

Science 10

ST. FRANCIS XAVIER CATHOLIC HIGH SCHOOL



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Science 2021-2022

Science 10 - 5 CREDITS

Semester 2: February 1, 2022 – June 28, 2022

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Google Classroom Code: 4onsqok

St. Francis Xavier High School acknowledges Treaty 6 territory—the ancestral and traditional territory of the Cree, Dene, Blackfoot, Saulteaux, Nakota Sioux, as well as the Métis. We acknowledge the many First Nations, Métis, and Inuit whose footsteps have marked these lands for generations. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We recognize the land as an act of reconciliation and gratitude to those whose territory we reside on or are visiting.

GENERAL OUTCOMES/ COURSE OVERVIEW

Science 10 consists of four units of study: A. Energy and Matter in Chemical Change, B. Energy Flow in Technological Systems, C. Cycling of Matter in Living Systems, D. Energy Flow in Global Systems

Prerequisite: Students must have successfully completed grade 9 Science with a recommended mark of 50% or better.

Required Materials & Resources: Science 10 textbook, notebook, pencil, eraser, ruler, graphing calculator

Learning Outcomes: The student will:

- A. describe the basic particles that make up the underlying structure of matter, and investigate related technologies,
- B. explain, using the periodic table, how elements combine to form compounds, and follow IUPAC guidelines for naming ionic compounds and simple molecular compounds,
- C. identify and classify chemical changes, and write word and balanced chemical equations for significant chemical reactions, as applications of Lavoisier's law of conservation of mass,
- D. analyze and illustrate how technologies based on thermodynamic principles were developed before the laws of thermodynamics were formulated,
- E. explain and apply concepts used in theoretical and practical measures of energy in mechanical systems,



- F. apply the principles of energy conservation and thermodynamics to investigate, describe and predict efficiency of energy transformation in technological systems,
- G. explain the relationship between developments in imaging technology and the current understanding of the cell,
- H. describe the function of cell organelles and structures in a cell, in terms of life processes, and use models to explain these processes and their applications,
- I. analyze plants as an example of a multicellular organism with specialized structures at the cellular, tissue and system levels,
- J. describe how the relationships among input solar energy, output terrestrial energy and energy flow within the biosphere affect the lives of humans and other species,
- K. analyze the relationships among net solar energy, global energy transfer processes—primarily radiation, convection and hydrologic cycle—and climate,
- L. relate climate to the characteristics of the world’s major biomes, and compare biomes in different regions of the world,
- M. investigate and interpret the role of environmental factors on global energy transfer and climate change

ASSESSMENT

A wide range of assessment information is used in the development of a student’s final grade. At St. Francis Xavier 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.

Topics and Course Weighting (% for each unit):

UNIT A: Energy and Matter in Chemical Change	25%
UNIT B: Energy Flow in Technological Systems	25%
UNIT C: Cycling of Matter in Living Systems	25%
UNIT D: Energy Flow in Global Systems	25%

The student’s grade will be calculated based on the following:

Unit Coursework: 30% Unit Exams: 70%

Final Grade: School awarded mark: 90% / Division Common Summative Assessment: 10%



PLAGIARISM

We provide a Catholic education, where the Core Values of dignity, respect, fairness, personal and communal growth, loyalty, and honesty are the framework for all that we do. Within this Catholic education that St. Francis Xavier School provides, one of our main focuses is to encourage and facilitate the pursuit of knowledge and excellence in academics.

To ensure that we attain this focus, all students at our school community are expected to meet the standards of individual integrity in the following ways:

Students practice intellectual honesty in the process of acquiring and extending knowledge by improving their own personal academic competence, critical thinking, and self-evaluation. 2. Students are therefore not expected to act in ways that result or could result in unearned academic benefit or advantage for themselves or others (cheating and collusion).

Therefore, students who submit work not their own, take or copy answers from another student or source (cheating), provide answers to any assessment to another student (collusion), cheat during examinations, or use unauthorized means to obtain answers or complete work, after investigation by the teacher supervisor, are at risk of the following:

First offense – May receive a zero for the assessment and a two-day suspension.

Second offense – May receive a zero for the assessment and a three-day suspension.

Third offense – May be removed from the class, further suspensions, or possible recommendation for expulsion.

Conditions surrounding the investigation will be considered and each situation will be dealt with on an individual basis. Review of the incident will first be conducted by the teacher and will then potentially involve additional staff (department head), administration, parents and the student(s) involved.

SCHOOL POLICIES

St. Francis Xavier does not publish report cards. Parents and students are encouraged to keep up to date on Power School and contact their teacher if there are any issues.

At St. Francis Xavier, zeros may be administered for incomplete or absent work with the opportunity to rectify the mark with conversation with their teacher.

CELL PHONE POLICY

Cellphones may be used in the classroom by the teacher invitation only. If the teacher deems the device is a distraction to the learning environment, the teacher reserves the right to ask that the phone be put away or to confiscate until the end of the class.

No cellphones shall be on a student's person during an assessment and should be put on mute in their bag. A zero will be awarded if the device was used for cheating.

CLASSROOM POLICY & MISSED ASSESSMENT POLICY

Evaluation is important and must be fair to everyone, therefore all unwritten tests must be accounted for. Students missing a test will be required to write an alternate exam upon their return. Missed test writes take place Friday after school beginning at 12:15 PM.

