



COURSE DESCRIPTION 2011-2012

COURSE NAME:	Science and Technology	LEVEL:	Cycle 2, Year 2
COURSE CODE:	558 – 404	PERIODS PER CYCLE:	4
TEACHER(S):	E-MAIL ADDRESS:	OFFICE	
Ms. Andrea Hawkins (4C)	hawkins.a@gaa.qc.ca	Chemistry Lab	
Mr. Matthew Myszak (4B)	myszak.m@gaa.qc.ca	Physics Lab	

Subject Area Competencies:

1.	The student seeks answers or solutions to scientific or technological problems
	The student communicates in appropriate language for science and technology
40%	The student must use the scientific method or the design method to solve problems. Student expertise is expected to increase with each lab performed.
	The student must identify, and be able to restate in her own words, the questions asked of her in lab situations.
	The student must be able to write a clear, concise procedure using scientific vocabulary.
	The student must be able to carry out the procedure using correct techniques and as well as following all safety rules.
	The student must be able to form conclusions and inferences from the data collected during the experimental procedure. She should also be able to identify potential sources of error which may have affected the experiment's results.
	The student must create data tables and charts accurately. The student must communicate in all forms (oral and written) using appropriate scientific vocabulary and symbols.
<i>Activity types in this competency:</i>	
<ul style="list-style-type: none"> all activities related to the scientific method (labs, design projects) 	
2.	The student makes the most of her knowledge of science and technology
	The student communicates in appropriate language for science and technology
60%	The student must be able to analyze and form opinions on scientific issues.
	The student must be able to analyze a technical object.
	The student must be able to apply facts and theories to new situations or to answer questions.
The student must communicate in all forms (oral and written) using appropriate scientific vocabulary and symbols.	
<i>Activity types in this competency:</i>	
<ul style="list-style-type: none"> issue analysis (essays, orals, displays, etc.) content-based tests essay tests, case studies, etc. analyses of technological objects 	

COURSE MATERIALS

- TEXT & ACTIVITY BOOK:
Observatory – The Environment
- 2" binder
- 14 dividers
- loose leaf
- ruler
- highlighter
- pencil and eraser
- scientific calculator

HOMEWORK

The expectation is for 20 - 30 minutes of homework for each one hour of class time.

TUTORING

Tutoring will be held at lunch by your teacher on **DAY 5** in the Chemistry Lab (Ms. H)/Physics Lab (Mr. M).

SCIENCE FAIR

It is required that you do a science fair project in term 2 (Value: **20% Competency 1**). It is recommended that you work in pairs (no groups of 3 allowed!). Proposals are due on **Monday, October 31st**. The Q.A.A. Science Fair is on **Sunday, February 5th**.

COURSE CONTENT

TERM	CHAPTER
1 (20%)	11 - GENETICS 1 - ATOMS AND ELEMENTS 2 - MOLECULES AND SOLUTIONS 3 - DIFFERENT FORMS OF ENERGY
2 (20%)	13 - MECHANICAL ENGINEERING 4 - CHANGES IN MATTER 5 - ELECTRICITY AND MAGNETISM 14 - ELECTRICAL ENGINEERING
3 (60%)	6 - THE LITHOSPHERE AND THE HYDROSPHERE 7 - THE ATMOSPHERE AND SPACE 8 - THE BIOSPHERE 9 - POPULATIONS AND COMMUNITIES 10 - ECOSYSTEMS 12 - MANUFACTURING TECHNICAL OBJECTS

☞ **N.B.** This course is an extension of Science & Technology 555-404. For a detailed list of topics, please see the course objectives posted in the EST conference in First Class. It is also a prerequisite for Chemistry and Physics in Secondary 5.

ADDITIONAL POINTS OF NOTE:

- 1) There will be tests given at the end of each chapter.
- 2) There will be **written (theory) exam in December.**
- 3) There will be **two exams in June:**
 - Written (Theory) exam worth 40% of competency 2
 - Lab (Practical) exam worth 20% of competency 1