Hamilton Wentworth District School Board
SIR WINSTON CHURCHILL SECONDARY SCHOOL

TEACHER: A. Stosich **astosich@hwdsb.on.ca** **Website: stosich.ca**

COURSE: Grade 11 Biology – College Preparation

PREREQUISITE: Science, Grade 10, SNC2P applied or SNC2D academic

DEPARTMENT HEAD: R. Bukvic

CREDIT VALUE: 1

Curriculum Document: The Ontario Curriculum, Grade 11 and 12, Science.

http://www.edu.gov.on.ca/eng/curriculum/secondary/2009science11_12.pdf

Course Description:

A survey course of biology topics that explore life from unicellular microbes through the vast diversity of multicellular plants and animals, paying specific attention to the nature of their metabolic and hereditary processes. A special focus will be given to the human body, especially in comparison to mammals and other vertebrates.

Overall Expectations:

By the end of this course, students will:

*A1. demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating);

*A2. identify and describe careers related to the fields of science under study, and describe the contributions of scientists, including Canadians, to those fields.

B1. evaluate the impact of environmental factors and medical technologies on certain cellular processes that occur in the human body;

B2. investigate structures & functions of cells, the factors that influence cellular activity, using appropriate laboratory equipment & techniques and B3. demonstrate an understanding of basic processes of cellular biology.

C1. assess the effects of microorganisms in the environment, and analyse ethical issues related to their use in biotechnology;

C2. investigate the development and physical characteristics of microorganisms, using appropriate laboratory equipment and techniques;

C3. demonstrate an understanding of the diversity of microorganisms and the relationships that exist between them.

D1. evaluate some social, ethical, and environmental implications of genetic research and related technologies;

D2. investigate the process of meiosis, and analyse data related to the laws of heredity;

D3. demonstrate an understanding of the process of meiosis, and explain the role of genes in the transmission of hereditary characteristics.

E1. analyse the social or economic impact of a technology used to treat systems in the human body, and the impact of lifestyle choices on human health;

E2. investigate, through laboratory inquiry or computer simulation, the anatomy, physiology, and response mechanisms of mammals;

E3. demonstrate an understanding of the structure, function, and interactions of the circulatory, digestive, and respiratory systems of mammals.

F1. analyse the roles of plants in ecosystems, and assess the impact of human activities on the balance of plants within those ecosystems;

F2. investigate some of the factors that affect plant growth and F3. demonstrate an understanding of the structure and physiology of plants and their role in the natural environment.

*A SECTION of curriculum expectations will be evaluated throughout the course in specific evaluations and in the context of Learning Skills.

Determining a Grade:

Teachers will take into account various considerations before making a decision about the grade to enter on the report card. Determining a report card grade will involve teacher's professional judgment and interpretation of evidence (conversations, observations, products) and should reflect the student's most consistent level of achievement for each overall expectation, with special consideration given to more recent evidence.

Evaluation:

UNIT/STRANDS	EVALUATIONS	WEIGHT %
CELLULAR BIOLOGY	Cytology / Microscopy Lab B1, B2 Cell Transport Lab B3	**10 %**
MICROBIOLOGY	Microscopy of Microbes C2 Diversity of Microbes around us C3 Antibiotics, Transgenics and Microbes C1	**15 %**
GENETICS	Modelling Meiosis D1 Patterns of Heredity D2 Human Traits and Heredity D3	**15 %**

ANATOMY OF MAMMALS	Mammalian Organ Systems Lab investigations E3 Comparative Anatomy of Mammalian systems E2 The Human body in Health and Disease E1	**20 %**
PLANT BIOLOGY	Botany Investigation: diversity & ecology F1 Phytology Investigation: plant physiology F2	**10 %**
	TERM	**70%**
	Culminating Evaluation – Case Studies in Biology	30%
	FINAL SUMMATIVE	**30 %**
	FINAL COURSE MARK	**100%**

Learning Skills:

The provincial report card provides a record of the learning skills you demonstrate in this course under the following categories: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self-Regulation. Your performance in each of these skills will be reported separately except in cases where a specific learning skill is one of the expectations of the course. It should be noted that better achievement of the Learning Skills often corresponds to better academic achievement.

Textbooks:

All essential textbooks and resources will be provided to the student for use throughout the semester. Textbooks are the property of HWDSB and students will be responsible for lost or damaged resources.

Teaching Strategies will (include but not limited to):

- Be based on the premise that all students can be successful
- Respect and address how students learn
- Vary in nature
- Ensure that each student is given clear directions for improvement
- Promote students' ability to assess their own learning and to set specific goals
- Include the use of exemplars
- Provide ongoing feedback that helps students fill the gaps in their learning
- Encourage students to talk through their thinking and learning processes
- Provide many opportunities for students to practice and apply their developing knowledge and skills
- Involve caregiver communication throughout the semester and/or year

Teaching Students with Diverse Educational Needs:

Classroom teachers are the key educators of students who have special education needs. At Sir Winston Churchill Secondary School we believe:

- All students can succeed.

- Universal design and differentiated instruction are effective and interconnected means of meeting the learning or productivity needs of any group of students.
- Successful instructional practices are founded on evidence-based research, tempered by experience.
- Classroom teachers are key educators for a student's literacy and numeracy development.
- Each student has his or her own unique patterns of learning.
- Classroom teachers need the support of the larger community to create a learning environment that supports students with special education needs.
- Fairness is not sameness.

In any given classroom, students may demonstrate a wide range of learning styles and needs. Teachers plan programs that recognize this diversity and give students performance tasks that respect their particular abilities so that all students can derive the greatest possible benefit from the teaching and learning process.

Sir Winston Churchill Secondary School addresses the needs of all students under the Ministry's *Equity and Inclusive Education in Ontario Schools Guidelines*, and takes great care to meet the needs of students with special education needs as outlined in the Ministry's *The Individual Education Plan (IEP) Resource Guide.*

Missing Evidence of Leaning:

Students are responsible for:

- Providing evidence of their learning by completing all tests, demonstrations, projects, presentations and assignments to the best of their ability within established timelines.
- Using organizational and time management strategies to meet deadlines.
- Working collaboratively with their teachers to get extra help and support and manage their time when required.
- Ensuring that the evidence they provide is their own work, not the result of cheating or plagiarism.

If a student has not participated in learning activities in the classroom, and the teacher has not been able to evaluate the student through observations, conversations or student products, the teacher may not be able to evaluate student achievement of the overall expectations for a unit, subject or course. In such situations, the teacher will communicate with parents and seek the support of the student success team, student services and/or administration. In the case where a student is not attending, the school social worker will be involved. If after strategies for support have been put in place and the student has still not demonstrated achievement of the overall expectations of a course, the teacher will use "*Lower Limits*" on the report card to indicate where the student is on the continuum of learning. Lower Limits are as follows:

40	Additional learning required. Focus on remediation, revision and completion. Recommend credit recovery or summer school.
30	Significant additional learning required. May require additional supports, interventions or changes to program. May need to repeat course.
25	Used for grades 11 & 12 only. Means a student has had no opportunity to demonstrate achievement of the overall expectations due to unique circumstances (student just joined course or has been ill).
I	Used for grades 9 & 10 only. Means a student has had no opportunity to demonstrate achievement of the overall expectations due to unique circumstances (student just joined course or has been ill).
0	No evidence of learning.

Academic Honesty

Honesty is one of the keys to personal success; it demonstrates respect for self and others and promotes a positive school atmosphere. Honesty is both a virtue and an expectation of our society and school environment. Our school's academic policies are designed on the premise of "academic honesty."

Citing & Referencing

Assignments which use sources of information and which do not clearly and precisely indicate where these sources have been used are NOT eligible for evaluation, as it is impossible for the teacher to accurately determine where the student's ideas begin and end, and where the source information begins and ends. Students must ensure that their work is submitted with clear and precise citations and references. Keeping proper track of sources is a vital step in the process of completing work, and is not something that should be done only when an assignment is 'complete'.

Plagiarism is a form of cheating. The Ministry "*Growing Success*" document defines plagiarism as "the use or close imitation of the language and thoughts of another without attribution, in order to represent them as one's own original work." Plagiarism can occur in different ways including:

- Improper paraphrasing or paraphrasing without acknowledgement of the source;
- Quoting from a source without acknowledgement (copying);
- Cutting and pasting from an electronic source without acknowledgement, including graphic representations;
- Representing as his/her own a product that a student did not produce.

Consequences for initial incidents of academic dishonesty may include the following:

- Student/teacher conference
- Student/parent/teacher conference
- Confirmation of student understanding of academic honesty
- Completing the task under supervision
- Revising and resubmitting the task

Repeated actions of academic dishonesty will be treated as a violation of the code of conduct and will be referred to administration. The students and his/her parents will be made aware that this behaviour constitutes lying and/or theft and progressive discipline actions appropriate to these infractions will ensue. Ultimately, a mark of zero can be given for the product.