Laboratory emphasis will be on design and documentation. Students seeking an IB diploma or certificate, or looking for a challenge, should take this class.

Textbook: *IB Biology* Oxford

Study Book: *IB Biology* BioZone

Online Study Resources: Kognity (see website for link), ib.bioninja.com.au

Labs: We investigate science through a combination of teacher and student-designed labs. This course fulfills the academic requirements of the IB SL Biology course.

Materials:

Required – Notebook/lined paper, pencil or pen: used for taking class notes.

Recommended – Three ring binder: Used to organize notes, diagrams, articles and corrected work.

– Scientific calculator: Used for statistical analysis for labs.

Grade Components: A variety of assignments make up your total grade for the course. Your grade is determined using both formative and summative assessments.

Formative: 20% -- Daily assignments and group collaboration (10%) & Homework (10%)

Summative: 80% -- Labs & Quizzes (30%) & Exams (50%)

Tests and quizzes will be composed of multiple choice and essay questions and modeled after previous IB Biology exams, to help prepare you for the exams at the end of the year.

Grading scale

Grade	Percentage Range	Definitions
A	100-93	Exemplary Work
A-	92-90	
B+	89-87	Proficient/Thorough Work
B	86-83	
B-	82-80	Satisfactory/Acceptable Work
C+	79-77	
C	76-73	
C-	72-70	Mediocre Work
D	60-69	
F	50-59	Unacceptable Work

Extra Credit: There may be extra credit questions on tests -- but no assignments.

Retakes: Retakes will be allowed on tests only. The retake will be on a different version of the test, and can only be retaken once, within the week following the return of the exam. Final test score will be averaged from the original and retake score.

To earn a passing grade, students must complete *all* summative assignments.

Tentative Curricular Schedule: See website for weekly plan.

<p>1st Quarter</p> <p>IB Topic 4: Ecology</p> <ul style="list-style-type: none"> • 4.1 – Species, Communities and Systems • 4.2 – Energy Flow • 4.3 – Carbon Cycling • 4.4 – Climate Change <p>IB Topic 1: Cell Structure</p> <ul style="list-style-type: none"> • 1.1 – Introduction to Cells • 1.2 – Ultra-structure of Cells • 1.3 – Membrane Structure • 1.4 – Membrane Transport • 1.5 – The Origin of Cells <p style="text-align: right;"><i>Group 4 Project</i></p>	<p>2nd Quarter</p> <p>IB Topic 6: Physiology 1</p> <ul style="list-style-type: none"> • 6.1 – Digestion • 6.2 – Transport system • 6.3 – Defense against infectious disease <p>IB Topic 6: Physiology 2</p> <ul style="list-style-type: none"> • 6.4 – Gas exchange • 6.5 – Nerves, hormones and homeostasis • 6.6 – Reproduction <p>IB Topic 2: Molecular Biology 1</p> <ul style="list-style-type: none"> • 2.1 - Molecules to Metabolism • 2.2 - Water • 2.8 – Cell Respiration • 2.9 – Photosynthesis
<p>3rd Quarter</p> <p>Internal Assessments due February 5th</p> <p>IB Topic 2: Molecular Biology 2</p> <ul style="list-style-type: none"> • 2.3 – Carbohydrates and Lipids • 2.4 – Proteins • 2.5 – Enzymes • 2.6 – DNA and RNA • 2.7 – DNA replication, transcription and translation <p>IB Topic 3: Genetics & Division</p> <ul style="list-style-type: none"> • 1.6 – Cell Division • 3.1 – Genes • 3.2 - Chromosomes • 3.3 – Meiosis • 3.4 – Inheritance <p>IB Topic 5: Evolution and Biodiversity</p> <ul style="list-style-type: none"> • 5.1 – Evidence for Evolution • 5.2 – Natural Selection • 5.3 – Classification and Biodiversity • 5.4 – Cladistics 	<p>4th Quarter</p> <p>IB Topic 3 & B: Biotechnology & Microbiology</p> <ul style="list-style-type: none"> • 3.5 – Engineering and biotechnology • B1 – Microbiology • B2 – Biotechnology in Agriculture • B3 – Environmental Protection <p>Review for IB Exam</p> <ul style="list-style-type: none"> • IB Exam May 7th & 8th <p>End of Year Projects</p>

Missing & Late Work: Quizzes, class work, and labs must be made up within the week of your absence. *If your absence is unexcused, you will not receive credit.* If a test is missed - make-ups must occur within the following two weeks. *Weekly homework will receive no credit if turned in late.*

Grading modifications may be made for students with IEP or 504 plans.

Return this page into your IB Biology Teacher

Student Name: _____ Period: _____

Going Outside

This course will require students to identify with their immediate environment. We will be heading outside (during our class hour). Students will be told at least one day in advance of these local "field trips". Students are encouraged to dress appropriately (for your comfort and mine). Please initial below stating that you and your parent/guardian understand this.

Student Initials

Parent/Guardian Initials

Photographs

The instructor applies for grants to provide money or supplies to enhance students' classroom experience. Many times the organization granting money requires photos of students using the supplies that were donated to us. The photos have: NO STUDENT NAME, NO SCHOOL NAME, and NO TEACHER NAME associated with them and typically do NOT show faces of students unless you have signed the media release. By signing below (or if you signed a media release for the district) you are saying it is OK to use your child's image using the material donated to us.

Parent/Guardian Initials

Use of Technology

Cell phone use is not permitted during class time. Students are expected to be responsible users of school technology. By initialing below, you understand the expectations around use of technology.

Student Initials

Parent/Guardian Initials

Lab Safety Agreement

I, _____, _____ (student's name) have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to ensure my own safety, and that of my fellow students and instructors. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also closely follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory or misbehavior on my part, may result in being removed from the laboratory, detention, receiving a failing grade, and/or dismissal from the course.

Student Initials

QUESTIONS

Do you wear contact lenses?

Are you color blind?

Do you have allergies?

YES NO

YES NO

YES NO

If so, list specific allergies. _____

The syllabus containing class requirements, grading policies, and classroom expectations can be found on the class website. The lab safety contract can also be found on the class website. If you would like an additional paper copy, feel free to request one from the instructor.

Dear Parent or Guardian:

We feel that you should be informed regarding the school's effort to create and maintain a safe science classroom/laboratory environment. With the cooperation of the instructors, parents, and students, a safety instruction program can eliminate, prevent, and correct possible hazards. You should be aware of the safety instructions your son/daughter will receive before engaging in any laboratory work. Please read the list of safety rules given to your student. No student will be permitted to perform laboratory activities unless this contract is signed by both the student and parent/guardian and is on file with the teacher.

Your initials on this contract indicates that you have read this Student Safety Contract, are aware of the measures taken to ensure the safety of your son/daughter in the science laboratory, and will instruct your son/daughter to uphold his/her agreement to follow these rules and procedures in the laboratory.

Parent/Guardian Initials

Signatures

We have read and understand the course requirements and expectations for Biology Class.

Student Printed Name

Parent/Guardian Printed Name

Student signature

Parent/Guardian signature

Home Telephone #

Parent/Guardian Cell Telephone #

Parent/Guardian Email Address (PLEASE PRINT)