

McCreary School
Semester 2 – 2023/2024
Mrs. Lockhart

Grade 12
Biology

COURSE DETAILS

Course Code: 0124
Course Name: BIO 40S
Credit Value: 1.0
Prerequisite: Science 20F

CONTACT INFORMATION

Room 14 McCreary School
MS Teams: Bio 40
Email: jlockhart@trsd.ca
School phone: 835-2083

COURSE TECHNOLOGY

Office 365
MS Teams: Bio 40

COURSE TEXTBOOK

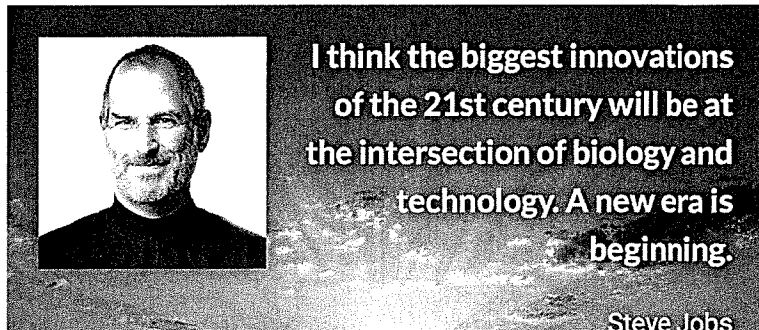
Biology: The Dynamics of Life, McGraw Hill - Glencoe Science, 2004.

SUPPLIES

- 2" – 3 ring binder
- Loose leaf
- Ruler
- Pens
- Pencils
- Erasers
- Highlighters

Welcome to
BIOLOGY

Part 1: Genetics	Mechanisms of Inheritance <ul style="list-style-type: none"> ▪ The discovery and structure of DNA ▪ The process of DNA replication ▪ Protein synthesis ▪ Gene mutations
	Biological Inheritance <ul style="list-style-type: none"> ▪ Mendel’s principles of inheritance ▪ Punnett squares ▪ Pedigree charts ▪ Ethical issues of genetic testing ▪ Karyotyping ▪ Meiosis
Part 2: Biodiversity	Evolutionary Theory <ul style="list-style-type: none"> ▪ Darwin’s theory of evolution ▪ Natural selection ▪ Genetic variation ▪ Convergent vs divergent evolution ▪ Models of evolutionary change
	Organizing Biodiversity <ul style="list-style-type: none"> ▪ Ecosystem, species, and genetic diversity ▪ Evidence for classifying organisms ▪ The classification system ▪ Evolutionary trends
	Conservation of Biodiversity <ul style="list-style-type: none"> ▪ Importance of maintaining biodiversity ▪ Strategies for maintaining biodiversity ▪ Tools and procedures for monitoring biodiversity ▪ Issues related to biodiversity



UNIFYING CONCEPTS & GENERAL LEARNING OUTCOMES

- ✓ Develop an understanding of the basic principles and concepts of life science.
- ✓ Develop critical and creative thinking and problem solving skills.
- ✓ Develop the skills and understand the process of science.
- ✓ Develop an understanding of the interconnecting ideas and principles that transcend and unify the natural science disciplines.
- ✓ Attain the level of scientific awareness essential for all citizens in a scientifically literate society.
- ✓ Make informed decisions about further studies and careers in science.
- ✓ Develop scientific attitudes and develop positive attitudes towards science.
- ✓ Develop an understanding and appreciation of the effect technology has on advancements in science and the resulting effects on society.
- ✓ Develop an understanding of the importance of maintaining biodiversity and the impact that humans can have on the environment.
- ✓ Make decisions and explore alternative solutions to current issues in biology.
- ✓ Gather data and utilize information from a variety of sources and properly reference it.

RULES & EXPECTATIONS

➤ Daily Classroom Expectations

Show up to class on time, with all your supplies, and use class time effectively. Take responsibility for your learning by completing all assigned work and being proactive rather than reactive.

➤ Technology in the Classroom

Technology will be an integral part of the functionality of the classroom. Students will have access to the school laptops, but are also welcome to bring their own device. Improper use may result in a loss of certain privileges.

➤ Student Lates & Absences

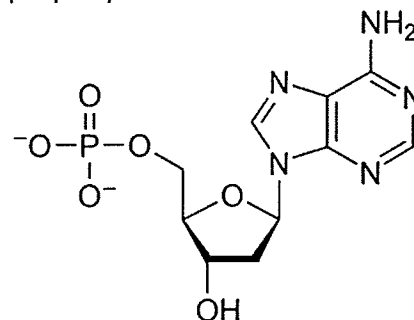
Students who are late for class are asked to come in quietly without causing a disruption. Students who make a habit out of being late may not be allowed into the room if class has already begun. If you are absent, YOU are responsible for finding out what you missed and making up all missed work.

➤ Academic Dishonesty

Academic dishonesty including (but not limited to) inappropriate collaboration, cheating, or plagiarism is a severe offence and will be dealt with according to the policy outlined in the school handbook.

➤ Extra help

Arrangements can be made for in person extra help before or after school or during lunch hour. Students can also ask for clarification or feedback via email, MS Teams chat or discussion post, or schedule a Teams meeting.



ASSESSMENT

➤ Homework

You won't have homework every night, but when it is assigned it is expected to be completed on time. Homework is often used to connect lessons between days and although you do not receive credit for this work immediately it acts to solidify understanding which will be rewarded on future assessments.

➤ Chapter Reviews

A lot (but not all) of the content covered in this course can be found in the student textbook. As we progress through the course, students will be required to complete relevant textbook reviews. It is expected that all students use class time wisely and complete all assignments on time.

➤ Incomplete and Late Work

Work is to be completed on time and to the best of the student's ability. Late or missing assignments will be penalized as outlined in the school student handbook, "Upon teacher discretion a maximum of 5% may be deducted for every day the assignment is not turned in. If the assignment is not turned in after two weeks or at the start of a new unit, the assignment will receive a mark of zero."

➤ Unit Tests

Students are expected to complete tests on the agreed upon date. Students with an unexcused absence on the day of a test will receive a zero. Students with an excused absence on the day of a test are expected to make arrangements ahead of time whenever possible, or as soon as they return to school if the absence was unforeseen (ie. due to illness).

➤ Re-writes

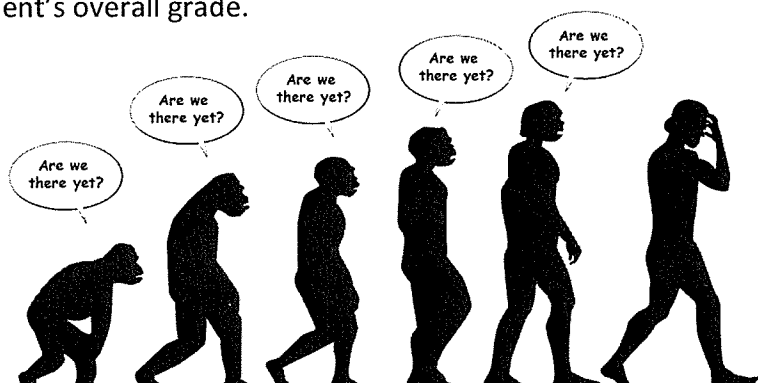
Re-writes will not be available once a summative assessment has been graded and returned to students. If a student is unhappy with their grade they may meet with the teacher to discuss the possibility of completing an alternative assessment. The final decision is at the discretion of the teacher.

➤ Research Projects

Each student will complete two research projects during the course. We will co-construct a grading rubric for each project prior to the first project's due date.

➤ Final Exam

All students will be required to write the final exam during exam week; June 17th – June 21st. The final exam is worth 20% of the student's overall grade.



SUMMATIVE ASSESSMENT for BIOLOGY 40

Assessment Category	Assessment Item	Item Weight	Category Weight
Part 1: Genetics	Construct a Critter Assignment	7%	40%
	Ch 11 Textbook Review	4%	
	Ch 11 Test	17%	
	Vocabulary Word Cycle	7%	
	Ch 10 Textbook Review	4%	
	Ch 10 Test	17%	
	Case Study: The Death of Baby Pierre	7%	
	Ch 12 Textbook Review	4%	
	Ch 12 Test	17%	
	Ch 13 Textbook Review	4%	
	Project: Genetics / Biotechnology	12%	
Part 2: Biodiversity	Ch 14 Textbook Review	4%	40%
	Ch 15 Textbook Review	4%	
	Species Adaptation Assignment	8%	
	Ch 14 & 15 Test	17%	
	Characteristics of Life Assignment	8%	
	Ch 17 Textbook Review	4%	
	Ch 25 Textbook Review	4%	
	Ch 17 & 25 Test	17%	
	Ch 5 Review	4%	
	Ch 5 Test	17%	
	Project: Evolution / Biodiversity	13%	
Final Exam	Mrs. Lockhart's final exam is in June. The exam covers all material covered in the course.	100%	20%

Behaviour Assessment

- Personal Management Skills - The student self-monitors own behaviors and personal growth, organizes for learning, contributes positively to the learning process and takes responsibility for work completion.
- Active Participation in Learning - The student participates actively in learning, is curious, sets learning goals, self-assesses, provides feedback, and uses feedback for improvement.
- Social Responsibility - The student demonstrates citizenship and social skills that contribute to making the classroom, school, and larger community a positive, safe and caring environment.