



# St. Francis Xavier Secondary School

*"Striving for Excellence in Catholic Education; to give our students a Purpose and Hope for Life."*

## ST FRANCIS XAVIER SUMMER SCHOOL - SCH3UN COURSE OUTLINE

<b>Teacher</b>	Mr. Dvorsky
<b>Class Location &amp; Time</b>	Room 317, 8:00 am - 1:30 pm
<b>Email</b>	kenneth.dvorsky@dpcdsb.org
<b>Textbook</b>	Nelson Chemistry 11

### Description

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

**Curriculum Policy Document:** [\*The Ontario Curriculum, Grades 11 and 12: Science. 2008.\*](#)

### Units of Study

#### **Unit 1 - Matter, Chemical Trends, and Chemical Bonding**

- analyse the properties of commonly used chemical substances and their effects on human health and the environment, and propose ways to lessen their impact;
- investigate physical and chemical properties of elements and compounds, and use various methods to visually represent them;
- demonstrate an understanding of periodic trends in the periodic table and how elements combine to form chemical bonds.

#### **Unit 2 - Chemical Reactions**

- analyse chemical reactions used in a variety of applications, and assess their impact on society and the environment;
- investigate different types of chemical reactions;
- demonstrate an understanding of the different types of chemical reactions.

#### **Unit 3 - Quantities in Chemical Reactions**

- analyse processes in the home, the workplace, and the environmental sector that use chemical quantities and calculations, and assess the importance of quantitative accuracy in industrial chemical processes;
- investigate quantitative relationships in chemical reactions, and solve related problems;
- demonstrate an understanding of the mole concept and its significance to the quantitative analysis of chemical reactions.

#### **Unit 4 - Solutions and Solubility**

- analyse the origins and effects of water pollution, and a variety of economic, social, and environmental issues related to drinking water;
- investigate qualitative and quantitative properties of solutions, and solve related problems;
- demonstrate an understanding of qualitative and quantitative properties of solutions.

#### **Unit 5 - Gases and Atmospheric Chemistry**

- analyse the cumulative effects of human activities and technologies on air quality, and describe some Canadian initiatives to reduce air pollution, including ways to reduce their own carbon footprint;
- investigate gas laws that explain the behaviour of gases, and solve related problems;
- demonstrate an understanding of the laws that explain the behaviour of gases.

#### **Assessment & Evaluation**

##### **70% Term Work Evaluations**

- Tests (one per each unit), Quizzes

##### **5% CPT**

##### **25% Final Exam**

#### **Categories**

- Knowledge 25%
- Thinking 35%
- Application 25%
- Communication 15%