Archbishop MacDonald Catholic High School

Course	Biology 30
Year	2025-2026
Term	Semester 2
Teacher(s)	Mrs. Brianna Yardy brianna.yardy@ecsd.net Mrs. Christine Andison christine.andison@ecsd.net
Resources	Text: McGraw Hill 'Inquiry into Biology' (Colburn et. Al, 2007) Calculator Copy of notes of the relevant PPT from Google Classroom OR a digital version on which to take notes
Program of Studies	LINK
Overview	This course includes the following units of study: **Unit A: Nervous System and Endocrine:** This unit examines the biological processes that mediate the interactions between humans and their environment to maintain equilibrium. The nervous system contributes to homeostasis through its response to internal and external stimuli. Endocrine glands help to maintain homeostasis through the hormones they release into the blood. A study of the interactions between the nervous and endocrine systems leads to an examination of the functioning of the central and peripheral nervous systems and their ability to sense the environment and respond to it. **Unit B: Reproduction and Development**: This unit investigates the human

reproductive system as a representative mammalian system responsible for propagating the organism and perpetuating the species. The processes associated with human reproduction and development, as well as the regulation of these processes by hormones, are reviewed. The influence of environmental factors on embryonic and fetal development is examined, as are various reproductive technologies.

Unit C: Cell Division, Genetics and Molecular Biology: This unit examines the two types of cell division, mitosis and meiosis. Students learn about chromosomal behaviour during cell division and expand their knowledge of chromosomes by studying classical genetics. Classical genetics is further extended to a molecular level by exploring the basic structure of deoxyribonucleic acid (DNA), its role in protein synthesis and the impact of mutation.

Unit D: Population and Community Dynamics: Population change over time can be examined through a study of population genetics (Hardy-Weinberg principle) and population growth. Both of these can be expressed quantitatively. Individual members of populations interact with each other as well as with members of other populations, which can have an impact on the populations involved. Communities are a sum of all the different populations living together. Communities may change over time as a result of natural or artificial events

IB Philosophy

MAC's courses use the IB philosophy to encourage the holistic development of all students. The Learner Profile and Approaches to Teaching and Learning are used at all levels so that students develop a better understanding of curriculum objectives. This course will focus on the Learner Profile for THINKERS because we use critical and creative thinking skills to act on complex problems. Our Approaches to Learning skill will be THINKING because we emphasize skills such as reflection and critical thinking.

Assessment

The Diploma Exam is worth 30% of the final grade. The school awarded mark is worth 70% of the final grade and is based on category weightings as follows:

Unit A: 30%
Unit B: 20%
Unit C: 35%
Unit D: 15%

The code NHI may be used to represent coursework that has not been handed in. It is representative of a zero. In addition, the following may appear for a student in PowerSchool instead of, or in addition to, a numeric grade:

Disclaimer

A wide range of assessment information is used in the development of a student's final grade. At Archbishop Macdonald Catholic High School, individualized assessments provide specific information regarding student progress and overall performance in class. Student assessment may vary from student to student to adapt for differences in student needs, learning styles, preferences, and paces. It should also be noted that not all assignments are used to determine the final grade, and that scale factors may have been used to determine the weight of individual assignments.

Personal Mobile Device Standards

Mobile Devices and Social Media Use:

- Personal mobile devices are to be silenced or turned off and stored in the student's assigned locker during the day, which must be locked.
- No personal mobile devices are to be used during the day except for at lunch.
- No social media is to be accessed during the school day.
- The standards for Personal Mobile Devices includes cell phones, SMART watches, earbuds, and headphones
- Non-compliance with the standards will result in consequences of a suspension or loss of privileges such as participation in school trips, or activities, sports teams, and extracurricular activities.

Laboratory Safety Standard

Science at Archbishop MacDonald is a hands-on, skill-based discipline involving activities that may entail risk. Safety in the laboratory takes precedence over all instructional concerns. To ensure your safety and the safety of others, the following laboratory safety standard is always in effect:

1. Conduct must be professional. Counter-sitting, throwing, playing, pranking, and unsanctioned experiments are prohibited.
2. Footwear must completely cover the foot. Sandals, slides, and/or clogs are prohibited.
3. Food and/or drink are prohibited.

There is a **zero-tolerance policy** for violations of the safety standards; failure to comply with these standards will result in immediate exclusion from the lab activity. Additional safety measures that are activity dependent may also be required.

Expectations	Unexcused absences and/or lates are unacceptable and may have a negative effect on the grade. Missed coursework may be expected to be completed and may be scored as zero or NHI until submitted (see disclaimer).
Student Handbook	LINK
Academic Integrity	LINK