

IB Biology SL1/HL1 2020-21

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Welcome to IB Biology!

Congratulations on choosing to take this exciting and challenging class. Your teacher is here to guide, help and support you through your learning as we make our way through the content. Please don't hesitate to reach out to your teacher if you feel that you need further support or guidance in order to be successful in this class.

While this class can feel intimidating, it is designed for students of all academic backgrounds to be successful, all you need to bring to the table is a desire to learn and a willingness to follow your teacher's instructions and the pacing for the course. Work diligently and you will find success in this class!

Managebac

All materials, resources, and the calendar will be available on Managebac for this course. Many assignments will be submitted via Managebac, unless otherwise stated. Students need to be checking Managebac regularly and present for Zoom meetings each day according to the schedule below.

	TIME	LINK	Meeting ID
Period 1 - IB Bio	8:00 - 9:00 AM	https://bit.ly/2XMmUQm	957 1592 3373
Period 2 - IB Bio	9:15 - 10:15 AM	https://bit.ly/33J7qQC	928 3194 6802
Period 3 - Physio	10:30 - 11:30 AM		
Period 4	12:30 - 1:30 PM	Prep Period	
HUB	1:45 - 2:45 PM	https://bit.ly/3gXu5wF	955 1566 5807

HUB Time

HUB time is designed to help students who need extra time with the teacher. **HUB time will follow the typical Intervention schedule: 1st period priority Tuesday, 2nd period priority Wednesday, 3rd period priority Thursday, 4th period priority Friday.** If you are asked to attend a HUB period, it is mandatory that you attend the priority day or find a day and time that works for you and your teacher.

Communication

We cannot stress the importance of communication during this unprecedented time. Many students have other obligations making it difficult to attend classes on time and submit assignments on time. However, attendance will be taken each day and the grading policy will be enforced. There will be flexibility as we are all adjusting to the dynamic online learning schedule, but it is in each student's best interest to contact the teacher the minute that something comes up. The best way to contact your teacher is through email, please see the header at the top of this page.

Absences and make up work

Make up work for absences will follow the Oakmont policy. Students are expected to reach out to the teacher via email, whenever possible, to ask for make-up work or clarification on work or assignments that are posted online. Students should avoid missing exam days wherever possible. The dates of exams are posted well ahead of the actual test. Please try to schedule appointments and other

disruptions to being in class on other days. Students who consistently miss days when there are exams or large assignments due will be asked about the pattern by the teacher.

Late Work

Being able to work at the pace expected in this class is essential for success. Students that procrastinate will struggle to be successful. Be sure to manage your time well, pay attention to due dates, and ask for help if you need it. For more information about the way these skills are formally assessed, please refer to the Approaches to Learning section.

All assignments that will be submitted will have a deadline of submission of 10pm. Any inability to meet this 10pm deadline MUST be communicated via email to the teacher by 9PM on the night the assignment is due. For most assignments, for every 24 hours they are late, there is a 10% penalty (beginning at 1 minute past the posted deadline time in Managebac, or once the teacher has collected the hard copies at the beginning of class, depending on which is relevant for that particular assignment). Making a habit of turning work in late will quickly and significantly impact your grade. These points cannot be made up. Some assignments cannot be turned in late. This will be communicated when they are assigned.

Technology

It is suggested that you use your Chromebook every day, but it is required that you use your Chromebook on assessment days. Phone and ear buds should not be used during class time, unless otherwise stated by your teacher. **Please be aware, on any given day, a Zoom class session may be recorded so that it can be available at a later time.** It will only record the teacher's screen, not student screens or video, however, it may record voice feedback from students.

Assignments

Assignments are considered a form of formative feedback for how you are progressing through the course. They are generally graded on completion, rather than on correctness. However, if an assignment is turned in that is well below the standard expected, it will have to be completed in order to receive ANY points for the assignment.

- **In-Class Assignments:** Completed in-class and due before the end of class. There will be no extensions for these assignments, and no late work accepted.
- **Homework:** Due dates are firm. Late work will not be accepted without a penalty to the grade. (see late work policy section above)

Quizzes

There are many quizzes in this class. They are intended to be formative, which means they should help inform the student, parent and teacher of the student's progress mastering the material in preparation for the exam. If a student does not pass a formative, they will be asked to complete a retake quiz. They may be retaken until the day before the exam to which that quiz relates. For example, you may make up any Topic 1 quizzes up to the day before the Topic 1 exam.

All quizzes are worth 10 points. For reference, the guidance for students and teachers is as follows:

Score	Teacher feedback
10	Student is demonstrating reasonable progress towards learning the material.
0	Student is not demonstrating reasonable progress towards learning material and needs to

	attend HUB Time to review, relearn and retake the quiz.
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Assessments

Summative assessments serve to demonstrate the level of mastery of material at the end of a section of class. There will be a summative assessment at the end of each topic, as well as a cumulative midterm and final exam. Students are required to use their district issued Chromebooks for all assessments, quizzes, and tests. All assessments will be completed during class time. If a student is unable to use their district Chromebook or if they will be absent, it is vital that they contact the teacher as soon as possible.

Labs/IAs

The IA is a major component of this course, and the final version will be submitted to IB as a part of your formal assessment from IB. It comprises 20% of your score for this course from IB. You will learn much more about the IA as we progress through the first half of the course. In order to sufficiently prepare you for success on the IA, we have a number of practice IAs that will help you learn how to approach this important assignment. In addition to these larger labs, there are smaller labs and lab skills that we will practice along the way. These will also go into the Labs/IA portion of the gradebook.

Grading Policy

- Engagement (0%)
- Classwork/Assignments (includes DBQ's and orange boxes) (25%)
- Formative assessments (quizzes) (10%)
- Summative assessments (40%)
- Labs/IA prep (purple boxes from book and practice IA's) (25%)

Academic Honesty

IB and OHS takes Academic Honesty very seriously, and violations of the policy can have serious consequences. It is important that you understand what constitutes Academic Honesty, and violations of it. There is more information available on the OHS IB website, in the OHS IB handbook, at www.ibo.org, in the front of your textbook, and from your coordinator or teacher, should you need additional clarification. All IB teachers will go over the pieces of the academic honesty policy at the start of each class, including collecting your signature on a form, verifying you understand it, and agree to follow it. Should you have any questions or concerns, you should bring those to the attention of your teacher or coordinator as soon as possible.

Consequences for violations of the policy are at the teacher's discretion, but could include a zero on the assignment, a requirement to redo the assignment by a given deadline, or in severe cases, possible removal from the IB Program due to the violation. In some cases, the teacher may choose to escalate the situation to a school administrator for further investigation, and possible disciplinary action. There is more information about this available in the OHS IB Handbook.

Classroom Routine/Behavioral Expectations	
Entering the Classroom	<p>How can students be welcomed to the class?</p> <ul style="list-style-type: none"> • Arrive in the waiting room for your zoom call a few minutes before the scheduled start time • Keep your camera on, unless otherwise cleared by the teacher • Keep your microphone muted until it is time for you to participate
Starting the Class	<p>How can instruction begin quickly?</p> <ul style="list-style-type: none"> • Your teacher will take roll, and will tell you what you need to have ready for class that day. Follow instructions and get ready quickly.
Attention Signal	<p>What attention signal will be used?</p> <ul style="list-style-type: none"> • Keep the volume up on your computer so that you can hear your teacher call students to attention at any point during class.
Working Independently	<p>What are the expectations for students when they are working independently?</p> <ul style="list-style-type: none"> • During independent work time students must keep their camera on and be in view so that the teacher knows that you are still in class and working. • Keep your microphone muted during independent work time. • If you have a question, use the Hand Raise feature and/or the chat feature to let the teacher know that you need help.
Working in Groups	<p>What are the expectations for students when they are working in groups?</p> <ul style="list-style-type: none"> • Students are expected to collaborate during class using Zoom Breakout Rooms and shared google documents. • Students must show respect and integrity while working together by actively listening, stepping up and stepping back when appropriate, and always using kind words.
Asking for Help	<p>How will students ask the teacher for help?</p> <ul style="list-style-type: none"> • In Zoom, students should use the Hand Raise feature and/or the chat feature to signal that they have a question or need help. • Students should also use email to ask additional questions that can be addressed during class or hub time.
End of class	<p>What does the last 5 minutes of class look like?</p> <ul style="list-style-type: none"> • Before leaving class, make sure that you know what must be done before the next day's class. • Check to see if you have been assigned to come to Hub Time today. • Complete any exit ticket that might have been assigned.

Learner Profile

- ***Inquirers***: we nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.
- ***Knowledgeable***: We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance
- ***Thinkers***: We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions

- **Communicators**: We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.
- **Principled**: We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.
- **Open-Minded**: We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.
- **Caring**: We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.
- **Risk-Takers**: We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.
- **Balanced**: We understand the importance of balancing different aspects of our lives-intellectual, physical and emotional-to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.
- **Reflective**: We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

Approaches to Learning

Thinking Skills

Critical Thinking skills: Analysing and evaluating issues and ideas.

Creative Thinking Skills: Generating novel ideas and considering new perspectives.

Transfer Skills: Using skills and knowledge in multiple contexts

Communication Skills

Exchanging thoughts, messages and information effectively through interaction

Reading, writing and using language to gather and communicate information

Social Skills

Collaborative Skills: Working effectively with others

Self-Management Skills

Organization skills: Managing time and tasks effectively

Affective Skills: Managing state of mind: Mindfulness, Perseverance, Emotional Management, Self-Motivation, Resilience

Research Skills

Information literacy skills: Finding, interpreting, judging and creating information.

Media Literacy skills: Interacting with media to use and create ideas and information

Theory of Knowledge (TOK)

TOK encourages us to think critically into the process of knowing, and not just rote memorization of knowledge. It bridges the gap between how we know and what we claim to know. In science, one way this is demonstrated, is through the collection, analysis and evaluation of data. We will look at knowledge claims and explore knowledge questions.

Ways of Knowing:

The lens through which we look at information are language, sense perception, emotion, reason, imagination, faith, intuition and memory. Mastering any subject requires that you look at the knowledge

that you are gaining in that subject through all these lenses. We will do this in this class. They help in that they underline the methodology of the subject (area of knowledge), as well as provide a basis for personal knowledge. Thinking about the ways of knowing while you are engaging with the learning process helps you understand the material on a deeper level, and across multiple subjects.

Areas of Knowledge:

Areas of knowledge include mathematics, the natural sciences, the human sciences, the arts, history, ethics, religious knowledge systems and indigenous knowledge systems. The specific branches of knowledge each have a distinct nature and different method of gaining knowledge. In this class, we will mainly explore the area of knowledge for natural sciences, but will occasionally think about how other areas of knowledge impact learning in the sciences.

The Knowledge Framework for Natural Sciences

Scope/Applications

- Natural science is a system of knowledge of the natural world largely based on observation and constructed using reason and imagination
- The sciences are shared knowledge, often shared by a large grouping geographically spread and largely independent of culture
- Prediction is often an important feature of scientific knowledge, but understanding is also a prime purpose
- Natural sciences are interested in producing generalized statements, principles or scientific laws about the natural world
- Most of these laws are causal: If event A happens then B will happen as a result

Concepts/Language

- Many of the laws of the natural sciences are stated using the language of mathematics - maths is central
- Language of the sciences is precise in order to eliminate ambiguity which might affect the reasoning process

Methodology

- Measurement involves interaction with the world, but this interaction can sometimes change the aspect of the world we are trying to measure
- Models are important in most areas of the natural sciences
- Classification is a central idea in many of the natural sciences
- Among the methods employed by the natural sciences are : Hypothesis-deduction and induction - use of reason and sense perception

Historical Development

- There have been a number of pivotal shifts of thinking in the development of the natural sciences

Links to personal knowledge

- The natural sciences give us a view of ourselves as material entities behaving according to universal laws
- There is little space here to see ourselves as rational, free agents with desires and the ability to choose
- Individuals have contributed to scientific progress, often in revolutionary ways
- Use of imagination, intuition and emotion in creation of hypotheses

Knowledge Questions

- Given the problems associated with the inductive process (going from the particular to the general), how is it that science can be reliable?

- How does one know in advance which factors (to measure, say) will be relevant to the final explanation?
- How can one decide when one model/explanation/theory is better than another?
- How can we build understanding about the world independent of the human impact of measuring it?
- How can it be that scientific knowledge changes over time?
- How can we know cause and effect relationships given that one can only ever observe correlation?