

Torah High School

Biology Honors Course Syllabus

Instructor

Ms Jen Fordham

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Lab Instructor

Dr Tracey Milani

Class lecture times

Monday 2:30 - 4:00pm

Wednesday 3:00 - 4:20

Overview

Biology Honors is a first year course in biology and is designed for highly motivated, college bound students. It is a fast paced course that requires daily reading and review. Students in this course typically will also take one or more Advanced Placement science courses as they proceed through high school. The goal of Honors Biology is twofold. First, the course provides students the framework of key biological concepts into which they can integrate the many new things that they learn and encounter throughout their lives. Second, the course should familiarize students with the scientific process. This course incorporates hands-on activities, technology and labs when appropriate.

Course Textbook and Required Materials

Concepts of Biology

<https://openstax.org/details/books/concepts-biology/>

This is a free online textbook that can be viewed in a web browser or downloaded on a tablet. It can be printed or you can order a print version for \$35 (purchase is not required for class).

Each day of class you will need a 3 ring binder, lined paper, pen/pencil, and a handful of different colors of pens/markers/pencils for illustrations and notes.

**Please note, Dr Milani will have a separate syllabus and additional requirements for the lab portion of this class

Grading

Sem 1 - Labs with Dr Milani Sem 2 - Projects	30%
Homework: Chapter Notes and Review Questions	20%
Activities: Classwork	20%
Tests	30%

Labs

This year Dr Milani will be conducting labs on Fridays during the first semester. She will communicate her expectations for lab safety and assignments in a separate syllabus.

Homework

I expect students to arrive to class with the reading on the lecture topic completed along with chapter notes. During class I will answer questions on the material, review, and expand on the content. Students will add to their reading notes with annotations, diagrams, and illustrations with the intent of creating a resource for studying later. Additionally, I will frequently assign the chapter review questions, which will often be the basis for class discussion.

Activities

Very few people learn a concept well just through reading, so we will complete a variety of activities in class to enhance understanding of the material. Activities may include creative projects, hands on demonstrations, games, and review exercises.

Tests

Each unit will end with a test that will include not only multiple choice questions, but also written short answer critical thinking questions. Rote memorization will not be sufficient for passing tests and does not indicate an advanced understanding of the material, therefore comprehension and application questions will be a big part of each test.

Late Work

Late work will be accepted for a period of one week after the due date/time for a reduced point value. Typically, there is a 5% deduction on the earned score per day late up to the 7-day mark, after which no work will be accepted.

Academic Honesty

Do your own work. Plagiarism/cheating earns 0 points on the assignment, a phone call home, and a possible conference. You always need to do your own work and write answers in your own words even if you are working with a partner. If you turn in an identical assignment as another person, it is cheating. If someone takes your work and copies it, both parties will still be held accountable. Unless expressly designated in the assignment instructions, use of AI is not allowed in this course.

Course Outline

**The dates are likely to change but the order and pacing of each unit should remain the same. Canvas will have up to date information on due dates and assignments.

Date	Topics	Textbook notes and review questions DUE
8/28/24 Unit 1 - Chemistry of Life	Intro to bio	
9/2/24	Science Basics	1.2 and Chapter questions
9/4/24	Chemistry	2.1
9/9/24	Macromolecules	2.3
9/11/24		Chapter questions
9/16/24		TEST 1
9/18/24 Unit 2 - The Cell	Cell structure and function	3.2-3.3
9/23/24	Organelles	
9/25/24	Organelles	
9/30/24	Membrane	3.4
10/7/24	Transport	3.5-3.6 Chapter Questions
10/9/24		
10/14/24		TEST 2
10/28/24 Unit 3 - Cells and Energy	Energy	4.1
10/30/24	ATP and glycolysis	
11/4/24	Citric Acid Cycle	
11/6/24		
11/13/24 quarter ends		TEST 3
11/18/24 Unit 4 - Cell Division	Cell cycle - Mitosis	6.1-6.2

11/20/24		Chapter 6 Questions
11/25/24	Meiosis	7.2-7.3
11/27/24		Chapter 7 Questions
12/2/24		TEST 4
12/4/24 Unit 5 - Genetics	Mendel	8.1
12/9/24	Laws of Inheritance	8.2
12/11/24	More methods of inheritance	8.3 and Chapter Question
12/16/24		
12/18/24		TEST 5
1/6/25 Unit 6 - Molecular Bio	DNA	9.1
1/8/25	Replication	9.2
1/13/25	Transcription	9.3
1/15/25	Translation	9.4 and Chapter Questions
1/22/25		MIDTERM (TEST 6)
Semester 2		
1/27/25 Unit 7 - Plants and photosynthesis	Photosynthesis	5.1
1/29/25	What is Light	5.2
2/3/25	Calvin Cycle	5.3 and Chapter Questions
2/5/25	An overview of plants	14.1
2/10/25		14.4
2/12/25		TEST 7
2/19/25 Unit 8 - Evolution	Evolution	11.1
2/24/25	Natural Selection	11.2-11.3

2/26/25		11.4 and Chapter Questions
3/3/25		
3/5/25		TEST 8
3/10/25 Mini unit - Diversity of Life	Diversity of Life	12.1
3/12/25		12.2
3/17/25		
3/19/25 Unit 9 - The Human Body	Human Body Systems	16.1
3/24/25	Digestive System	16.2
3/26/25	Circulatory System	16.3
3/31/25	Nervous System	16.6
4/2/25	Viruses	17.1
4/7/25	Immune System	17.2-17.3
4/28/25		
4/30/25		TEST 9
5/5/25 Unit 10 - Ecology	Ecosystems	20.1
5/7/25		
5/12/25	Biogeochemical Cycles	20.2
5/14/25		
5/19/25	Biomes	20.3-20.4
5/21/25		
5/28/25	Review	
6/4/25	Review	FINAL (TEST 10)