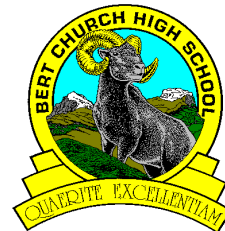


Bert Church High School



Course Outline: Science 10

Instructor: Mr. Netzel

Senior High Science Program Philosophy

The senior high science programs are designed to help all students attain scientific literacy in order to function as effective members of society. The expected student knowledge, skills and attitudes are approached from a common philosophical position in each science course. Students focus on learning big ideas and principles, which provide continuity with the junior high program and build on students' previous learning. These programs place an increased emphasis on developing methods of inquiry-based learning that characterize the study of science.

Students will be expected to show an appreciation for the roles of science and technology in understanding the natural world. The learning context is an integral part of the senior high science programs. Learning opportunities will be made meaningful by providing both concrete and abstract experiences that students can relate to their world. These programs place students at the centre of their own learning. Students are active learners and will assume increased responsibility for their learning. They will appreciate the value of teamwork and make positive contributions when working with others to solve problems and complete tasks.

Evaluation

Student report card marks are determined on the basis of homework, class assignments, quizzes, unit exams, and a final exam. A general mark breakdown follows:

Unit	Topic	Program Emphasis	Evaluation
A	Energy and Matter in Chemical Change	32 %	22 %
B	Energy Flow in Technological Systems	27 %	19 %
C	Cycling of Matter in Living Systems	27 %	19 %
D	Energy Flow in Global Systems	14 %	10 %
	Final Exam		30 %

Each Unit mark is made up of the following components:

- Labs, and assignments 25 %
- Projects 15 %
- Quizzes 30 %
- Unit test 30 %

Course Materials/Textbook

Science 10, Toronto, Ont., Canada: Addison Wesley 2003 (\$118.55)

Students must also provide the following supplies;

- Pens, pencils, eraser, ruler, 3 ring binder, lined paper, scientific calculator, highlighter (optional)

Course Description and Objectives

Unit A: **Energy and Matter in Chemical Change**

- Atomic structure- protons/electrons/neutrons.
- Atoms vs. Ions
- Nomenclature (naming) – identifying ionic, molecular, acids and bases.
- Properties of chemical substances.
- Balancing chemical equations.
- Identifying reactions and states
- Concept of the mole.

Unit B: **Energy Flow in Technological Systems**

- Motion including graphic representation as well as mathematical analysis.
- Scalars v. Vectors
- Force, Work and Energy.
- Types of Energy
- Laws of Thermodynamics
- Useful energy vs. energy input.
- Technological systems.

Unit C: **Cycling of Matter in Living Systems**

- Developing technologies
- Microscopy
- Cells and organelles
- Transport within cells
- Plant structure and function

Unit D: **Energy Flow in Global Systems**

- Weather Systems and energy flow.
- Solar, Wind and Hydrologic systems and distribution of energy throughout the world.
- World Biomes.

Science Department Expectations

Late Procedure

Each student is expected to be punctual for each class period. Repeated lateness is disrespectful and discourteous and, if not corrected, tends to become commonplace. Corrective action may include detention time, extra work or assignments, or in chronic situations referral to administration.

Excused Absences

Students will be permitted to write a make-up test/quiz as long as it is within an appropriate time period, this will be at the teacher's discretion. If the student cannot write a make-up test/quiz then the unit test or final exam mark may be substituted for the missed test/quiz, this is again at the teacher's discretion.

If a student has missed an assignment or lab due to an excused absence, then that student will be given the assignment or lab data and permitted to hand in the assignment/lab for marking without penalty at the teacher's discretion.

Unexcused Absences

Quizzes and Unit tests that are missed as a result of an unexcused absence will result in a mark of zero. Any assignments or labs that are incomplete due to an unexcused absence will not be accepted and will result in a mark of zero.

Late Assignments, Incomplete Assignments, and NHI's

The teacher will periodically accept late assignments and labs not previously handed in. This does not include assignments not handed in **due to unexcused absences**. Any late assignment/lab will be worth a maximum of 50% of the original assignment mark.

Calculator Policy

It is the student's responsibility to have an appropriate calculator for tests, quizzes, and assignments.

- Calculators may be used for exams and quizzes, but may not be shared.
- Phones **may not** be used as calculators during tests, quizzes and exams
- Calculators may be cleared before quizzes, exams, and the final exam.

Appeals

Students and parents may direct, in writing, any appeal of the final grade to the school Principal (see the student handbook).