



# Glenview Park Secondary School

55 McKay Street, Cambridge, Ontario, N1R 4G6 (519) 621-9510 [gps.wrdsb.ca](http://gps.wrdsb.ca)

## Course Outline: Chemistry, Grade 11 IB Chemistry SL SCH 3UW

Semester: 1	Block: B	Room: A210
Teacher:  Mr. Michaelides	Teacher Contact Information:  519-621-9510 ext 1204 Office: A204	Course/Teacher Website: <a href="http://teachers.wrdsb.ca/amichael/">teachers.wrdsb.ca/amichael/</a> Email: alex_michaelides@wrdsb.on.ca

### Course 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; atmospheric chemistry and the behaviour of gases; and energy changes and rates of reaction. 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.

### Essential Learnings:

To earn this credit, students must demonstrate learning in each of the following areas:

#### Measurement and Data Processing (Chapter 11)

- All measurement has a limit of precision and accuracy, and this must be taken into account when evaluating experimental results.
- Graphs are a visual representation of trends in data.

#### Atomic Structure and Periodicity (Chapter 2 & 3)

- Theories on atomic structure and bonding have evolved since the Bohr model of the atom.
- Elements show trends in their physical and chemical properties across periods and down groups.

#### Chemical Bonding and Structure (Chapter 4)

- The type of chemical bond in a compound determines the physical and chemical properties of that compound.

#### Stoichiometric Relationships (Chapter 1)

- Relationships in chemical reactions can be described quantitatively.
- The efficiency of chemical reactions can be determined and optimized by applying an understanding of quantitative relationships in such reactions.
- Properties of solutions and gases can be described qualitatively and quantitatively, and can be predicted.

#### Acids and Bases (Chapter 8)

- Many reactions involve the transfer of a proton from an acid to a base and these reactions can be characterized by a variety of methods.
- The pH scale is a logarithmic scale that monitors the hydrogen ion concentration.
- Increased industrialization has led to greater production of compounds responsible for acid rain, which is damaging to our environment.



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## Energetics and Thermochemistry (Chapter 5)

- All chemical and physical changes involve an exchange of energy with the surroundings.
- The energy change associated with a chemical reaction can be measured and predicted in a variety of ways.

## Chemical Kinetics (Chapter 6)

- Reaction rates can be described qualitatively and quantitatively using a variety of methods.
- The collision theory can be used to explain a variety of factors that affect the rate of a chemical reaction.

### Evidence of Learning – may include the following:

Atomic Structure and Periodicity Assignment	<b>70%</b>
Atomic Structure and Periodicity Unit Test	
Chemical Bonding and Structure Assignment	
Chemical Bonding and Structure Unit Test	
Stoichiometric Relationships Assignment	
Stoichiometric Relationships Lab (A & EV)	
Stoichiometric Relationships Unit Test #1	
Stoichiometric Relationships Unit Test #2	
Energy Changes Assignment	
Energy Changes Laboratory Activity: Enthalpy of Reaction (A & EV)	
Energy Changes Unit Test	
Design Lab (EX)	
Final Evaluation: Lab Practical	<b>5%</b>
Final Evaluation: Written Exam	<b>25%</b>

## Course Evaluation

Student work will be evaluated using a balance of the Ministry's four achievement chart categories: knowledge & understanding, thinking & inquiry, application, and communication.

Throughout the course, teachers will gather evidence of student learning through observations, conversations, and student-produced work.

Seventy percent (70%) of the final mark will come from term work, and thirty percent (30%) will come from final evaluations. Report card grades will reflect the student's most consistent level of achievement, with consideration given to more recent evidence.

## Guidelines for Assessment, Evaluation and Reporting

### 1. Learning Skills

The Learning Skills and Work Habits section of the provincial report card is an integral part of a student's learning. Students will be assessed in the following areas:

- Responsibility
- Initiative
- Independent Work
- Collaboration
- Organization
- Self-Regulation

The following scoring system is used for Learning Skills:

E=Excellent; G=Good; S=Satisfactory; N=Needs Improvement



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## 2. Missing Work

*Students are expected to submit all evidence of learning by the assigned date.*

- (a) The Learning Skills section of the provincial report card will be used to reflect incidents of late and missing work.
- (b) At the time of entering a report card grade, students with missing evidence of learning may receive an "I" ("I" = insufficient evidence) on their report card and will not receive a credit (Grades 9 and 10), or may be assigned a failing mark and will not be granted a credit for the course (Grades 11 and 12).
- (c) Students submitting evaluation materials to the IBO have additional expectations to meet the international standards. These expectations will be reinforced during class instruction time as well as during supplementary IB meetings.

## 3. Cheating and Plagiarism

*Students are expected to submit their own original, best work to demonstrate their learning.*

- (a) The Learning Skills section of the provincial report card will be used to reflect incidents of cheating and plagiarism.
- (b) Students caught cheating on tests or assignments will receive an "I" ("I" = insufficient evidence), and will be required to demonstrate their learning through an alternative evaluation.
- (c) Students who plagiarize may be required to re-do all or part of the assignment (or evaluation) or complete an alternative assignment (or evaluation). The student's work may be treated as Missing Work (see above). As well, potential consequences for plagiarizing include disciplinary action (e.g., suspension) and loss of access to academic awards and scholarship opportunities.
- (d) Students submitting evaluation materials to the IBO have additional expectations to meet the international standards. These expectations will be reinforced during class instruction time as well as during supplementary IB meetings.

**Textbook:** Pearson Standard Level Chemistry  
Replacement cost for lost textbook \$65.00

### **Equipment:**

Students are expected to have their own pencil, pen, eraser, ruler and scientific calculator. You will also be expected to have a laboratory notebook to be used during laboratory investigations.

**Course Enhancement Fees:** These activities add meaning and dimension to the learning process - Laboratory activities: \$5.00 per student.

### **Class Website:**

I will be using the following website (<http://teachers.wrdsb.ca/amichael/>) as a class website for you to download class notes ahead of time and to find any additional resources to aid in your learning. I will also use Edmodo as a class tool for you to communicate with your teacher and with each other as we complete the course. The link to the Edmodo group can be found under the homepage for this course.



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## SAFETY CONTRACT

The purpose of this contract is to make the student aware of his/her responsibility for laboratory safety.

**I will:**

- Follow all instructions given by the teacher
- Protect my eyes, face, hands and body when involved in chemical experiments
- Carry out good housekeeping practices (keep a tidy lab bench, use common sense when working with glassware)
- Know the location of the first aid kit, eye wash station, fire blanket and fire extinguisher
- Conduct myself in a responsible manner at all times
- Not bring any food, gum or drinks into the science room (water bottles are permitted in the classroom area only)
- Not use any electronic devices such as cell phones, ipods, and tablets in the science lab unless directed by the teacher.

I, \_\_\_\_\_ (name of student), have read and agree to follow the safety regulations as described in the Safety Contract above. I will follow the oral and written instructions provided by the teacher and the school administration.

## Signatures

***As per Board Policy, parents need to authorize permission for their students to access course notes, course calendar, and correspondence via Edmodo, Wordpress, Googledocs, and any other electronic site.***

Please sign below indicating you have read and understood this course outline, including the requirements for successful completion of this course. By signing, you are also granting your permission for your student to gain digital access to the course. Please return this sheet to the teacher as soon as possible.

\_\_\_\_\_  
Student Name

\_\_\_\_\_  
Parent/Guardian Name

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Parent/Guardian Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

Preferred Method of Contact

☐ Phone

☐ Email

\_\_\_\_\_  
Daytime phone number

\_\_\_\_\_  
Email