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|  |  | Winter Semester Blocks B & C |
| Biology 11  Advanced |  | Instructor: Amanda Dalby E-Mail: [amanda.dalby@msvu.ca](mailto:amanda.dalby@msvu.ca)  Website: www.msdalby.weebly.com  Room: 307 Extra Help: Wednesday’s after school |
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| Overview The aim of this course is to explore the unity and diversity among living things, as well as the tremendous impact biology and technology have on our society. Goals Throughout this course, students will be expected to further develop their skills in:   * Scientific Inquiry * Problem Solving * Decision Making * Interrelations among science, technology, society, and the environment * Scientific Literacy  Your Responsibilities  1. You are responsible for coming to class on time and being prepared to work with all the necessary materials. 2. You are expected to complete and submit all assignments by their due date\* If you are unable to meet a particular due date for a specific reason, please come and see me as soon as possible to arrange an alternative due date. 3. Keep up to date on all homework and in-class assignments. If you miss time, you are responsible for getting the missed work. You can check the website or ask a friend. 4. You are responsible for keeping up with the readings, homework, and in class assignments. “I was not here” is not an excuse for missed work! 5. You are responsible for conducting yourself in a way that respects every member of the class.   \*As with Citadel High School policy, there will be an alternate due date which will usually be the following day. After the alternate due date, submissions are not accepted. Evaluation Throughout this course, you will be evaluated and assessed for skill development and knowledge attainment. You will be given regular quizzes on material covered in class, including readings, as well as a number of in class assignments, labs, projects, and unit tests.  Every student in this class as a specific learning style and way of communicating knowledge. With this in mind, there will be a variety of ways to learn the material and demonstrate your knowledge and skills. This may include, and is not limited to, debates, minor & major projects, poster creations, dioramas, games, models, simulations, group work, poems, skits, web quests, etc.  **As this is advanced biology 11, we will be going through topics and concepts more quickly than the regular biology 11. In addition, we will go into more detail and depth with some topics and you will have a research project.**  **Unit 1 – Matter & Energy for Life**  This unit will focus on cells as the basic unit of life. We will look at the role of cell structures in matter exchange and energy flow, and look at the impact technology as had on our understanding of cell structures and functions. We will discuss the development of cell theory as well as the role of microscopes in the advancement of biology in our society. Photosynthesis and cellular respiration will be analyzed at the molecular level. There will be a lot of lab time in this section, which will give you experience with using microscopes, drawing biological diagrams, and writing biological lab reports. “Why are cells so small? “ “Is stem cell research ethical?” are possible questions we will answer.  **Unit 2 – Biodiversity**  This unit will provide the opportunity to investigate life’s unity and diversity within the biosphere. We will deal with the classification of living organisms, as well as the technologies and systems used to determine the relationship between living organisms.  **Research Project**  This project will be an independent group project, to be completed outside of school time. The focus of this project will be on viruses and bacteria; What does it do? How does it attack? How does it spread? Where is it found? These questions are a few of the questions you will be answering for your project. Groups can include 3-4 people; make sure you chose people you can work well with. See research project paper for more information.  The value of this project will be determined later on in the semester.  **Article Reviews**  It is my hope to have article reviews on current events and advancements that pertain to our class work. You will form groups of 4-5 people, and each group will have a different article to review. The article will be available for a few days before it is to be discussed in class, so you have a chance to read the article. Each article will have questions that go along with it, which are to be answered before coming to class. During the article review day, you will hand in your questions and then discuss the article, as well as the questions, with your group. This will give you a chance to discuss current events regarding biology in our society, as well as engage in scientific conversation with people who may have ideas that differ from yours. These activities will count as in class assignments and will be graded as such. There may also be an opportunity for you to find an article of personal interest relating to an aspect of biology and bring it in to discuss with your group. Throughout our units, I hope to have 3-4 article review days. |  | Materials Students will require the following for this class:   * A binder for notes and handouts * Loose Leaf * Scissors * Pens & Pencils * Ruler * Markers/Colored Pencils * Textbook  Units in Biology 11 Adv. Unit 1 – Matter and Energy for Life  *30% of your term mark.*  Historical Development Cell Theory. Introduction to the Microscope. Interaction of Cell Structures. Photosynthesis & Cellular Respiration.  Unit 2 - Biodiversity  *20% of your term mark.*  Classifying Living Things. Diversity Among Living Things.  Research Project  *% TBD*  Microbiology – Viruses & Bacteria  \*\*A link to the biology curriculum outcomes will be listed on my website. |