

Mr. Hazlewood

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Biology 40S – Course Outline

Credit Value: 1 Credit**Course Code:** 0124**Prerequisites:** None**Textbook:** Biology. McGraw-Hill. Whitby, ON. 2003.

****Textbooks are in limited supply, and given that students are not able to share books this year, we will only be using them as a resource when needed and students will be given other options to access the material.**

Tidbits of wisdom from the world of biology...

“Scientists have shown that the moon is moving away at a tiny yet measurable distance from the earth every year. If you do the math, you can calculate that 85 million years ago the moon was orbiting the earth at a distance of about 35 feet from the earth’s surface. This would explain the death of the dinosaurs. The tallest ones, anyway.” -- Unknown

“Aerodynamically, the bumble bee shouldn’t be able to fly, but the bumble bee doesn’t know it so it goes on flying anyway.” -- Mary Kay Ash

Companies should have more gametes in commercials because sex sells. -- Unknown

Course Description - Biology 40S is designed to introduce students to the world of genetics and biodiversity amongst organisms. The material in this course looks at how offspring resemble (and differ from) their parents, and the reasons why. Within the course we will also look at the various organisms both past and present that have inhabited earth, and how each species came to exist.

*****While sections of this course will be taught following Darwin’s theory of evolution, it is important to note that this is not the only theory that will be discussed. There are a number of different theories that attempt to explain natural variation, but due to time constraints the most widely accepted theory will be used as the basis of study. Our focus for this course will be a hands on approach to using scientific methods to solve problems. We will complete a number of performance assessments, which are opportunities for you to demonstrate the topics we are learning about. Each student will also complete an inquiry project on a biology topic of their choosing.**

Course Timeline

Section 1: Genetics

Topic 1: Biological Inheritance

Topic 2: Mechanisms of Inheritance

Section 2: Evolution

Topic 1: Darwin’s Principles

Topic 2: Adaptations & Biodiversity

******Inquiry Project Completion**** Dec. 14th – Dec. 18th********Review for Final Exam**** Jan. 18-22**

Section 3: Classification

Topic 1: Evolutionary Timeline

Topic 2: Methods of Classification

Assessment – curriculum available at <https://www.edu.gov.mb.ca/k12/cur/index.html>

Course Work (70%) – Each topic will have multiple formative assessments to help students recognize areas of strength and areas to continue to improve on. We will also complete a performance assessment in most of the topics, some of which will be marked using a rubric, while others are used as formative feedback. There will also be at least one summative assessment in each topic that will be weighted based on the amount of time spent on that section. Larger sections that the class finds interesting will have larger assessments worth a greater percentage of the course mark.

Each student will also complete an inquiry project that will be marked using a class constructed rubric, which will be worth approximately 10% of this course mark.

Final Exam (30%) – The final exam is cumulative, and will focus on material covered on various topic assessments. There will also be questions regarding the performance assessments as well as the inquiry project.

Academic Dishonesty – any act of cheating, plagiarizing, or copying of work by a student will result in stiff penalties. The first offense will be a choice of zero on the assignment or a redo at my convenience, as well as a letter sent home to your parents. The second offense will be an automatic zero, with a referral to administration for any further discipline.

Late Assignments – Performance assessments and inquiry projects are due on or before the date set. Other than medical emergencies and prior arrangements, failure to do so will result in a grade of 0 once the assignment has been marked and returned to the other students.

Missed Assessments & Rewrites – Any missed assessment will be given a grade of 0 unless valid reasons are given (eg. hospitalization). A student who misses an assessment will be required to complete it during the lunch hour (or spare) on the day they return to school. Assessments can be rewritten upon the request of the student, but will only be granted after that student has earned the opportunity. This requires attendance at lunch (or spare) for extra help and practice, as well as multiple formative assessments in order to demonstrate sufficient understanding.